

Routes 7/15 Interchange Norwalk, Connecticut State Project No. 102-358

Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation

Appendix G Wetland Assessment

August 2022

Prepared for: Connecticut Department of Transportation Federal Highway Administration



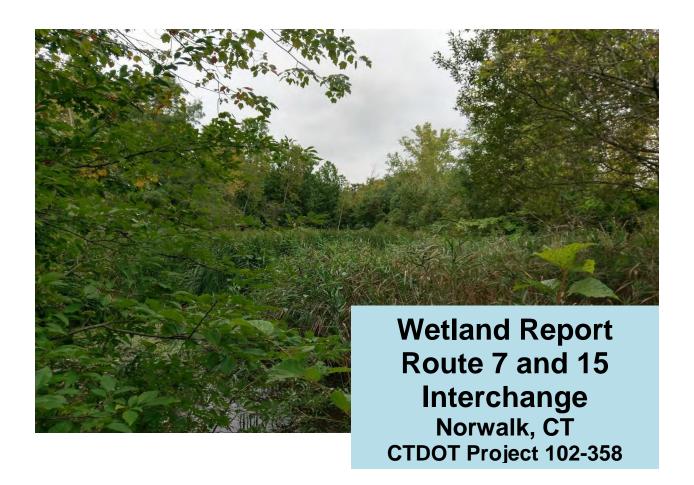
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Appendix G1 2017 Wetland Report

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Prepared for: Connecticut Department of Transportation Federal Highway Administration



Prepared by:



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1.0 INTRODUCTION

Project Description

The purpose of this report is to document and describe state, and federal jurisdictional wetlands, i.e., "Waters of the United States", found on site in the vicinity of the Route 7 and Route 15 interchange in Norwalk, Connecticut. The project begins approximately at the West Rocks Road overpass over Route 15 and terminates approximately 800 feet west of Perry Road. The project also extends approximately 2,000 feet north and approximately 1,000 feet south of the Route 15 overpass over Route 7, and includes existing commercial properties along Main Avenue. The entire project limits can be viewed in Appendix A: Location Map.

Field delineations were conducted by a BL Companies, Inc. (BL) wetland scientist and qualified soil scientist in accordance with Section 22a-38(15) of the Connecticut General Statutes (CGS); and federal wetlands in accordance with the U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual (1987) and the Northcentral and Northeast Region Latest Regional Supplement. The project site is located in Fairfield County, in the City of Norwalk, Connecticut. A map depicting the delineated features can be found in Appendix B, and supporting photographic documentation of each delineated resource is located in Appendix C. Datasheets completed for each feature can be found in Appendix D.

Natural Resources

The Site lies within the Silvermine River (7302) and Norwalk River (7300) drainage basins, part of the Norwalk Regional Basin within the Southwest Coast Major Basin, and is not located within a public water supply watershed. The eastern and southern portions of the site are located within an Aquifer Protection Area according to Connecticut Department of Energy and Environmental Protection (CT DEEP) mapping.

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map numbers 09001C0389F and 09001C0393G for Fairfield County, Connecticut, (effective dates June 18, 2010 and October 16, 2013), the project area includes several floodplain designations including, floodway, 100-year floodplain (Zone A), and 500-year floodplain (Zone X).

A review of the Connecticut Department of Energy and Environmental Protection Natural Diversity Database (DEEP NDDB Map December 2016) indicates that there are no known or recorded species listed as threatened or endangered within the project limits. Resource mapping is included in Appendix E.

2.0 METHODOLOGY

This investigation involved a wetland/watercourse delineation conducted in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) Soil Survey Manual (1993). The soil classification system of the National Cooperative Soil Survey was used in this investigation to identify the soil map units present on the project site. Field work included identification of onsite upland and wetland soils. Corresponding ACOE wetland delineation data sheets are included in Appendix D.

Vegetation, soils, and hydrology were observed and documented during the site investigation in order to meet the criteria of state and federal delineation methodologies. Soil types were identified by observing soil morphology (soil texture, color, structure, etc.). To observe the morphology of the soils, numerous test pits and/or hand borings (generally to a depth of at least two feet) are completed. If wetland and/or watercourses were determined to be present, their boundaries were identified with flags and hung from vegetation or small wood stakes. These flags are labeled "Wetland Boundary" and are generally spaced a maximum of approximately 50 feet apart. It is important to note that flagged wetland and watercourse boundaries are subject to verification by regulatory agencies.

The project Site was investigated on September 27, 28, and 29, 2016, with temperatures ranging from the low 60's to the low 70's°F under mostly sunny conditions. Follow up investigations to determine if some of the wetlands were functioning as vernal pools were also conducted on April 19th and 27th of 2017. Weather during these investigations ranged from the low 50's to low 60's with some rain showers on April 19th.

Functions and Values

Biophysical elements such as a wetland's landscape position, size, geology, hydrology, substrate, and vegetation determine the wetland functions and to what capacity they are performed. Due to the differing biophysical characteristics between onsite wetlands, the functions the wetlands provide and the capacity to perform those functions vary. To better understand these differences, the wetland functional values were assessed based on the United States Army Corps of Engineers Highway Methodology Workbook (1993) and its supplement workbook. The ACOE workbook includes thirteen (13) functions and values that have been recognized as functions wetlands can provide: ground-water recharge/discharge, flood flow alteration, fish and shellfish habitat, sediment/toxicant removal/retention/ retention. nutrient transformation. production export. sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, uniqueness/heritage, visual quality/aesthetics, and habitat for threatened or endangered species.

3.0 REGULATORY INFORMATION

Wetlands and watercourses are regulated by state, municipal, and federal laws and regulations, each with different definitions and regulatory requirements. Accordingly, the State and municipalities may regulate wetlands and waters that fall outside of federal jurisdiction; however, where federal jurisdiction exists, concurrent State and municipal jurisdiction is almost always present.

State Jurisdiction

State of Connecticut wetland determinations are based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land. Watercourses are defined 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." Intermittent watercourse determinations are made based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus, (2) the presence of standing or flowing water for a duration longer than a particular storm incident, and (3) the presence of hydrophytic vegetation. (See Inland Wetlands and Watercourses Act §22a-38 CGS.).

Federal Jurisdiction

Jurisdictional wetlands at the Federal level consist of "Waters of the United States", which includes lakes, rivers and streams, as well as vegetated wetlands (See 33 CFR 328.8). The onsite waters and wetlands, regulated by the ACOE, were delineated in accordance with the Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual Northcentral and Northeast Region (Version 2.0) (January 2012). This Manual requires there to be dominant hydrophytic vegetation, hydric soils, and hydrological conditions present in determining wetland areas.

4.0 PROJECT STUDY AREA

The following section describes the existing conditions of the resources located within the project limits. There are fifteen (15) identified wetlands within the project limits, descriptions of the wetlands and functions and values are provided below. Additionally, ten (10) intermittent watercourses, two (2) perennial watercourses including the Norwalk River, and a pond were identified. Several of the wetlands and watercourses ultimately flow into the Norwalk River or to the west into the Silvermine River.

Resources were delineated and labeled in the order that they were observed in the field, however for the sake of ease of presentation and also to better represent the hydraulic

connections between wetlands, the resources have been relabeled sequentially from east to west. Therefore, wetland flag labels observed in the field will not correspond to the wetland identifications utilized in this report. A list depicting the "Field ID" and the "Report ID" can be found in Appendix F.

Pond 1

Pond 1 is located north of Creeping Hemlock Drive and West of Lakewood Drive. The pond is long and linear, orientated roughly north to south; and is surrounded by forested upland. The water is estimated to be three to four feet deep, and no substrate was visible at the time of the investigation. Water was noted flowing through a stone swale on the western side of the pond. The swale is located outside of the project limits and continues to the west, north of several residential homes.

Perennial Watercourse 1 (PER 1)

Perennial watercourse 1 is located north of Route 15 and south of Creeping Hemlock Drive. The watercourse originates at a 24" reinforced concrete pipe (RCP) in a masonry endwall along the Route 15 southbound embankment. The substrate in the vicinity of the outfall includes rocks, cobble, and gravel, as well as some bricks that appear to have deteriorated from the end wall. The channel becomes narrow, approximately 2 feet wide, and very steep with rock and cobble substrate as flows progress to the west. At the base of the steep slope, the water forms a large pool and receives hydraulic input from a 15" RCP which is partially buried and a 48" RCP that conveys flows from north of Creeping Hemlock Drive. The pool is approximately 7 feet wide, with a rock, cobble, gravel, and sand substrate. Sediment deposition in this area is notable. Further west, the watercourse enters a 48" x 48" box culvert at a skew angle which conveys the flows southerly under Route 15 and outlets into Wetland 1. Vegetation is present along the channel, and includes Norway maple (Acer platanoides), winged euonymus (Euonymus alatus), multiflora rose (Rosa multiflora), wineberry (Rubus phoenicolasius), beggar tick (Bidens frondosa), jewelweed (Impatiens capensis), and aster (Symphyotrichum sp.). Additionally, a masonry rock wall is present along the north edge of the channel for the majority of its length.

The box culvert conveys this watercourse under Route 15 and outlets into Wetland 1 where the flow becomes diffused through the wetland, and the channel loses its definition. Wetland 1 is described in more detail separately below. At the southern portion of the wetland, the channel becomes more well defined with areas of incised banks, approximately one-foot-high and 3 feet wide. Deep pools were observed in portions of the channel, and a small oxbow was also noted along the embankment to the Stop and Shop shopping center to the south. The watercourse then flows west where the channel widens to approximately 10 feet with a silt and gravel bottom.

As it flows further west the watercourse transitions to an intermittent watercourse, the surrounding habitat remains forested. The substrate changes to mainly riprap, with evidence of sediment deposition. The intermittent channel turns slightly and flows to the south where it enters a box culvert east of Main Avenue and south of the Route 15 north entrance ramp. The surrounding area transitions to more densely developed, commercial properties. Vegetation along this portion of the channel included similar species to those seen in the upper reaches of the watercourse.

Wetland 1

Wetland 1 is located south of Route 15, west of Linden Heights, east of the Main Avenue entrance to Route 15, and north of the Stop and Shop plaza. Wetland 1 is not located within mapped FEMA floodplain or floodway. This wetland complex is classified as palustrine scrub-shrub wetland along the western and northern portion (along the highway embankment), and palustrine emergent wetland dominates within the transmission right-of-way to the east. Perennial Watercourse 1 flows south into Wetland 1 from a 48" x 48" box culvert under Route 15 and meanders through the wetland. The watercourse is diffused through the northern portion of the wetland and becomes more well defined in the southern portion.

The scrub shrub portions of the wetland are characterized by drift deposits, water-stained leaves, surface soil cracks, stunted or stressed plants, and geomorphic position. The vegetation includes sparse canopy cover of red maple (*Acer rubrum*) and dense scrubshrub and herbaceous strata. The scrub-shrub stratum is dominated by smooth alder (*Alnus serrulata*) and glossy buckthorn (*Frangula alnus*); green ash saplings (*Fraxinus pennsylvanica*) and silky dogwood (*Cornus amomum*) are also present. Ground cover by herbaceous plants is very dense and dominated by common reed (*Phragmites australis*), sensitive fern (*Onoclea sensibilis*), arrow-leaf tearthumb (*Persicaria sagittata*), rough-leaf goldenrod (*Solidago rugosa*), glossy buckthorn (*F. alnus*), and climbing hempvine (*Mikania scandens*). Additional non-dominant herbaceous cover includes skunk cabbage (*Symplocarpus foetidus*), mile-a-minute vine (*Persicaria perfoliata*), smooth alder seedling (*A. serrulata*), and green ash seedlings (*F. pennsylvanica*). No woody vine stratum was observed.

The emergent portion of the wetland is characterized by water marks, drift deposits, water-stained leaves, surface soil cracks, stunted or stressed plants, and geomorphic position. No tree stratum is present, and multiflora rose (*R. multiflora*) and common raspberry (*Rubus idaeus*) dominate the very sparse scrub-shrub stratum. The composition of the herbaceous stratum contains the same dominant species as the scrub-shrub portions of the wetland.

Functions and values of this wetland system include: ground-water recharge/discharge, floodflow alteration, potential fish habitat, sediment/toxicant retention, nutrient

removal/retention/ transformation, production export, and wildlife habitat. The wetland appears to retain overland flows and slowly return the water back to the water table. The wetland acts as floodplain for the perennial watercourse and retains flows during storm events. The presence of a perennial watercourse with areas of deep pools allows for potential fish habitat, although no fish were observed during the investigation. The dense herbaceous and scrub-shrub stratum as well as areas of diffuse, slow-moving flows aid in the retention of sediment and toxicant as well as the removal, retention, and transformation of nutrients. Additionally, the perennial watercourse allows for the export of nutrients downstream. The wetland is situated in a forested corridor along the highway as well as between residential and commercial properties and provides habitat for several wildlife species tolerant of the nearby roadways and development.

Intermittent Watercourse 1 (INT 1)

Intermittent Watercourse 1 is located west of the Route 15 off-ramp to Route 7, and south of Route 15. The watercourse originates at a 30" RCP that conveys drainage from Route 7 and surrounding uplands, and flows into west into Wetland 2 where the channel loses definition. The substrate in the vicinity of the outfall includes large rock piles, cobble, gravel, sand, and wood chips. The channel is incised near the pipe outfall and blocked by several downed trees and litter from the nearby off-ramp. Sediment deposits are extensive throughout the channel, with large piles of sand noted in portions of the channel and nearby Wetland 2. The channel is approximately 3 feet wide throughout. Vegetation along the channel includes jewelweed (*I. capensis*), white snakeroot (*Ageratina altissima*), mugwort (*Artemisia vulgaris*), and oriental bittersweet (*Celastrus orbiculatus*).

Wetland 2

Wetland 2 is located south of Route 15, west of the Route 15 northbound exit ramp to Main Avenue, and east of the Norwalk River. A commercial property with a parking garage is present south of Wetland 2. Wetland 2 is a palustrine emergent wetland located within a mapped FEMA floodplain and floodway, and is characterized by drift deposits and geomorphic position. The wetland abuts the Norwalk River and receives hydrology from Intermittent Watercourse 1, which feeds into this wetland from the east. The sparse tree canopy is comprised of box elder (*Acer negundo*), and glossy buckthorn composes a sparse shrub stratum. Jewelweed (*I. capensis*) and poison ivy (*Toxicodendron radicans*) dominate the herbaceous stratum, along with mugwort (*Artemesia vulgaris*), rough-leaf goldenrod (*Solidago rugosa*), calico aster (*Symphyotrichum lateriflorum*), and glossy buckthorn seedlings. Fox grape (*Vitis labrusca*) was also noted to dominate the woody vine stratum.

Functions and values of this wetland system include: flood flow alteration, sediment/toxicant retention, nutrient removal/retention/ transformation, sediment/shoreline stabilization, and wildlife habitat. Given its location adjacent to the river, Wetland 2

appears to retain flows during storm events. The dense herbaceous stratum provides sediment trapping. Sedimentation was noted through the intermittent watercourse (INT 1) that flows through Wetland 2. The dense herbaceous vegetation present in Wetland 2 aids in the removal, retention, and transformation of nutrients. Additionally, dense vegetation borders the river and provides shoreline stabilization. The wetland also provides a small patch of habitat for animals tolerant of the surrounding development.

Wetland 3

Wetland 3 is located south of Route 15, east of the Norwalk River, west of Main Avenue, and south of Wetland 2, and lies entirely within the mapped FEMA floodway for the Norwalk River. The wetland is divided into two sections that appear to be peninsulas formed by the periodic backwater of the Norwalk River. The southern section is situated at the base of a steeply sloped hill and extends into the river where a narrow channel caused by backwater from the river has dissected it from the northern portion of the wetland. The northern portion of the wetland is situated in a fairly level area, with water from the Norwalk River present to the east and west. The vegetation on both sections of the wetland appeared to be very similar, and therefore were categorized as the same wetland community. This palustrine scrub-shrub wetland is characterized by saturation at 12 inches, drift deposits, water-stained leaves, drainage patterns, and geomorphic position. Sparse tree canopy is composed of green ash (F. pennsylvanica), and a dense scrub-shrub stratum is dominated almost entirely by silky dogwood (C. amomum). The herbaceous stratum is dominated by jewelweed (I. capensis), with sensitive fern (O. sensibilis) and Virginia creeper (Parthenocissus quinquefolia) also present in the herb layer.

Functions and values of Wetland 3 include: ground-water discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, wildlife habitat, passive recreation, and visual quality/aesthetics. Wetland 3 potentially discharges groundwater to the river during the wet season. The presence of the backwater channel from the Norwalk River provides fish habitat. Dense herbaceous and woody shrub strata aid in sediment and toxicant retention, as well as nutrient removal, retention, and transformation, and sediment/shoreline stabilization. The vegetation as well as its location adjacent to the river provide habitat for a variety of animals, especially small mammals and birds. A business is located immediately adjacent to the northern portion of Wetland 3; landscaping, benches, and walkways are present around the edge of the wetland allowing for some passive recreational uses and providing visual quality/aesthetics.

Norwalk River

The Norwalk River is located west of Main Avenue and east Route 7. The river flows from north to south towards Long Island Sound. The portion of the river within the project limits

lies beyond the tidal influence of Long Island Sound. The width of the channel varies largely from approximately 10 to 120 feet throughout the project limits, with the channel becoming narrowest approximately 1000 feet north of Glover Avenue, and becoming widest approximately 250 north of Glover Avenue. The river had been manipulated through portions of this highly developed area; retaining walls are present along the western bank north of Route 15, and a dam is present approximately 900 feet south of Route 15. Additionally, a small oxbow is present in the vicinity of Wetland 3. Historical aerials from 1934 show the presence of the dam as well as this backwater channel. Footings for a railroad bridge across the river are also present further downstream of the dam. FEMA floodway encompasses the river bank width, with floodplain (100-year and/or 500-year) present beyond either side of the river's designated floodway throughout the project limits.

The Norwalk River is designated as a Class B, B* surface water. Class B surface waters are utilized for recreational use, fish and wildlife habitat, agriculture and industrial supply and other legitimate uses including navigation. Discharges to Class B waters include discharge from public or private drinking water treatment systems, dredging and dewatering, clean water discharges, discharges from industrial and municipal wastewater treatment facilities, and other discharges subject to the provisions of section 22a-430 CGS.

Water depth appeared highly variable throughout the channel, ranging from 2 to 3 feet deep in the center of the channel, to deeper pools in the vicinity of the dam. Additionally, substrate also varied, and was not visible in many areas. Boulder, rocks, and cobble were observed through most visible portions of the river as well as silt, leaf litter, and detritus.

Functions and values of the river include flow conveyance, groundwater discharge, fish and wildlife habitat, production export, streambank stabilization, recreation, and visual quality/aesthetics. Despite manipulations, the river continues to be an important tributary to Long Island Sound. The river is capable of supporting fisheries and other animals that rely on the watercourse for habitat or food, however the dam and the adjacent developments impose limits on the mobility of some of these species. Additionally, the river provides export of products produced upstream, and dense vegetation along the river edges provide shoreline stabilization. The river is wide and deep enough to allow for recreational activities such as kayaking and fishing in various areas throughout the project limits, and provides a visual quality/aesthetic in an otherwise densely developed area.

Wetland 4

Wetland 4 is located west of the Norwalk River, south of Route 15, and east of the railroad track, and is located partially within FEMA floodway and partially within 100-year floodplain. The palustrine forested wetland is characterized by saturation at 10 inches below soil surface, algal mat or crust, and geomorphic position. The wetland acts as a

floodplain for the adjacent river and is bound to the west by railroad tracks. A 24" RCP equalizer pipe hydraulically connects Wetlands 4 and 6 under the existing tracks. Additionally, an upland berm is present through a portion of Wetland 4 and is characterized by upland vegetation including beech (*Fagus grandifolia*) and white ash (*Fraxinus Americana*). The wetland itself is dominated by red maple (*A. rubrum*) with pin oak (*Quercus palustris*) also present throughout the tree stratum. Silky dogwood (*C. amomum*) and glossy buckthorn (*F. alnus*) dominate the scrub-shrub layer; green ash (*F. pennsylvanica*) saplings are also present in this stratum but not dominant. The herbaceous stratum is dominated by arrow-leaf tearthumb (*P. sagittata*) and calico aster (*S. lateriflorum*). Non-dominant herbs include arrow arum (*Peltandra virginica*), climbing hempvine (*M. scandens*), jewelweed (*I. capensis*), and common reed (*P. australis*). Porcelain berry (*Ampelopsis brevipedunculata*) dominated the woody vine stratum.

Functions and values of Wetland 4 include: ground-water discharge, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, and wildlife habitat. Wetland 4 potentially discharges groundwater to the river during the wet season. A dense herbaceous stratum aids in sediment and toxicant retention, as well as nutrient removal, retention, and transformation, and sediment/shoreline stabilization. The vegetation as well as its location adjacent to the river provide habitat for many species of mammals, birds, and possibly reptiles and amphibians, with various cover types available.

Wetland 5

Wetland 5 is located north of Glover Street, west of Main Avenue, and east of the railroad, adjacent to the Norwalk River, and is situated with the designated FEMA floodway. The emergent wetland is located at the base of a riprap embankment and extends down to the river. Wetland 5 is characterized by saturation 10 inches below the soil surface, drift deposits, and geomorphic position. The wetland receives drainage from the surrounding uplands via a 10" clay pipe and an 8" clay pipe that discharge along the western slopes of the wetland. No tree or scrub-shrub strata are present within the wetland. The herbaceous stratum is dominated by false nettle (*Boehmeria cylindrica*), white panicle aster (*S. lanceolatum*), and multiflora rose (*R. multiflora*) seedlings. Non-dominant herbs include true forget-me-not (*Myosotis scorpioides*), purple loosestrife (*Lythrum salicaria*), swamp smartweed (*Persicaria hydropiperoides*), and climbing hempvine (*M. scandens*). No woody vine stratum was present.

Due to its small size, functions and values of this wetland are limited to nutrient uptake, some floodflow alteration, and wildlife habitat. Dense herbaceous growth in the wetland provides nutrient attenuation. Given its location adjacent to the river, the wetland likely retains flows during storm events, however this function is limited by its size. The wetland also likely provides a small patch of habitat for riverine species.

Wetland 6

Wetland 6 is located south of Route 15, west of the railroad tracks, and east of the Route 15 northbound exit to Route 7 northbound, and is bound to the south by steep rock outcrops. The USFWS NWI map classifies a portion of this wetland as Palustrine Unconsolidated Bottom Permanently Flooded Excavated (PUBHx) wetland. The wetland is situated within mapped 100-year and 500-year FEMA floodplain. The palustrine scrubshrub wetland is situated at the base of the railroad embankment as well as the highway embankment and receives hydrology from overland flows; the overland flows appear to have formed an erosional ditch along the steep grade west of the wetland. Wetland 6 is characterized by a high water table 8 inches below the soil surface, saturation to the soil surface, inundation and saturation visible on aerial imagery, sparsely vegetated concave surface, water-stained leaves, and geomorphic position. This wetland is hydraulically connected to Wetland 4, east of the railroad tracks, via a 24" RCP equalizer pipe. Soils in this wetland are organic. In areas where vegetation is present, American hornbeam (Carpinus caroliniana) dominated the sparse tree stratum. Silky dogwood (C. amomum) almost entirely dominates the scrub-shrub stratum. Swamp milkweed (Asclepias incarnata) and American white waterlily (Nymphaea odorata) dominate the herbaceous stratum; climbing hempvine (M. scandens) is also present throughout the herbaceous layer but is not dominant. Fox grape (V. labrusca) and Japanese honeysuckle (Lonicera japonica) are present and dominate the woody vine stratum.

Functions and values for Wetland 6 include: ground water discharge, floodflow alteration, sediment/toxicant retention, nutrient removal/retention/ transformation, and wildlife habitat. The high water table and saturation to surface indicate potential groundwater discharge. The wetland's location at the base of embankments and organic soils indicate that the wetland receives and retains hydrology from the surrounding uplands. The presence of dense scrub-shrub and herbaceous understory aid in sediment/toxicant retention and nutrient removal, retention, and transformation. The wetland and surrounding uplands appear to function as a part of a wildlife corridor and habitat for wildlife such as mammals and birds with evidence of deer was noted during the field investigation.

Wetland 7

Wetland 7 is located west of the railroad tracks, east of Route 7, and south of the Route 15/Route 7 interchange. The palustrine scrub-shrub wetland is an isolated depression situated at the top of a rock outcrop and is characterized by inundation and saturation visible on aerial imagery, and water-stained leaves. Vegetation is lacking within the wetland; however, hydrophytes are present along the edges. A sparse tree stratum is dominated by pin oak (*Q. palustris*) along the wetland boundary. The scrub-shrub stratum is dominated by highbush blueberry (*Vaccinium corymbosum*), pin oak saplings, mountain laurel (*Kalmia latifolia*), and coastal sweet pepperbush (*Clethra alnifolia*).

Herbaceous and woody vine vegetation is completely absent from the wetland and its boundary.

The functions and values of Wetland 7 are extremely limited due to its small size and location on top of a rock outcrop. The only functions of the wetland appear to be floodflow retention and wildlife habitat. During storm events water from the surrounding upland gathers in the depression, ponds, and is slowly returned to the water table or evaporates. The wetland is located in a forested hilltop with a relatively sparse understory and is likely utilized by several small mammals and bird species as a water source. It should be noted that no ponding was observed during the September delineation nor during a November revisit. Observations of ponding are based on current and historical aerial imagery. Ponding may have been absent due to the moderate drought that was occurring during the time of the investigation.

Wetland 8

Wetland 8 is located in the Route 15 Northbound-Route 7 Northbound interchange gore area. The USFWS NWI map classifies a portion of this wetland as Palustrine Forested Broad-leaved Deciduous Seasonally Flooded/Saturated (PFO1E) wetland. The wetland is bound on all sides by roadway and receives hydrology from Intermittent Watercourse 2, which lies to the north. This palustrine forested wetland is characterized by a sparsely vegetated concave surface water-stained leaves, drainage patterns, moss trim lines, and saturation visible on aerial imagery. The tree stratum is dominated red maple (*A. rubrum*). Green ash (*F. pennsylvanica*) saplings, coastal sweet pepperbush (*C. alnifolia*), and red maple saplings dominate the shrub stratum. The herbaceous stratum is dominated by false nettle (*B. cylindrica*) and green ash seedlings. American water horehound (*Lycopus americanus*) is also present but non-dominant. No woody vine stratum was observed.

Functions and values of Wetland 8 include: ground-water recharge, flood flow alteration, sediment/toxicant retention and nutrient removal/retention/ transformation, and wildlife habitat. The wetland retains water from the surrounding uplands during storm events and slowly returns it to the water table. Dense woody vegetation aids in retaining sediment and toxicants from the surrounding roadways as well as removing, retaining, and transforming nutrients. The gore area that the wetland is situated in is forested and likely provides habitat for species tolerant of the surrounding roadway. The wetland did display evidence of shallow standing water and may provide amphibian breeding habitat. Evidence of deer in the form of scat and remains were observed within the wetland.

Intermittent Watercourse 2 (INT 2)

Intermittent Watercourse 2 is located in the Route 7 Northbound/Route 15 Northbound interchange gore area and conveys flows to Wetland 8. The channel varies in width, but on average is approximately 3 feet wide. The watercourse receives sheetflow from the

surrounding uplands and flows southwest towards the wetland. Boulders and rocks form the banks the substrate is composed of cobble, silt, and leaf litter. The surrounding forested habitat consists of red maple (*A. rubrum*) and red oak (*Q. rubra*) throughout the canopy, with red maple saplings, coastal sweet pepperbush (*C. alnifolia*), and mountain laurel (*K. latifolia*) forming the understory along the banks.

Intermittent Watercourses 3 and 4 (INT 3 and 4)

Intermittent Watercourses 3 and 4 are located east of Route 7, north of Perry Avenue, and west of Pearl Street. Intermittent Watercourse 3 begins along the Route 7 northbound embankment at the outfall of a 36" CMP which carries drainage from Route 7. At its upper reach near the road, the channel is narrow, approximately 2 feet wide with a rock, cobble, and gravel substrate. The banks appear eroded with roots exposed. The channel flows east down a steep embankment where it turns south and begins flowing towards Perry Avenue. The channel loses definition in this area and sediment is present and accumulated in a wide, flat area approximately 10 feet wide. The channel becomes more defined further south, it becomes narrower, approximately 2 feet wide, and continues to display signs of deposition of sediment. The channel eventually dissipates and converts to sheet flow into a field.

Intermittent Watercourse 4 also begins along the Route 7 northbound embankment at a 15" RCP outfall and flows east where it converges with Intermittent Watercourse 3. Intermittent Watercourse 4 is a channel approximately 1-foot-wide, with a fine gravel and sand substrate. The channel also shows signs of scour and erosion with roots exposed. Sedimentation is high throughout the channel and at the convergence with Intermittent Watercourse 3.

Both Intermittent Watercourses 3 and 4 are the result of drainage from the roadway. The high sedimentation and evidence of erosion and scour indicate that they convey high velocities while flowing. Drift deposits in the form of leaves, branches, and mainly refuse including plastic bottles and bags have accumulated significantly near Perry Avenue and may account for the loss of channel definition in some portions of Intermittent Watercourse 3. Forested uplands near these watercourses are characterized by white pine (*Pinus strobus*), northern catalpa (*Catalpa speciosa*), green ash (*F. pennsylvanica*), multiflora rose (*R. multiflora*), goldenrod (*Solidago sp.*), and oriental bittersweet (*C. orbiculatus*).

Wetland 9

This wetland is a CTDOT wetland mitigation site created in 1990 as mitigation for construction of the Route 7 expressway in the area. This site is one of several mitigation sites constructed under US ACOE permit file 198500874. The permit notes that approximately 8.1 acres of PEM and PSS would be created.

Wetland 9 is located north of the Route 7/Route 15 southbound interchange, east of Route 7 northbound, and west of Glover Avenue. The USFWS NWI map classifies a portion of this wetland as Palustrine Emergent Persistent Semi-Permanently Flooded wetland with a Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded watercourse in that runs through the wetland. Field observations indicated that Wetland 9 has two areas of inundation that also appear to support emergent vegetation, and a palustrine forested wetland along the southern edge of the wetland. The wetland is located at the base of a steep embankment to Route 7 and is characterized by a channel that flows from north to south in the northern portion of the wetland; the water becomes ponded in two areas within the central portion of the wetland. The ponded area becomes constricted at the southern portion of the wetland and forms a channel that continues to meander through the floodplain wetland. Ultimately, the flows converge with the Norwalk River outside the project limits

Hydrologic features for the wetland include inundation visible on aerial imagery, water-stained leaves, aquatic fauna, saturation visible on aerial imagery, and geomorphic position. This wetland receives flows from Wetland 10 through pipes that flow from west to east under Route 7; these pipes include four sets of 24" RCP's, and one 42" RCP. Wetland 9 also receives drainage from Route 7 northbound via two 12" RCP's. Wetland 9 is dominated by red maple (*A. rubrum*); green ash (*F. pennsylvanica*), and swamp white oak (*Quercus bicolor*) are also present but not dominant in the tree stratum. Spicebush (*Lindera benzoin*), multiflora rose (*R. multiflora*), and red maple saplings all dominate the scrub-shrub stratum. Common reed (*P. australis*) and jewelweed (*I. capensis*) are dominant in the herbaceous stratum; non-dominant herbs also include marsh fern (*Thelypteris palustris*), posion ivy (*T. radicans*), sensitive fern (*O. sensibilis*), swamp smartweed (*P. hydropiperoides*), and false nettle (*B. cyclindrica*). The woody vine stratum is dominated by oriental bittersweet (*C. orbiculatus*), fox grape (*V. labrusca*), and porcelainberry (*A. bervipedunculata*).

Wetland 9 provides the following functions and values: ground-water recharge/discharge, flood flow alteration, potential fish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, and wildlife habitat. Wetland 9 has a watercourse and ponding present, suggesting areas of groundwater discharge. The flat, and in some areas concave, nature of the wetland as well as its location at the base of a steep grade and adjacent to a perennial watercourse allows for retention of water during a storm event. The presence of a persistent pond and perennial watercourse provides potential habitat for fisheries. Dense vegetation and slow moving water through ponded areas allow for sediment and toxicant retention, as well as nutrient removal, retention, and transformation. The presence of a perennial watercourse allows for the export of nutrients downstream. Dense woody vegetation is present along the edge of ponded areas, stabilizing sources of sediment and the shoreline. Additionally,

the wetland is located in a larger forested corridor, and therefore likely supports several bird species, deer, small mammals, fish, and amphibians.

Wetland 10

This wetland is a CTDOT wetland mitigation site created in 1990 as mitigation for construction of the Route 7 expressway and also is one of several mitigation sites constructed under US ACOE permit file 198500874. The permit notes that approximately 8.1 acres of PEM and PSS would be created.

Wetland 10 is located west of Route 7, north of Route 15, and east of Perry Avenue; a transmission ROW runs through the wetland from north to south. NWI mapping classifies this area as both a Palustrine Emergent Phragmites australis Seasonally Flooded/Saturated (PEM5E) wetland and a Palustrine Emergent Persistent Seasonally Flooded/Saturated (PEM1E) wetland. The wetland is located at the base of a steep roadway embankment, and is bound to the west, and a small portion to the east by vertical rock outcrops, and appears to contribute flows to Wetland 9 through four sets of 24" RCP pipes and one 42" RCP under Route 7. Wetland 10 is characterized by surface water (less than 1 inch), high water table and saturation to soil surface, as well as inundation visible on aerial imagery, aquatic fauna, hydrogen sulfide odor, saturation visible on aerial imagery, and geomorphic position. The wetland lacks any notable tree and scrub-shrub strata. The herbaceous stratum is dominated by broad-leaf cattail (Typha latifolia), sensitive fern (O. sensibilis), tussock sedge (Carex stricta), and soft rush (Juncus effusus). Other non-dominant herbs include highbush blueberry (V. corymbosum) seedlings, swamp smartweed (P. hydropiperoides), and false nettle (B. cylindrica). No woody vine stratum was observed.

Wetland 10 functions provides the following and values: ground-water recharge/discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, sediment/shoreline stabilization, and wildlife habitat. Wetland 10 has ponding present throughout. The concave nature of the wetland as well as its location at the base of a steep grade allows for retention of water during a storm event. The presence of a persistent pond provides potential habitat for fisheries. Dense vegetation and slow moving water through ponded areas allow for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, aiding in water quality. Dense woody vegetation is present along the edge of ponded areas, stabilizing sediment and the shoreline. Additionally, the wetland is located in a larger forested corridor, and therefore likely supports several bird species, deer, small mammals, and amphibians. Unidentified frog species were observed during the delineation.

Wetland 11

Wetland 11 is located west of the powerline ROW, north of Route 15, and east of Perry Avenue. USFWS NWI map classifies this feature as a Palustrine Aquatic Bed Permanently Flooded Excavated wetland (PABHx); field investigations found forested wetland surrounding the ponded area, and therefore classified the feature as a palustrine forested wetland. The wetland is characterized by inundation visible on aerial imagery, water-stained leaves, drainage patters, and geomorphic position. The ponded area also exhibited several other hydrologic indicators including several inches of standing water and an algal mat. Wetland 11 is bisected by an impervious access road, a 12" RCP pipe connects both sides of the wetland under the access road. The wetland also connects to Wetland 12 to the south via Intermittent Watercourse 5.

The palustrine forest is dominated by red maple (*A. rubrum*) and American elm (*Ulmus americana*). The scrub-shrub stratum is dominated by multiflora rose (*R. multiflora*) and American elm saplings. Panicled hydrangea (*Hydrangea paniculata*), red maple saplings, pin oak (*Q. palustris*) saplings, and Japanese barberry (*Berberis thunbergii*) are also present in the scrub-shrub stratum but not dominant. Green ash (*F. pennsylvanica*) seedlings and greenbrier (*Smilax rotundifolia*) dominate the herbaceous stratum; poison ivy (*T. radicans*), fowl manna grass (*Glyceria striata*), and Virginia creeper (*P. quinquefolia*) are present but not dominant. Oriental bittersweet (*C. orbiculatus*) dominates the woody vine stratum. Vegetation is lacking in the vicinity of the inundated area.

Wetland 11 provides the following functions and values: ground-water recharge/discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, sediment/shoreline stabilization, and wildlife habitat. Wetland 11 has ponding present in the northern portion suggesting areas of groundwater discharge. The concave nature of the wetland allows for retention of water during a storm event. The presence of a persistent pond provides potential habitat for fisheries. Dense vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation. Dense woody vegetation is present along the edge of ponded area, stabilizing sources of sediment and the shoreline. Additionally, the wetland is located in a larger forested corridor, and therefore likely supports several bird species, deer, small mammals, reptiles, and may support breeding habitat for amphibians.

Intermittent Watercourse 5 (INT 5)

Intermittent Watercourse 5 is located north of Route 15, west of the powerline ROW and east of Perry Avenue. The watercourse hydraulically connects Wetlands 11 and 12. This intermittent watercourse is approximately 3 feet wide with a silt and leaf litter substrate. Drift deposits and water-stained leaves were also noted in the channel. The watercourse receives flows from the surrounding uplands and wetlands, and conveys flows during

storm events. The surrounding forest consists of a red maple (*A. rubrum*) dominated canopy with sugar maple (*Acer saccharum*), red oak (*Q. rubra*), and white pine (*P. strobus*) saplings understory. Herbaceous growth is present along the channel and includes green ash (*F. pennsylvanica*), Virginia creeper (*P. quinuefolia*), and greenbrier (*S. rotundifolia*).

Wetland 12

Wetland 12 is located east of Perry Avenue, north of the Route 15 southbound entrance ramp, and the western limit is partially within the powerline ROW. The wetland is situated at the base of a steep roadway embankment and extends into the powerline ROW. Intermittent Watercourse 5 connects Wetland 12 to Wetland 11 to the north. The palustrine emergent wetland is characterized by water-stained leaves and geomorphic position, and receives drainage from a 15" CMP that discharges to the northern embankment of the Route 15 southbound on-ramp. When water levels are high, water flows west out of the wetland and into a catch basin which ultimately discharges to Intermittent Watercourse 8, hydraulically connecting Wetland 12 with Wetlands 14 and likely 15. Red maple (A. rubrum) and black willow (Salix nigra) dominate the sparse tree canopy; green ash (F. pennsylvanica) is also present but not dominant. Button-bush (Cephalanthus occidentalis) and panicle hydrangea (H. paniculata) dominate the sparse scrub-shrub stratum; highbush blueberry (*V. corymbosum*) is present but not dominant. The herbaceous stratum is very diverse and dominated by narrow-leaf cattail (Typha angustifolia), harlequin blueflag (Iris versicolor), Virginia Marsh St. Johnswort (Hypericum virginicum), and false nettle (B. cylindrica). Rough bedstraw (Galium asprellum), marsh fern (T. palustris), arrow-leaf teathumb (P. sagittata), smooth beggartick (Bidens laevis), fowl manna grass (G. striata), and soft rush (J. effusus) were also present but not dominant. No woody vine stratum was noted.

Wetland 12 provides the following functions and values: ground-water recharge, flood flow alteration, sediment/toxicant retention, nutrient removal/retention/transformation, and wildlife habitat. The wetland's location at the base of an embankment and relatively flat topography allow for the retention of water and for groundwater to slowly be returned to the water table after storm events. Dense vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, preventing the degradation of water quality. Additionally, the wetland is located in a larger forested corridor and adjacent to a maintained powerline ROW, and therefore likely supports several bird species, deer, small mammals, and reptiles and amphibians.

Wetland 13

Wetland 13 is located south of Route 15, west of Route 7, and east of Perry Avenue. Wetland 13 consists of a palustrine emergent and forested wetland complex in a forested setting situated at the base of the highway embankment. The emergent portion along the

eastern edge is characterized by an algal mat or crust, surface soil cracks and geomorphic position, whereas the forested portion to the south and west is characterized by sparsely vegetated concave surface, water-stained leaves, surface soil cracks, and geomorphic position. Intermittent Watercourse 9 conveys flows into the wetland, and Intermittent Watercourse10 conveys flows out of the wetland.

The emergent portion of the wetland lacks a tree stratum, although nearby trees rooted outside of the wetland do provide some canopy cover. A very sparse shrub stratum is dominated by coastal sweet pepperbush (*C. alnifolia*) and slippery elm (*Ulmus rubra*). The herbaceous layer is dominated by tussock sedge (*C. stricta*) and rice cut grass (*Leersia oryzoides*). Non-dominant herbs include Pennsylvania smartweed (*Persicaria pensylvanica*), red fescue (*Festuca rubra*), rough-leaf goldenrod (*S. rugosa*), and greenbrier (*S. rotundifolia*). Fox grape (*V. labrusca*) dominates the sparse woody vine stratum.

The majority of the forested portion of the wetland lacks understory; trees are present mainly along the edges of the wetland or growing amongst rocks and boulders in the central portion of the wetland. Red maple (*A. rubrum*) and American elm (*U. americana*) dominate the tree canopy. Coastal sweet pepperbush, highbush blueberry (*V. corymbosum*), and green ash (*F. pennsylvanica*) saplings dominate the scrub-shrub stratum and are more highly concentrated in the southern portion. The herbaceous stratum is dominated by greenbrier, but overall is lacking. Fox grape is also present in the woody vine stratum.

Wetland 13 provides the following functions and values: ground-water recharge, floodflow alteration, and wildlife habitat. The wetland's location at the base of an embankment and concave topography allow for the retention of water and for groundwater to slowly be returned to the water table after storm events. Additionally, the wetland is located in a larger forested corridor and adjacent to a maintained powerline ROW, and therefore likely supports several bird species, deer, small mammals, and reptiles and amphibians. The wetland's sparse understory limits its functions and values.

Intermittent Watercourses 6 and 7 (INT 6 and 7)

Intermittent Watercourse 6 is located south of Route 15 and west of Route 7, east of Wetland 13, and conveys flows from east to west into the emergent portion of Wetland 13. Intermittent Watercourse 6 is approximately 4 feet wide, beginning with a riprap substrate and transitioning to a cobble, silt, and leaf litter substrate as it approaches the wetland. Fallen tree branches are present across the channel and may block some flows. Flows likely originate from the steep highway embankment to the north and east and an 18" RCP outfall that conveys drainage from catch basins located along the Route 15 Northbound off-ramp.

Intermittent Watercourse 7 is located east of Perry Avenue, south of Route 15, and west of Wetland 13, and conveys flows out of the forested portion of the wetland. Intermittent Watercourse 7 is located on the western portion of the wetland and conveys water from east to west. The channel is approximately 1-foot-wide with a silt, cobble, and leaf litter substrate; woody debris was also present in the channel. The channel loses definition as it approaches the gentle incline to Perry Avenue, and drains to a catch basin present in this vicinity.

Intermittent Watercourses 8 and 9 (INT 8 and 9)

Intermittent Watercourse 8 begins at a 30" RCP drainage outfall west of Perry Avenue, which is partially buried by sediment. During high water levels, the watercourse also receives hydrology from Wetland 12 via a catch basin located immediately west of Wetland 12. The channel varies in width but is approximately 3 feet wide on average with a silt and cobble substrate. Sedimentation was noted within the channel and the pipe outfall. The southern bank that runs parallel to the Route 15 embankment is undercut and eroded in some areas exposing roots. The banks of the watercourse are densely vegetated with herbs including poison ivy (T. radicans) and shrubs including silky dogwood (C. amomum). Intermittent Watercourse 8 meanders through the forest understory and becomes braided, eventually diverging to form a second channel, Intermittent Watercourse 9, which flows offsite to the northwest. Intermittent Watercourse 8 continues to flow west into the vicinity of Wetland 14 before flowing offsite to the northwest. Intermittent Watercourse 9 is very similar in character to Intermittent Watercourse 8, but narrows to approximately 1.5-feet wide. Drift deposits in the form of small branches and woody debris were noted in the channel. A larger wetland system that appears to be connected to Wetland 14 is present off-site to the north, therefore Intermittent Watercourses 8 and 9 appear to contribute to its hydrology.

Wetland 14

Wetland 14 is located west of Perry Road and north of Route 15 near the western project limits. The forested wetland appears to extend off-site to the north, where it likely receives hydraulic input from Intermittent Watercourses 8 and 9; it is also likely that Wetland 14 and 15 are hydraulically connected off-site to the north. Wetland 14 is characterized by water-stained leaves, drainage patterns, and geomorphic position. The tree canopy is dominated by red maple (*A. rubrum*) and American elm (*U. americana*). A dense shrub understory is dominated by spicebush (*L. benzoin*) and silky dogwood (*C. amomum*). Additional non-dominant shrubs include coastal sweet pepperbush (*C. alnifolia*) and multiflora rose (*R. multiflora*). Poison ivy (*T. radicans*) dominates the herbaceous stratum; bristly dewberry (*Rubus hispidus*) rough-leaf goldenrod (*S. rugosa*), American elm seedlings, and sensitive fern (*O. sensibilis*) were also present but not dominant herbs observed in the wetland. Fox grape (*V. labrusca*) and poison ivy dominate the woody vine stratum.

The Wetland 14 system, including the area that extends off-site to the north provides the following functions and values: ground-water discharge, floodflow alteration, sediment and toxicant retention, nutrient removal/retention/ transformation, and wildlife habitat. Groundwater seeps were observed slightly north of the project limits, indicating that the wetland system performs groundwater discharge. The concave nature of the site and its location adjacent to a steep embankment and nearby intermittent watercourse allow the wetland to retain flood flows during storm events. Dense woody vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, preventing the degradation of water quality. Additionally, the wetland is located in a larger forested corridor and adjacent to the highway, and therefore likely supports several bird species, deer, small mammals, reptiles, and amphibians.

Intermittent Watercourse 10 (INT 10)

Intermittent Watercourse 10 originates from an 18" RCP pipe outfall at the base of the Route 15 embankment that appears to carry drainage from the highway. A small riprap splash pad is located at the base of the outfall. The channel is approximately 4 feet wide with a silt and leaf litter bottom, with heavy sedimentation. Water-stained leaves and woody debris were also noted in the channel. The watercourse is situated in a forested area, however trees in the vicinity of the channel have recently been cleared. Some vegetation, namely multiflora rose (*R. multiflora*), oriental bittersweet (*C. orbiculatus*), and greenbrier (*S. rotundifolia*), hang over portions of the channel. The watercourse flows west, eventually flowing into Wetland 15 where the channel loses definition and transitions to sheet flow.

Wetland 15

Wetland 15 is located at the western limit of the project, north of Route 15 and west of Wetland 14. The palustrine scrub-shrub wetland extends off-site to the north; it is also likely that Wetland 15 and 14 are hydraulically connected off-site to the north. Wetland 15 is characterized by high water table and saturation 8 inches below the surface, water-stained leaves, and geomorphic position. The wetland receives flows from Intermittent Watercourse 10 as well as a 15" RCP outfall along the northern embankment of the Route 15 southbound on-ramp that appears to carry drainage from the roadwat. Pussy willow (Salix discolor) dominates an extremely sparse tree stratum. Pussy willow also dominates the shrub stratum in addition to multiflora rose (R. multiflora). Wineberry (R. phoenicolasius) is present in the shrub stratum, but not dominant. Arrow-leaf tearthumb (P. sagittata), calico aster (S. lateriflorum), rough-leaf goldenrod (S. rugosa), and Japanese knotweed (Polygonum cuspidatum) dominate the herbaceous stratum. Marsh fern (T. palustris), poison ivy (T. radicans), sensitive fern (O. sensibilis), broad-leaf cattail (T. latifolia), curly dock (Rumex crispus), and prickly sedge (Carex stipata) are also

present in the herb stratum but non-dominant. Oriental bittersweet (*C. orbiculatus*) and fox grape (*V. labrusca*) dominate the woody vine stratum.

The Wetland 15 system, including the area that extends off-site to the north provides the following functions and values: ground-water discharge, flood flow alteration, sediment toxicant retention, nutrient removal/retention/ transformation, and wildlife habitat. Groundwater seeps were observed slightly north of the project limits, indicating that the wetland performs groundwater discharge. The concave nature of the site and its location adjacent to a steep embankment and nearby intermittent watercourse allow the wetland to retain flood flows during storm events. Dense woody and herbaceous vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, preventing the degradation of water quality. Additionally, the wetland is located in a larger forested corridor and adjacent to the highway, and therefore likely supports several bird species, deer, small mammals, reptiles, and amphibians.

5.0 ADDITIONAL CONSIDERATIONS

Previous Delineations

Two areas previously identified as wetlands by Connecticut Department of Transportation during the 2007 delineation were investigated during this delineation but were found to not meet the definition of a wetland according to the ACOE manual. Data point information was collected at these two locations.

The first location, Sample Point 1 "SP-1", is situated west of Route 7 and north of Route 15, between Wetland 10 and 12. The site was a small depression characterized by a sparsely vegetated concave surface with water-stained leaves, red maple (*A. rubrum*) in the tree canopy and very sparse scrub-shrub stratum. Oriental bittersweet (*C. orbiculatus*) was also dominant in the woody vine stratum. No herbaceous stratum was observed. Despite the presence of hydrologic indicators and hydrophytic vegetation, the soil was bright and fairly well-drained with no redoximorphic features, therefore it failed to meet any hydric soil indicators, and also did not qualify as state wetland.

The second location, Sample Point 2 "SP-2", is situated at the base of a hillslope east of Route 7, south of Route 15, and north of Perry Avenue, and receives flows from INT 6 and 7. SP-2 is characterized by drift deposits and geomorphic position. The tree canopy is dominated big-tooth aspen (*Populus grandidentata*) and northern catalpa (*C. speciosa*). The scrub-shrub stratum is dominated by multiflora rose (*R. multiflora*), and the herb layer is dominated by mugwort (*A. vulgaris*) and Canada goldenrod (*Solidago canadensis*). Multiflora rose and narrow-leaf cattail (*T. angustifolia*) are also present in the herbaceous layer but not dominant. Oriental bittersweet is dominant in the woody vine stratum. The vegetation failed to meet any of the hydrophytic vegetation indicators. Despite a thin layer of mucky silt loam, the soils did not meet any of the hydric soil indicators, did not appear

to be poorly-drained, and showed no signs of redoximorphic features. Therefore, it failed to meet federal or state wetland definitions.

Stormwater Basin

An excavated stormwater basin and riprap lined swale is present within the project limits east of Wetland 1. The basin is steeply sloped along the west, north, and east sides, and gently sloped along the south where the riprap swale is located. The swale conveys water to the west towards Wetland 1 and Perennial Watercourse 1 when water levels in the basin are high. A corrugated plastic pipe located along the eastern boundary appears to convey flows into the basin. The water is approximately 8 inches deep along the edges of the basin, but appeared to exceed 12 inches in the more central portions. The basin appears to have an organic substrate consisting of muck, leaf litter, and detritus. Aquatic plants including common duckweed (Lemna minor) and pondweed (Potamogeton amplifolius) were noted in deeper portions of the basin. Vegetation surrounds the basin, but is rooted outside the water on the slopes. Observed vegetation included red maple (A. rubrum), green ash (F. pennsylvanica), multiflora rose (R. multiflora), glossy buckthorn (F. alnus), wineberry (R. phoenicolasius), oriental bittersweet (C. orbiculatus), grape (Vitis sp.), and poison ivy (T. radicans). A large amount of refuse, namely plastic bags, were present in the water and along the edges of the basin. A green frog (Rana clamitans) was seen jumping into the water. No egg masses, tadpoles, or spermatophores were observed in the basin.

Potential Vernal Pools

Amphibian breeding, specifically spotted salamander (*Ambystoma maculatum*) breeding, was recorded in and around Connecticut as early as the first week of March, however a cold spell delayed further breeding until the first week of April. Spotted salamander and wood frog (*Rana sylvatica*) breeding was recorded on April 3, 2017 in nearby areas (VernalPool Listserv), therefore the surveys conducted on April 19, 2017 were felt to be able to capture evidence of initial breeding movements of both species.

During the wetland delineation in September, two wetlands, Wetland 8 and 11 were noted to exhibit vernal pool characteristics, therefore both wetlands were investigated during the spring visit as potential vernal pools. Additionally, Wetlands 7, 9, 10, and 12 were also investigated during the April 19, 2017 investigation as they appeared to maintain water levels deep enough to support amphibian breeding. Dip-netting and water sampling of the pools was completed; visual and auditory surveys of the pools and surrounding uplands as well as log/rock rolling were also conducted. None of the pools or wetland areas investigated exhibited evidence of breeding amphibians. No egg masses, spermatophores, larvae, tadpoles or obligate vernal pool species were observed in any of the areas. A single frog was observed in Wetland 10 during dip-netting, but was not caught and therefore could not be identified to species; frogs were also observed in

Wetland 10 during the fall wetland delineation, however due to the lack of egg masses, spermatophores, and larvae it does not appear that the adult frogs utilize this area as breeding habitat.

6.0 SUMMARY

BL Companies identified fifteen wetlands within the project site in Norwalk, Connecticut. Five of these wetland systems (Wetland 1, 9, 10, 11, and 13) were found to exhibit two cover types; seven palustrine emergent (PEM) wetlands, six palustrine scrub-shrub (PSS) wetlands, six palustrine forested (PFO) wetlands, and one palustrine aquatic bed wetland are present within the project limits. Several of these wetland also appeared to extend off-site. Hydric soils, dominant hydrophytic vegetation, and wetland hydrology were all observed within the wetland locations satisfying the criteria of the State of Connecticut and Federal ACOE methodology for wetland delineations. In addition to the descriptions within the previous sections of this report, supporting data forms and photographs are attached that document the findings of the onsite field investigations.

Additionally, ten intermittent watercourses, one pond, and two perennial watercourses, including the Norwalk River, were documented within the project limits. Two previously delineated wetlands were investigated and deemed to not meet the federal or state wetland definitions. Data was collected at these locations and labeled SP 1 and SP 2. Furthermore, a spring investigation utilizing dip-netting, water sampling, visual and auditory sampling was conducted to determine if any suspected wetlands function as vernal pools. Investigations suggest that none of the suspected wetlands currently function as breeding habitat for vernal pool obligate species. Wetland delineation datasheets and photos of the fall and spring investigations can be found in the appendices.

7.0 PREPARER

Rachael Hyland, WPIT, Certified Associate Ecologist

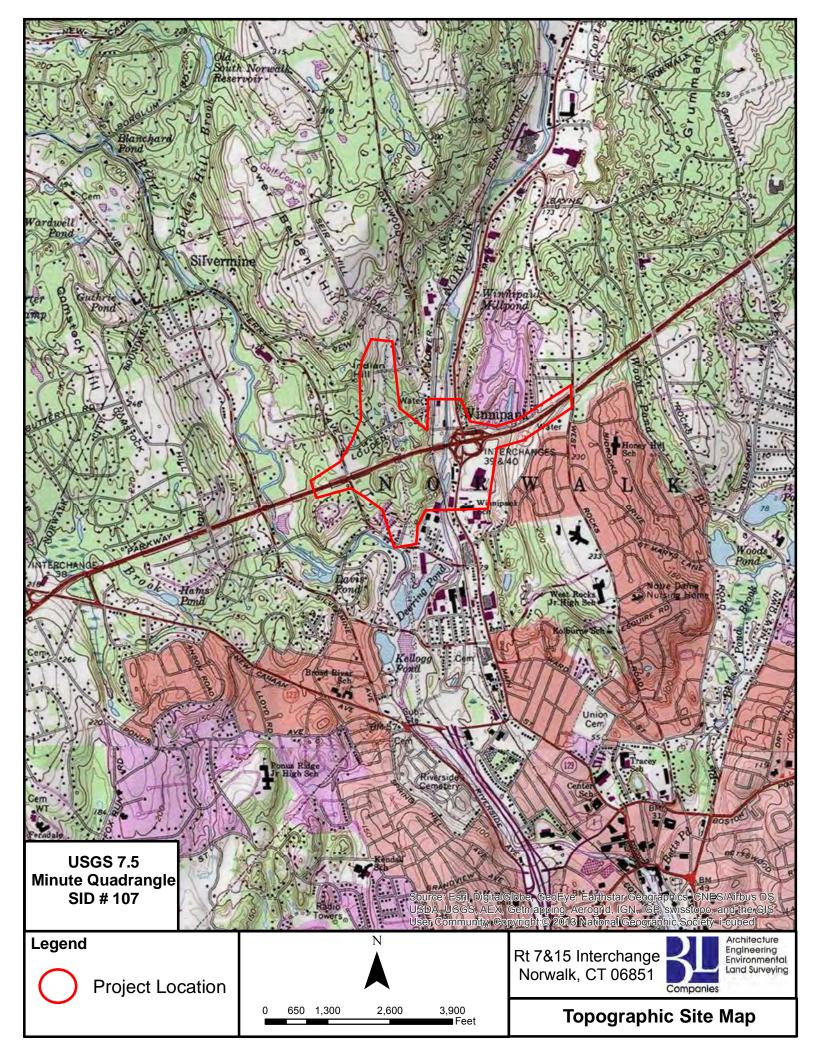
Ms. Hyland holds a Bachelor's degree in Ecology and Evolutionary Biology and has 4 years of experience in environmental sciences. Her specialty lies in ecological assessments and animal identification, specifically Connecticut species of reptiles, amphibians, and mammals including notable experience with bats. She is a Certified Associate Ecologist with the Ecologist Society of America. Ms. Hyland is also trained in wetland and upland plant identification and has assisted in federal and state delineations throughout Connecticut, Ohio, Virginia, and Alabama. Ms. Hyland is a Wetland Professional in Training with the Society of Wetland Scientists and has completed Basic Wetland Delineator Training with the Institute for Wetland Education and Environmental Research. Ms. Hyland's responsibilities include assisting with wetland delineations, permit preparation, performing environmental site assessments, vernal pool surveys, agency coordination, ecological assessments, and the preparation of client reports.

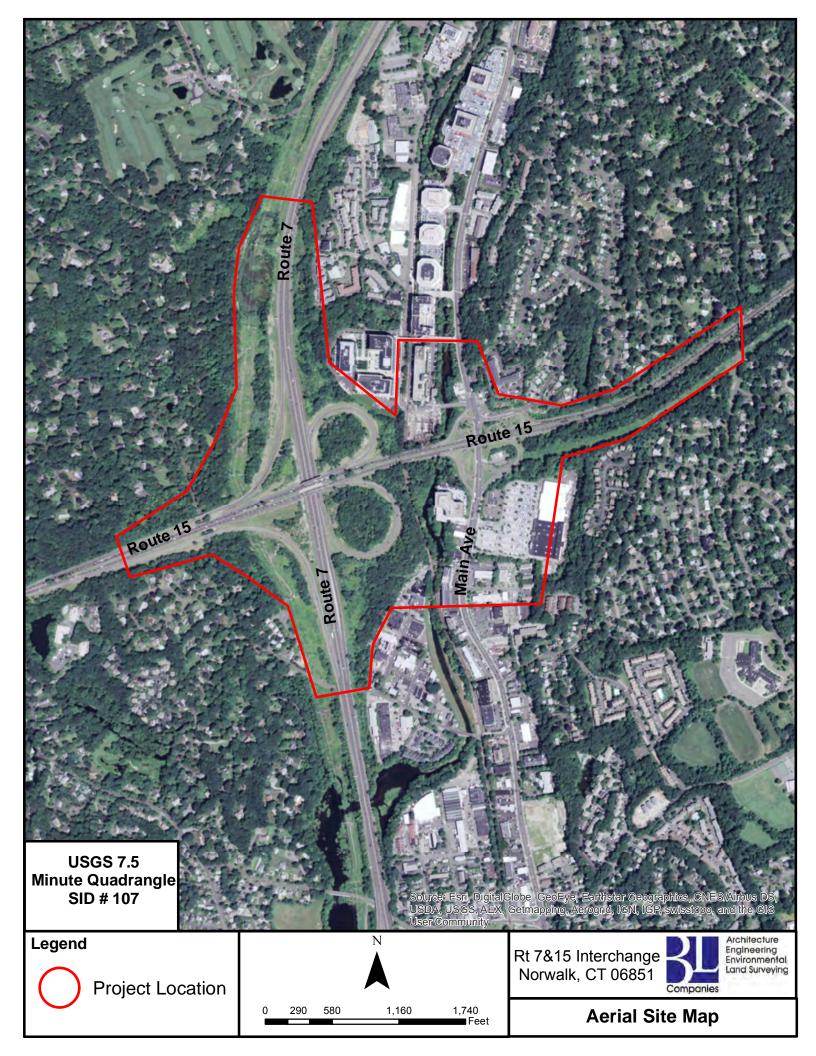
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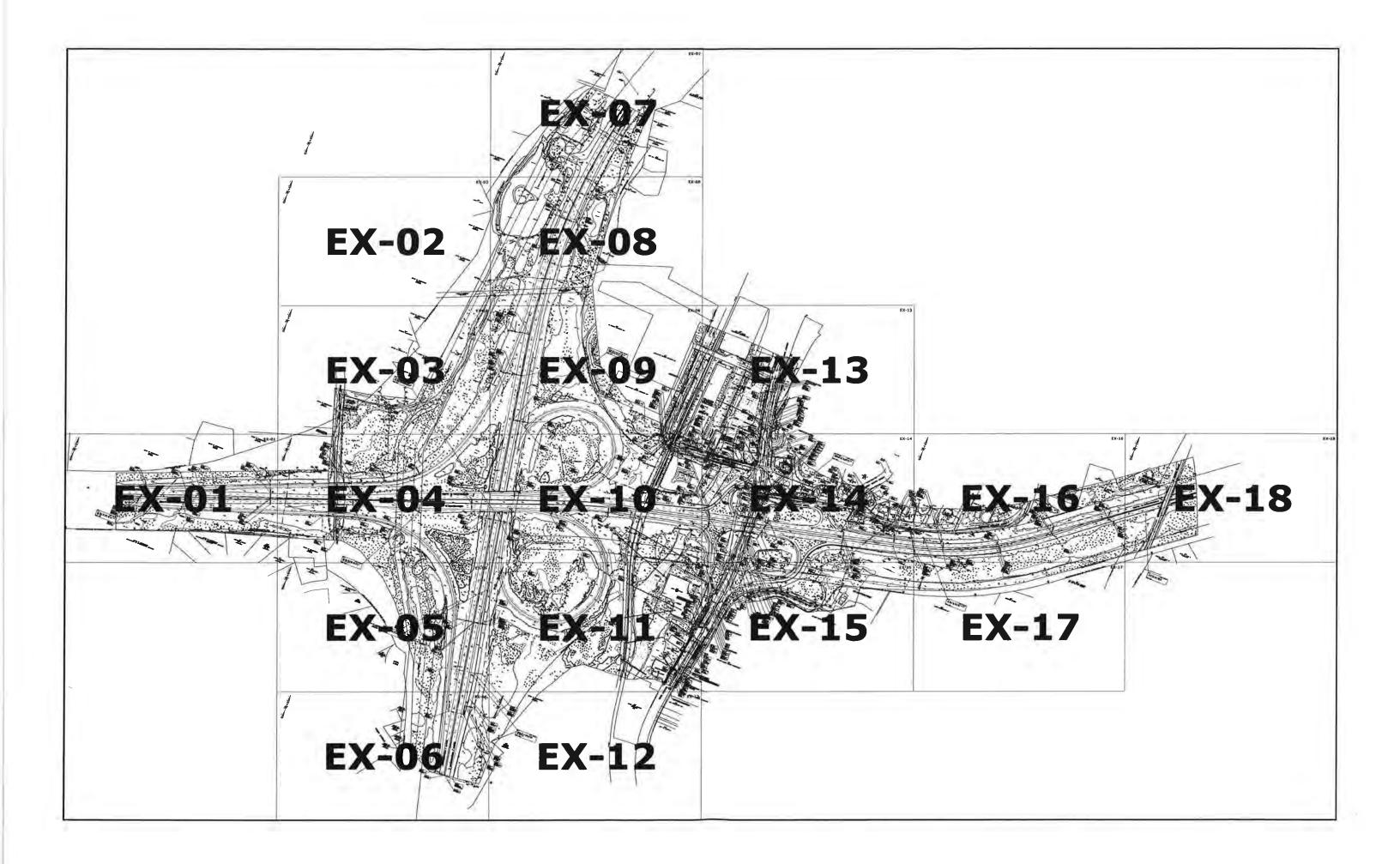
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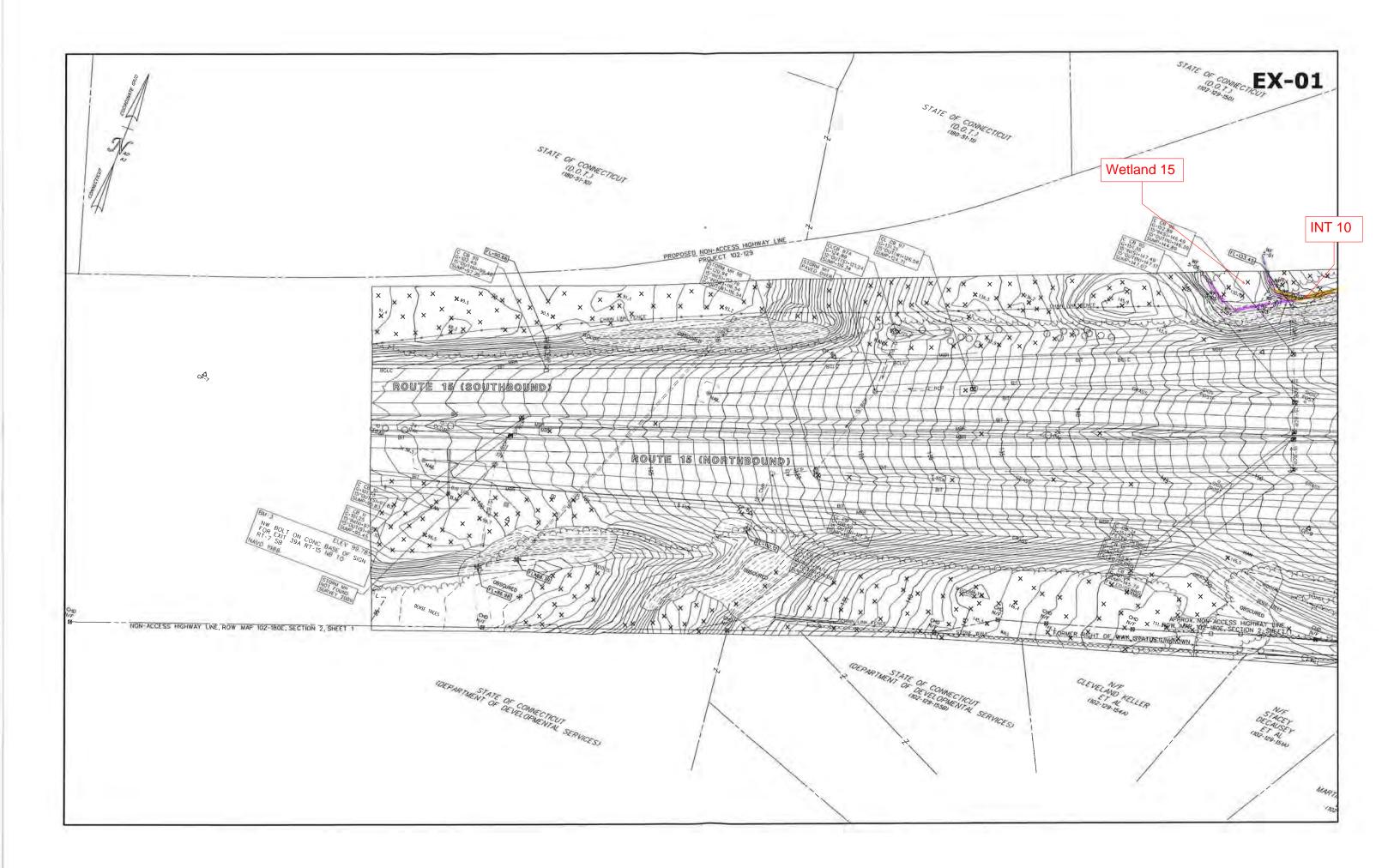
APPENDIX A: Location Mapping

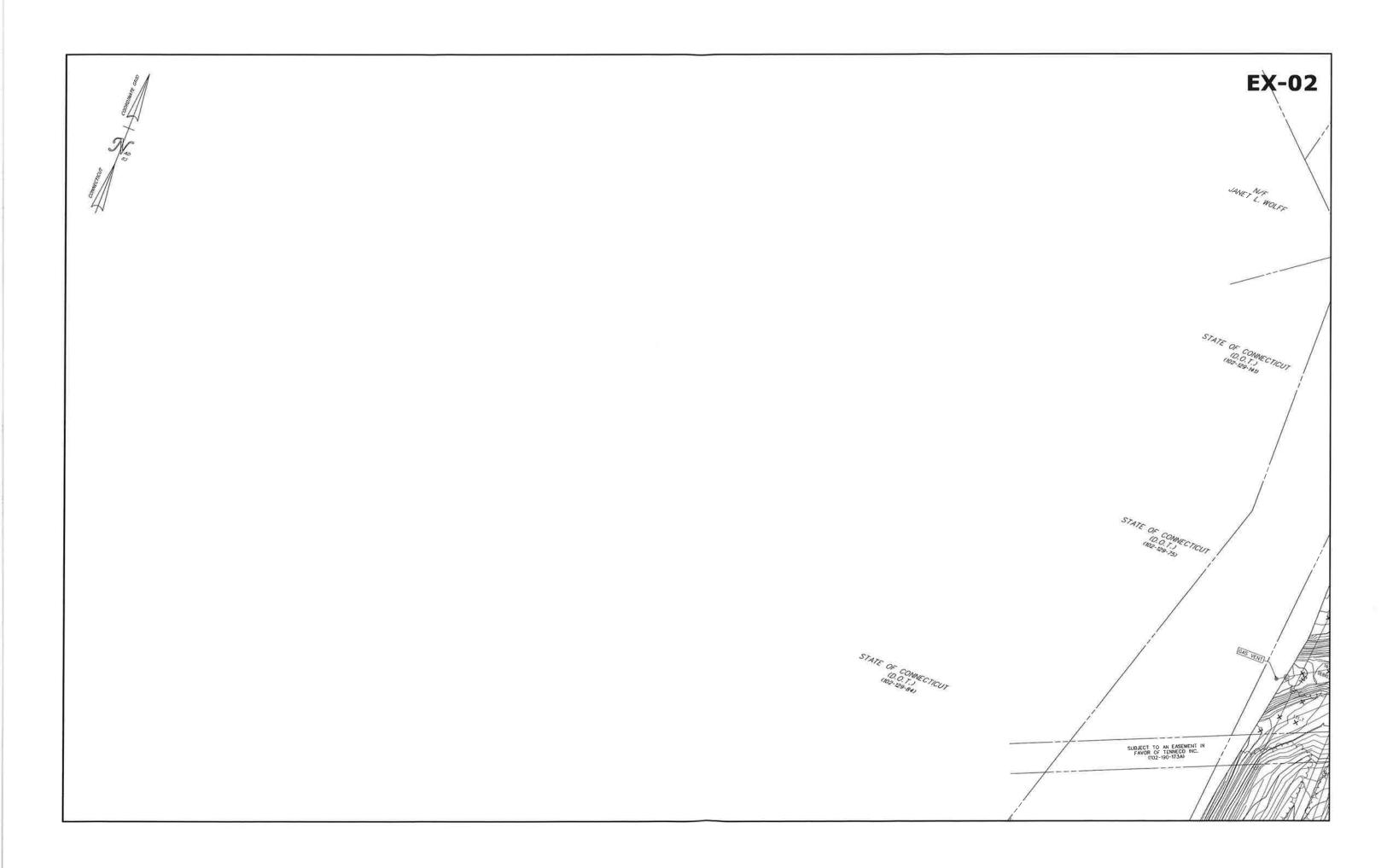




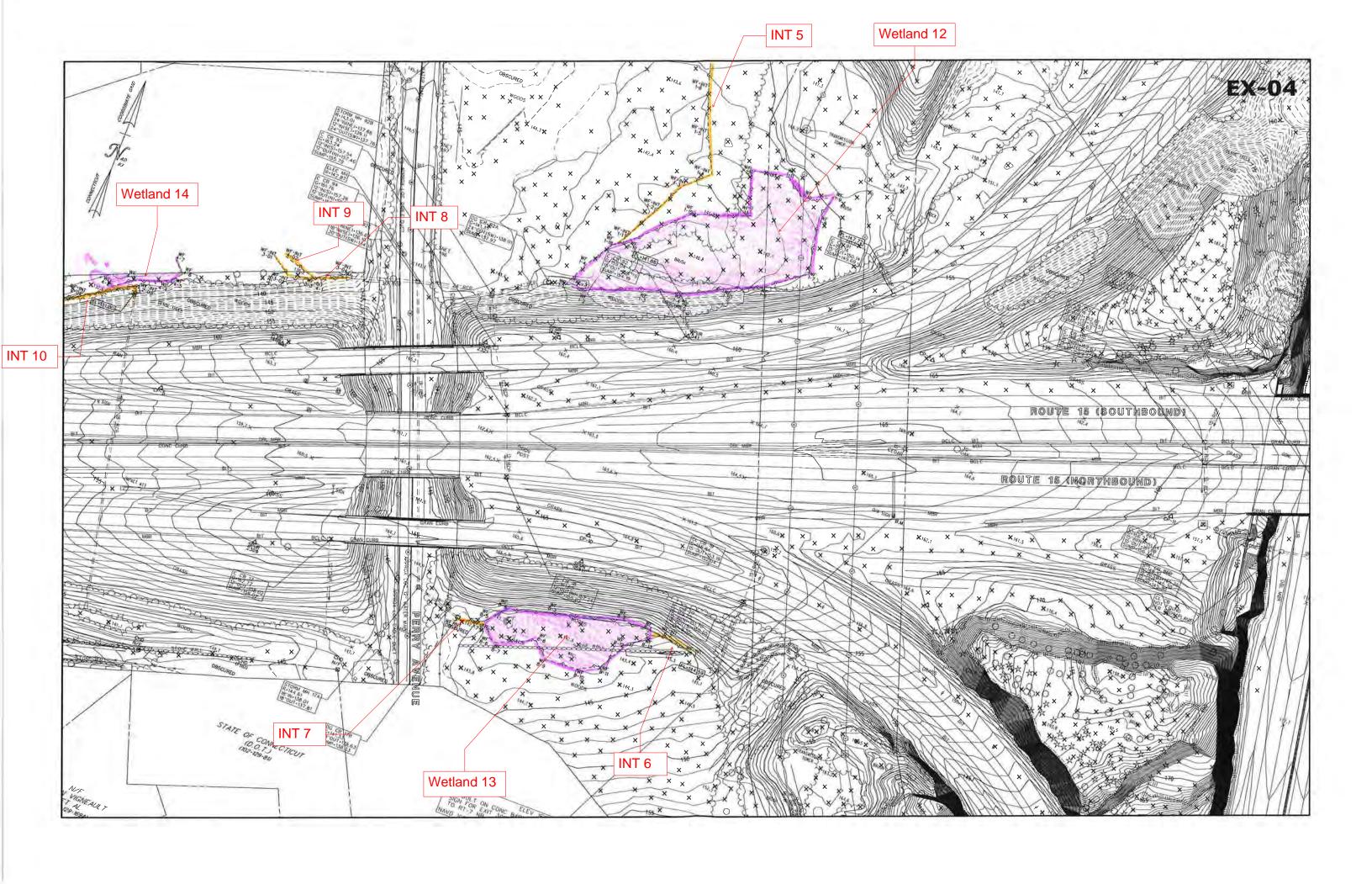
APPENDIX B: Delineated Features Sketch



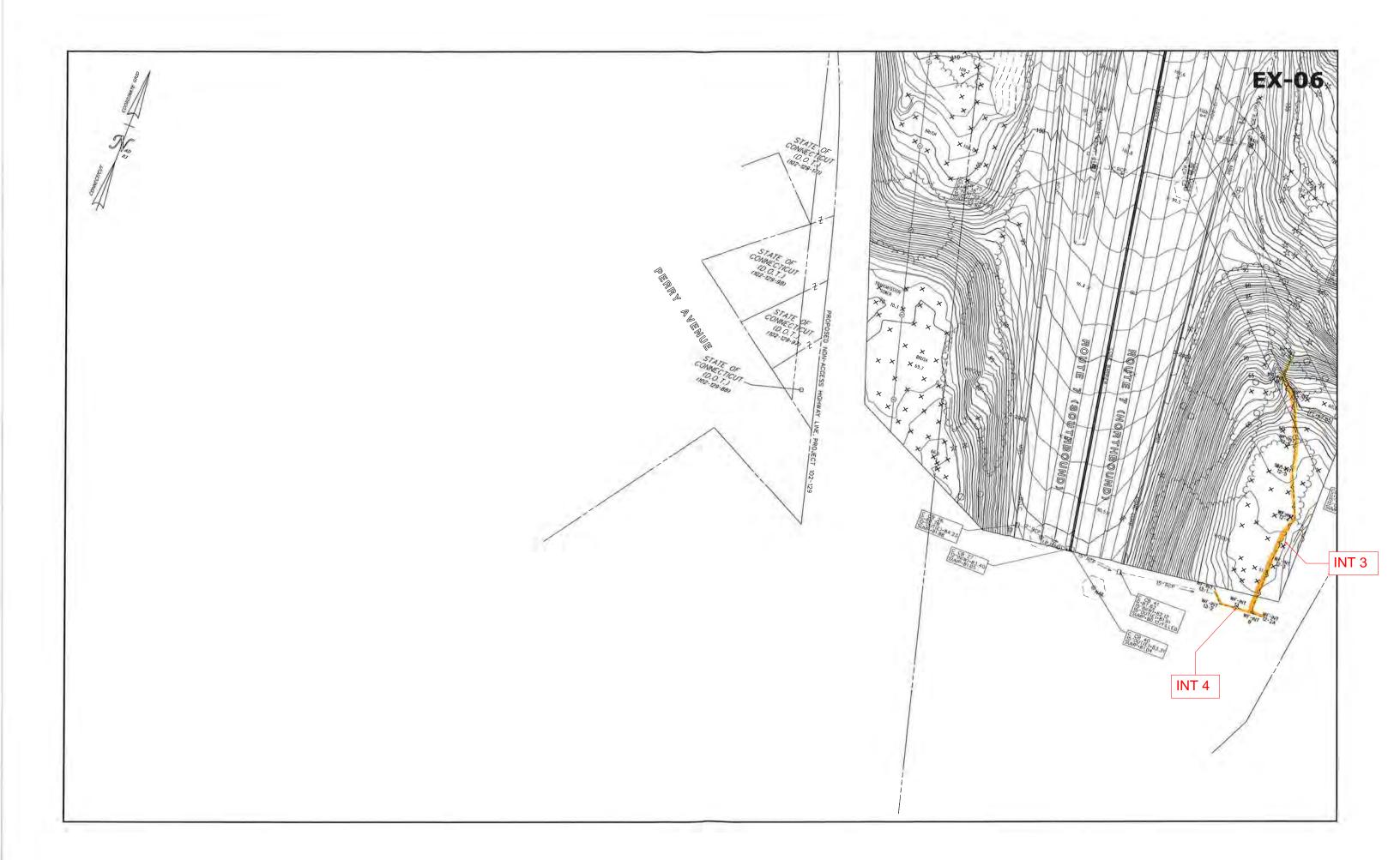


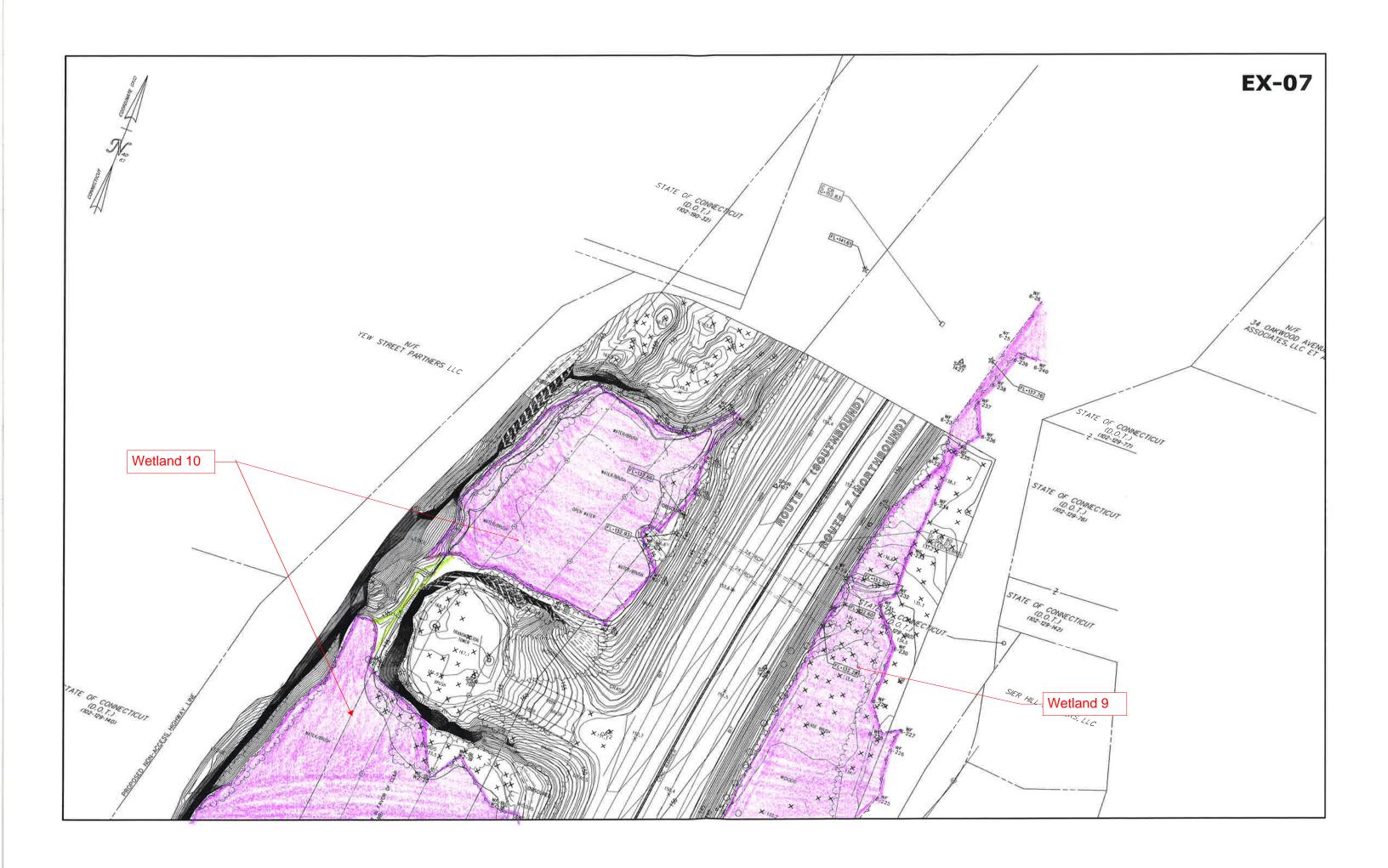


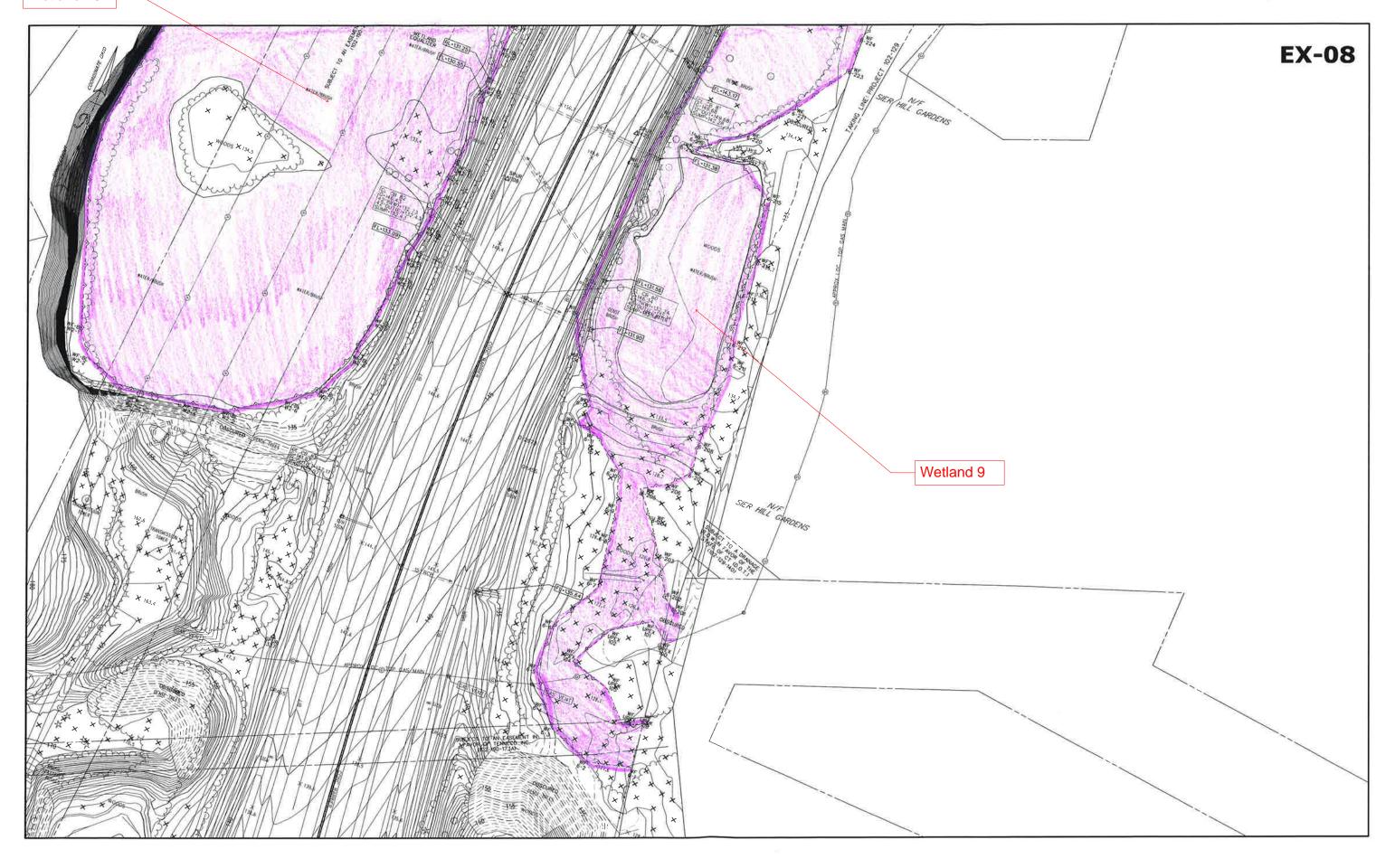


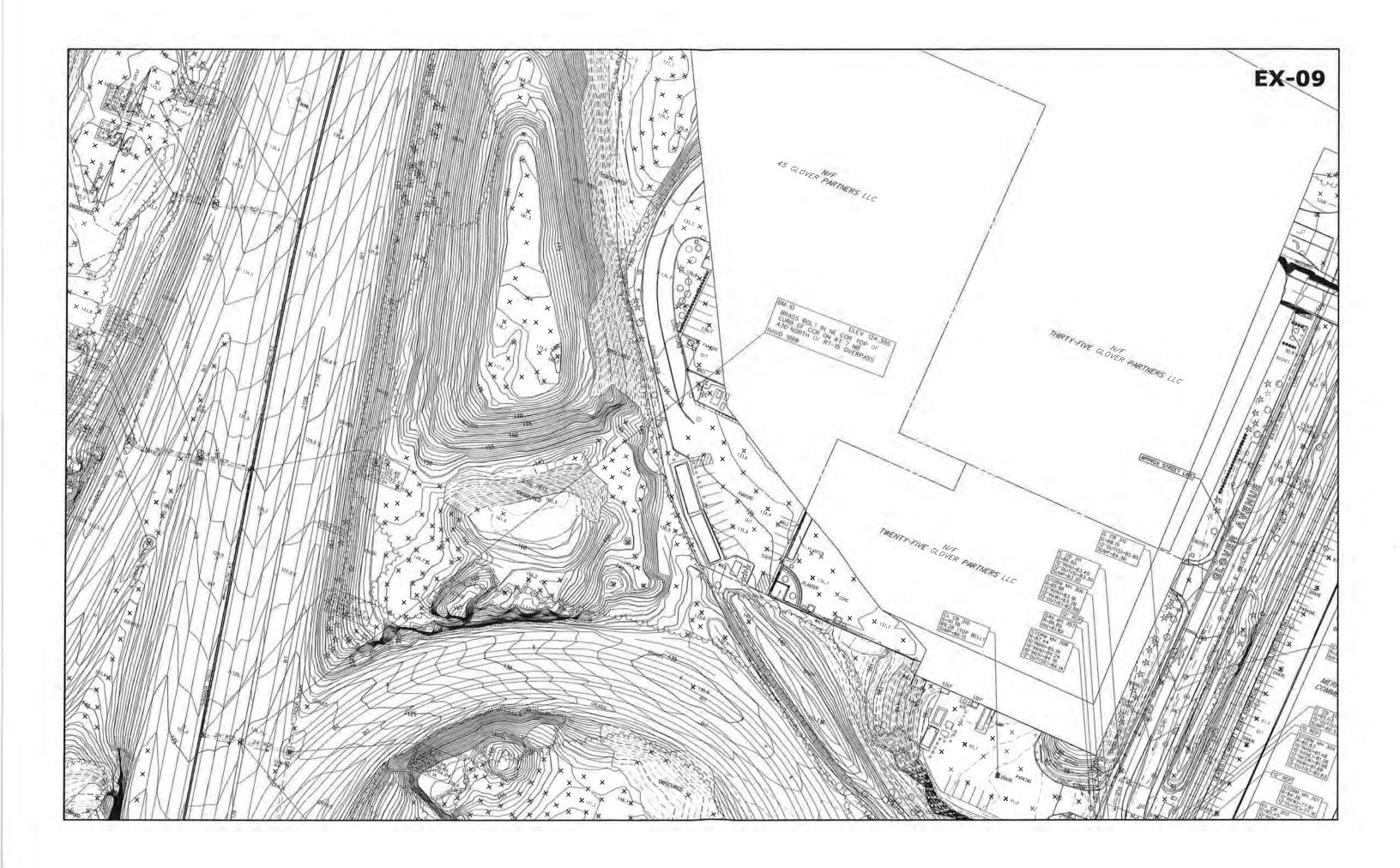


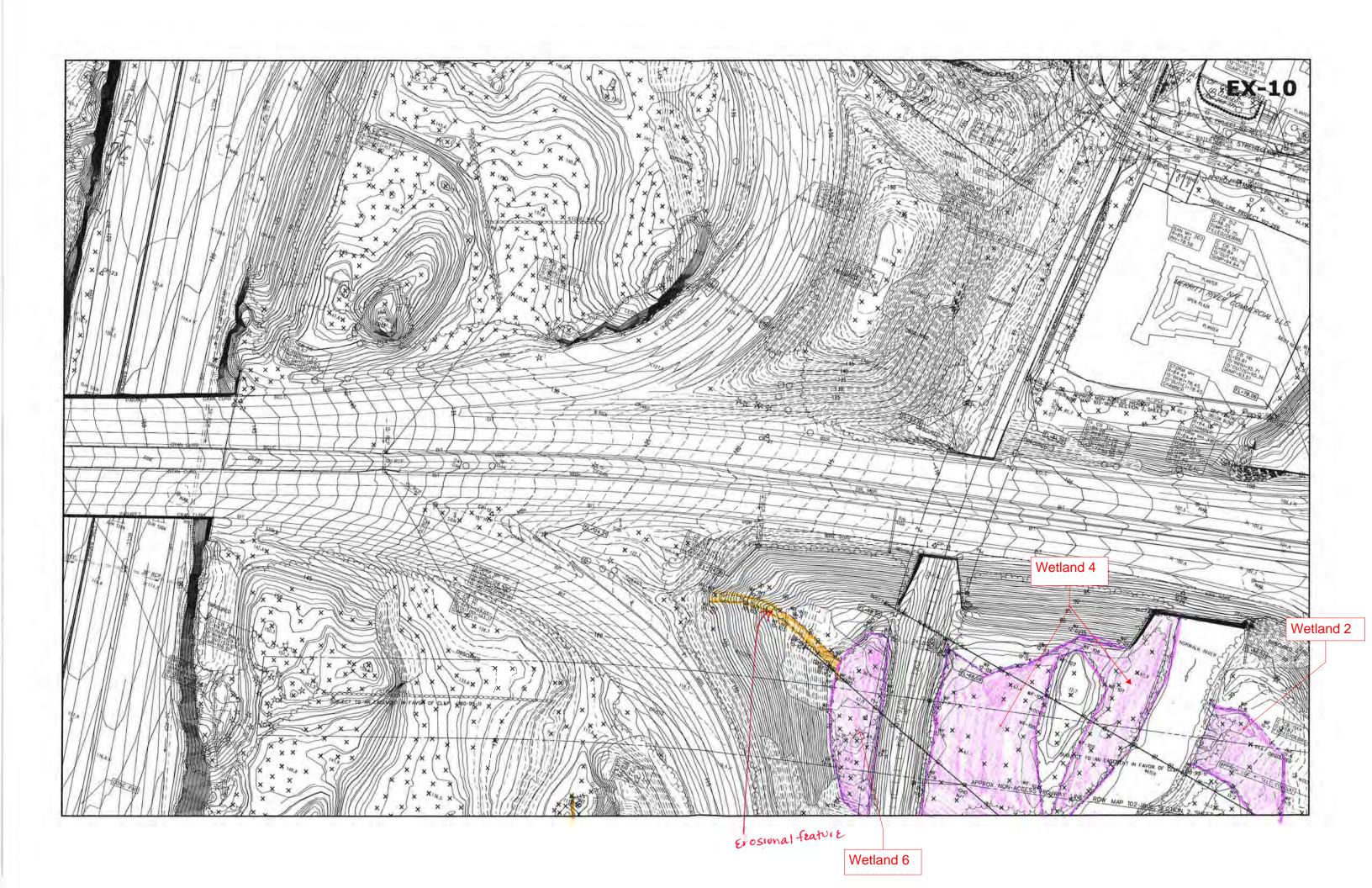




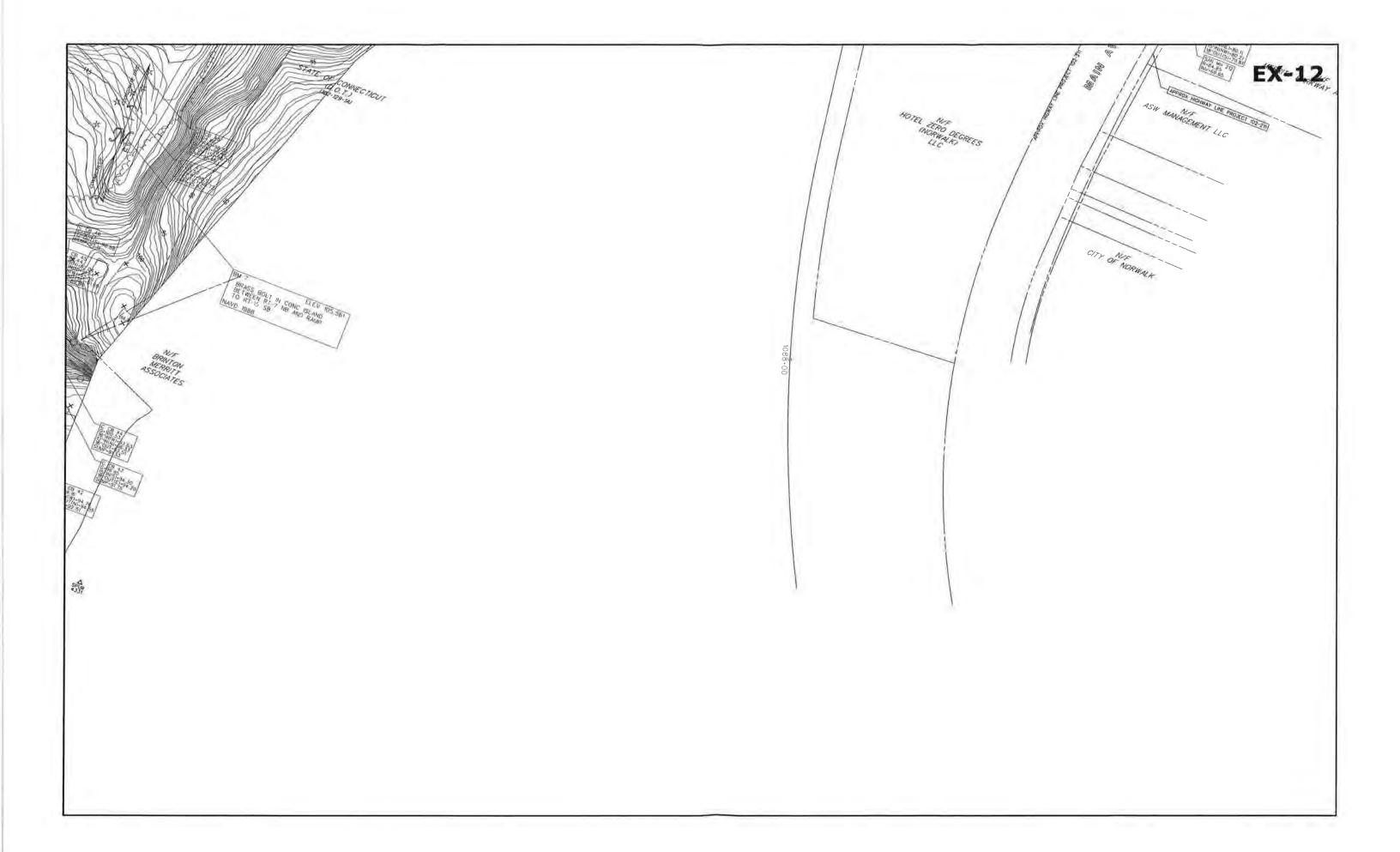


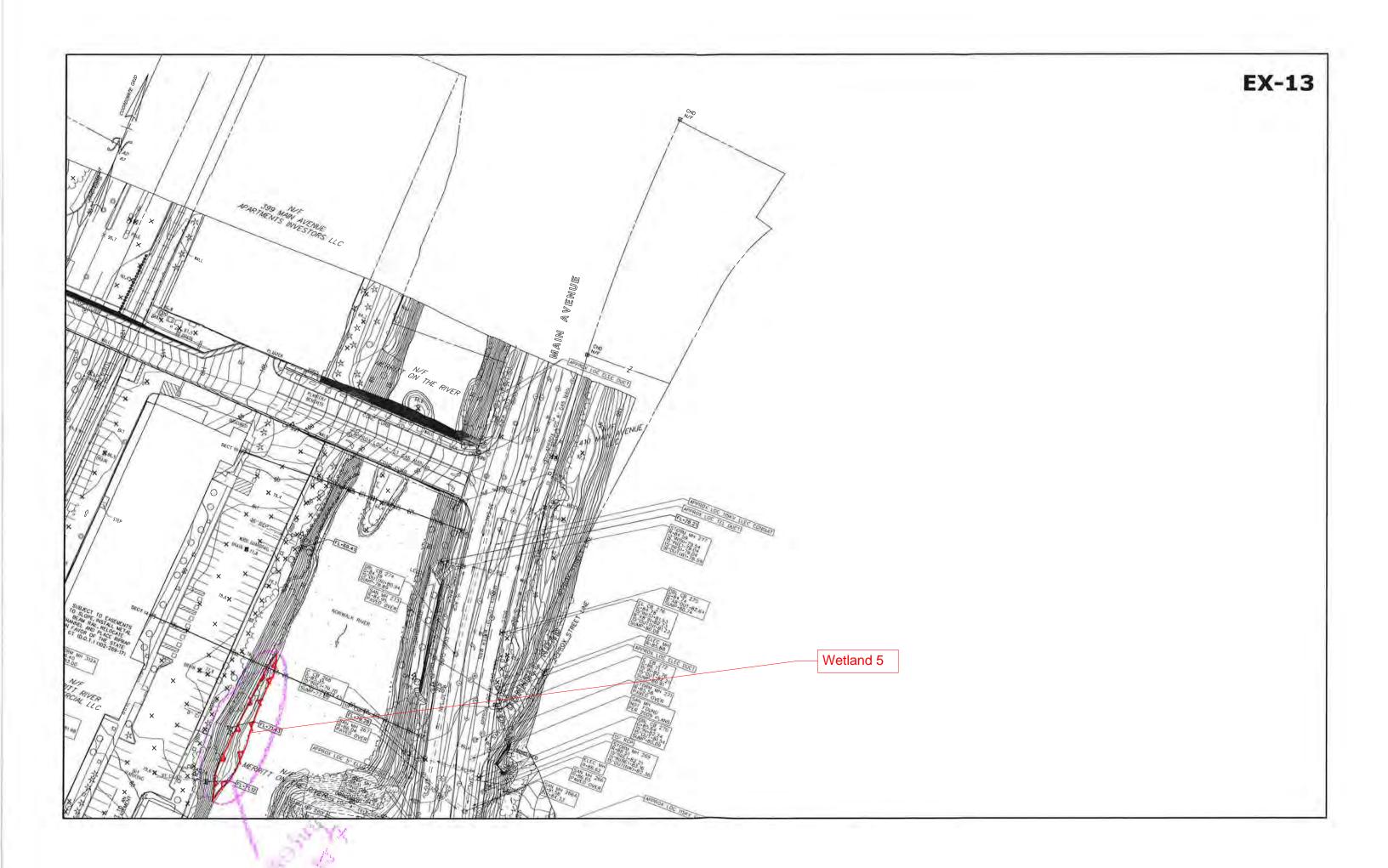


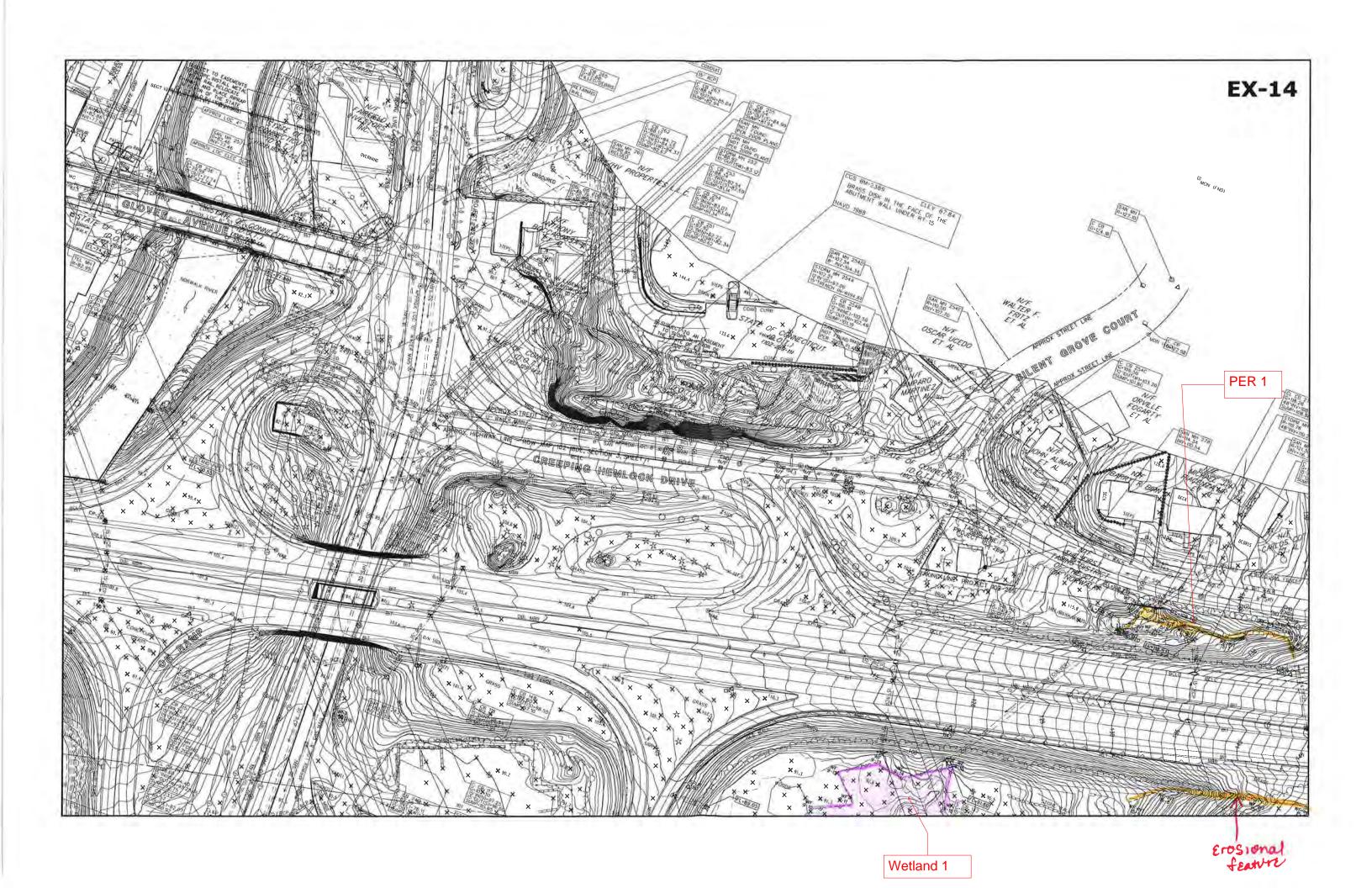


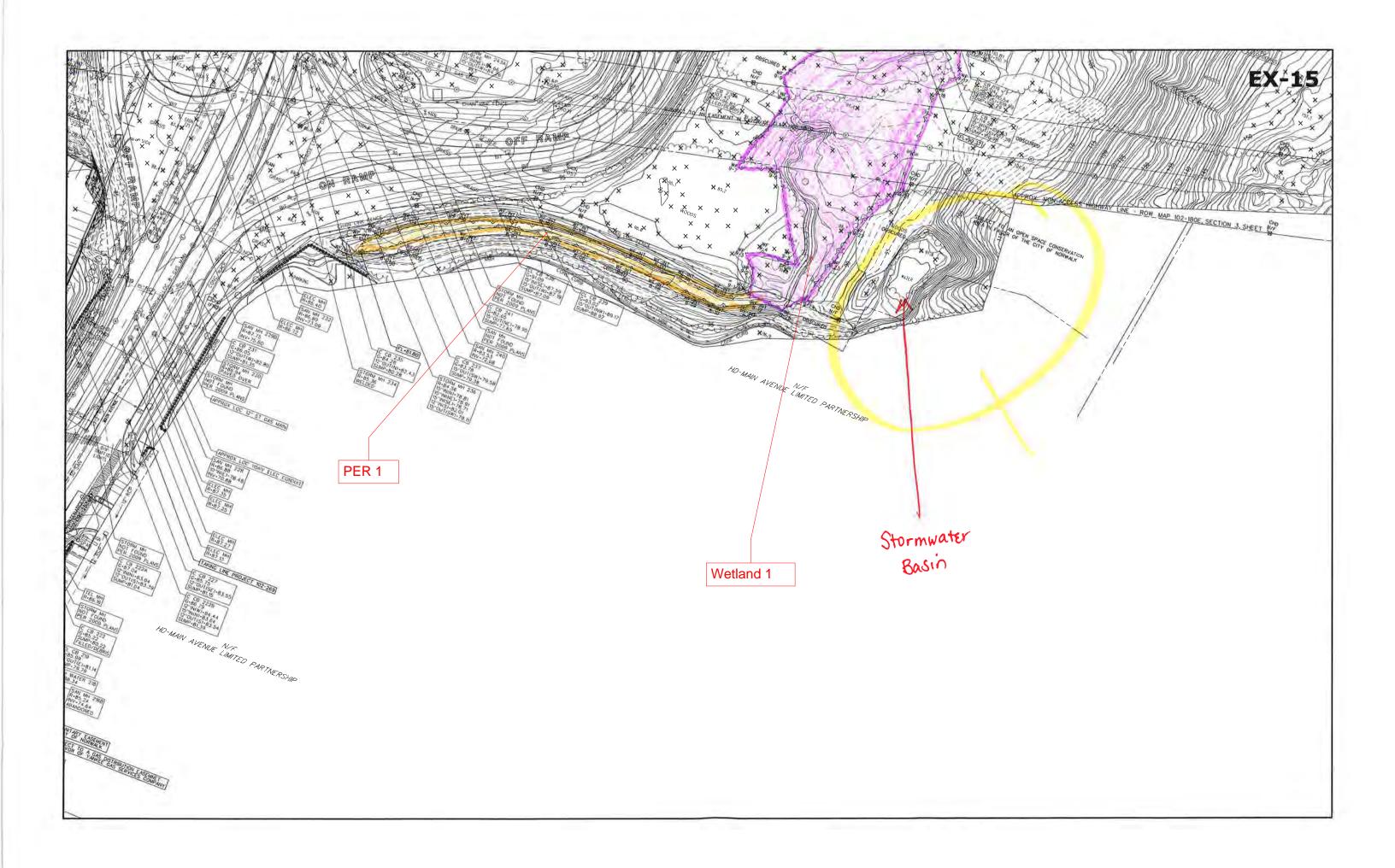


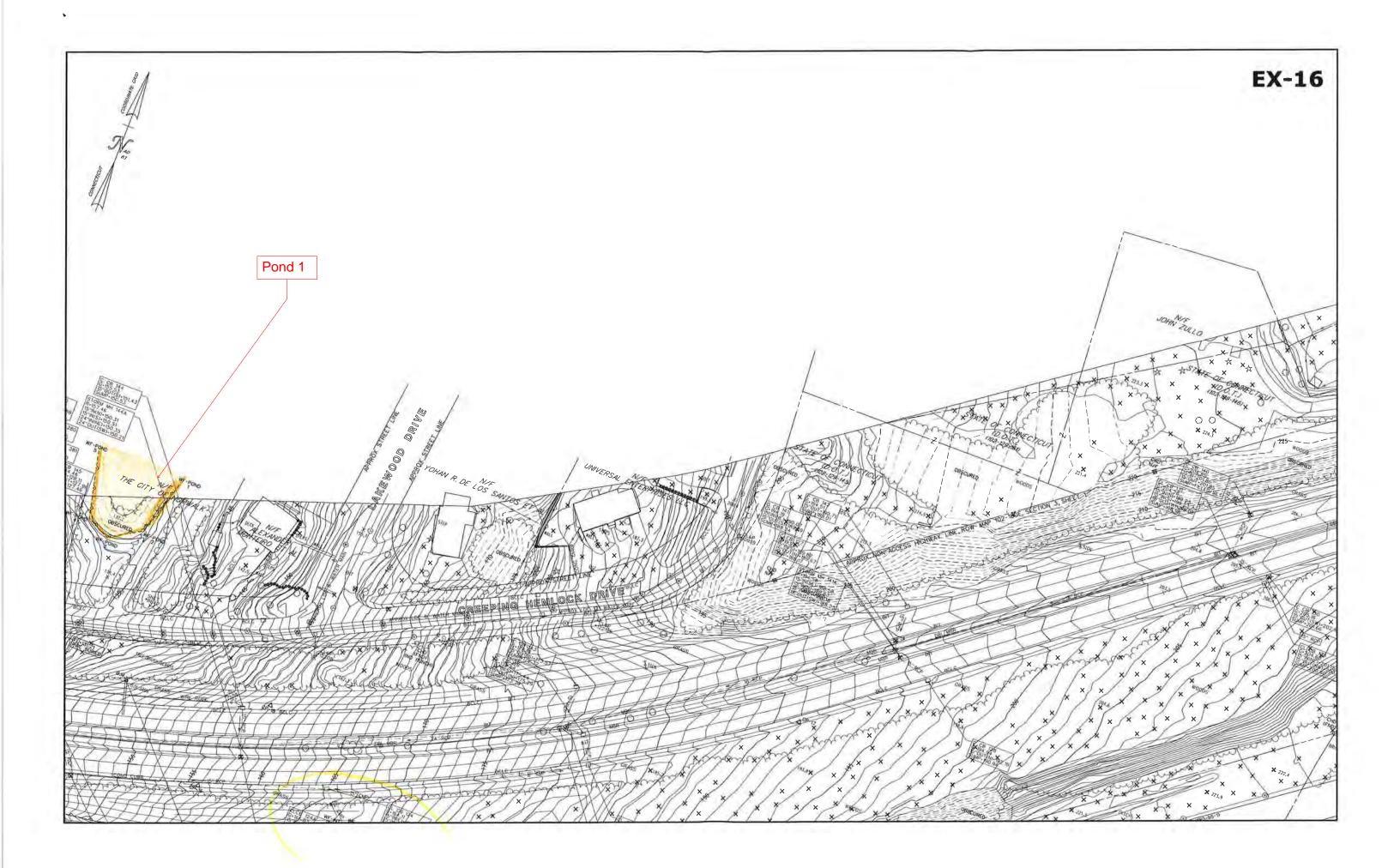


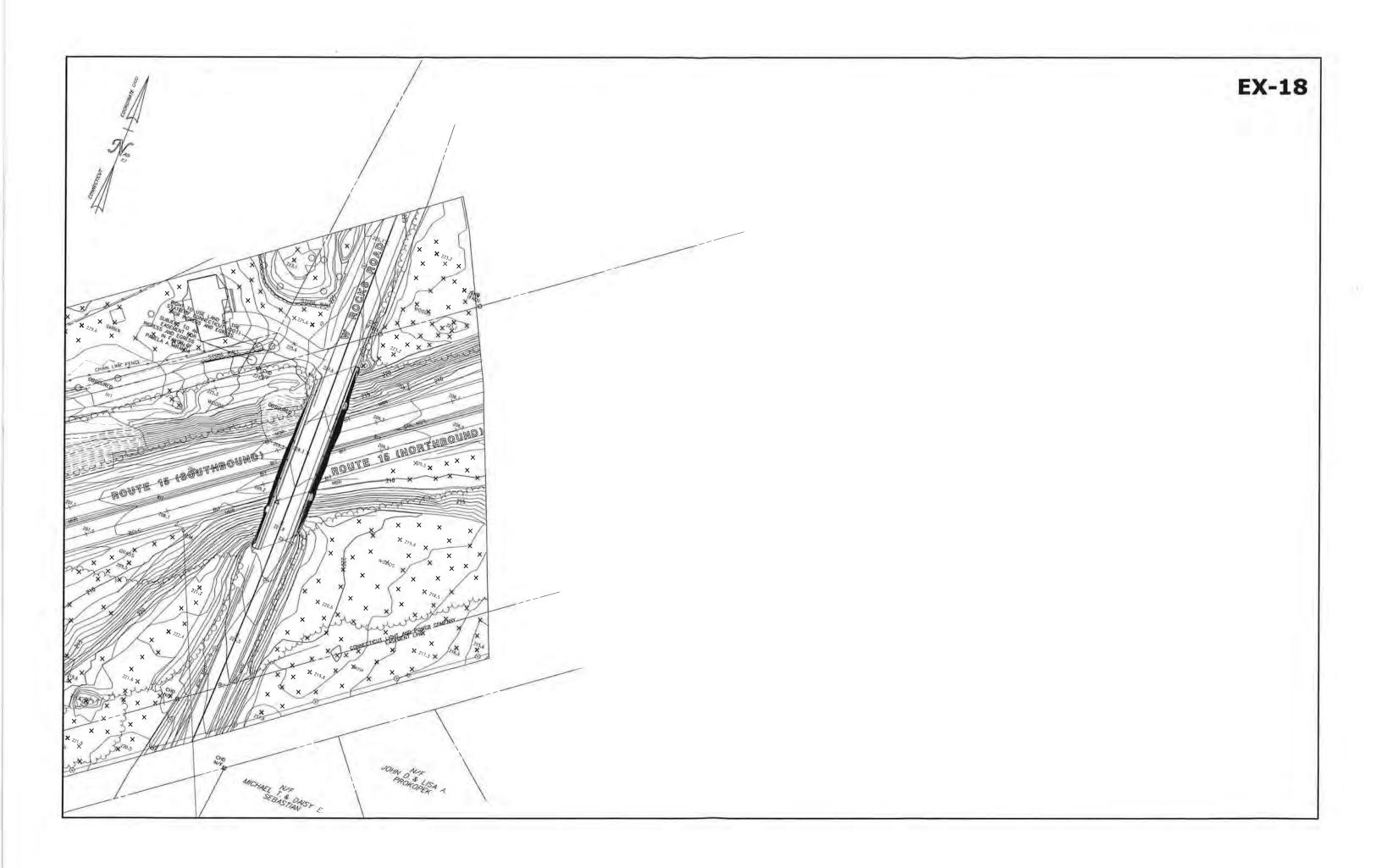












APPENDIX C: Photo Log



PHOTO 1: View of Pond 1, looking northwest.



PHOTO 2: View of upper reach of PER 1 near the pipe outfall, looking west.





PHOTO 3: View of PER 1 box culver inlet north of Route 15 southbound.



PHOTO 4: View of PER 1 south of Route 15 northbound, looking south towards parking lot.





PHOTO 5: View of PER 1, after it transitions to intermittent at culvert inlet near Main Ave, looking southeast towards the parking lot.



PHOTO 6: View of Wetland 1 complex from Route 15 northbound, looking south.



PHOTO 7: View of INT 1 through Wetland 2, looking northwest towards the Norwalk River.



PHOTO 8: View of Wetland 2 looking north towards Route 15.





PHOTO 9: View of Wetland 3 looking south, note backwater channel from the Norwalk River.



PHOTO 10: View of Wetland 4 from the east bank of the Norwalk River looking northwest.





PHOTO 11: View of dam in the Norwalk River, downstream of Route 15.



PHOTO 12: View of the Norwalk River from Wetland 5, looking northeast.



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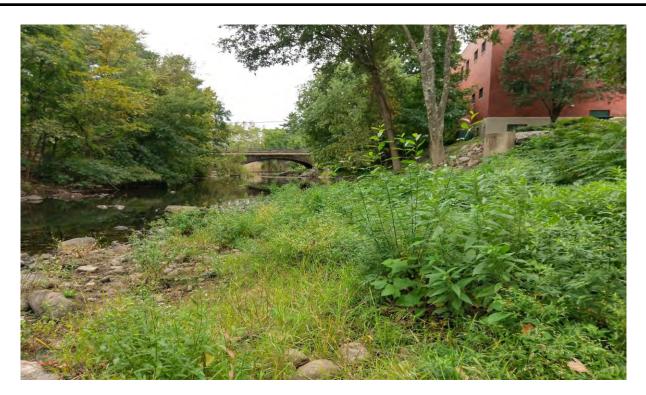


PHOTO 13: View Wetland 5, looking south towards the Glover Street bridge.



PHOTO 14: View of Wetland 6 looking southeast towards the railroad tracks.



PHOTO 15: View of Wetland 7 looking north towards the Route 15/7 interchange. Note lack of vegetation within the depression



PHOTO 16: View of Wetland 8 located in the gore area, looking north. Note woody debris, and microtopography which may be indicative of a vernal pool.





PHOTO 17: View of INT 2 looking southeast towards Wetland 8. Note boulders and rocks forming the banks.



PHOTO 18: View of INT 3 at its upper reaches near Route 7 northbound. Note the substrate is cobble and rock; substrate changes to sand and gravel downstream.



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PHOTO 19: View of INT 4, looking west towards Route 7 northbound. Note refuse and sedimentation in the channel.



PHOTO 20: View of Wetland 9, looking northwest towards Route 7. Note common reed growing in and around inundated area.





PHOTO 21: View of Wetland 10 looking southwest over the ponded area.



PHOTO 22: View of Wetland 11 looking north, note ponded area in the center void of vegetation surrounded by forested wetland.





PHOTO 23: View of INT 5 which connects Wetland 11 and 12, looking south towards Wetland 12.



PHOTO 24: View of Wetland 12 looking east towards the powerline ROW.





PHOTO 25: View of emergent portion of Wetland 13 looking northeast towards embankment.



PHOTO 26: View of forested portion of Wetland 13 looking east, note large boulders and lack of herbaceous growth.





PHOTO 27: Downstream view of INT 6 looking west towards Wetland 13.



PHOTO 28: View of OHWM of INT 7 looking north.





PHOTO 29: View of catch basin downstream of INT 7.



PHOTO 30: View of INT 8, looking east towards Perry Avenue, note culvert is partially buried.



PHOTO 31: View of INT 9 flowing northwest off-site; banks are densely vegetated with herbs and shrubs.



PHOTO 32: View of Wetland 14 looking south towards Route 15 embankment.

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PHOTO 33: View of INT 10 pipe outfall, looking south towards Route 15 embankment.



PHOTO 34: View of Wetland 15 looking north.



PHOTO 35: View of SP-1, a previously delineated wetland that failed to meet the definition of a wetland at the federal or state level due to lack of hydric or poorly-drained soils.



PHOTO 36: View of SP-2 looking south from INT 3.



PHOTO 37: View of SP-1, a previously delineated wetland that failed to meet the definition of a wetland at the federal or state level due to lack of hydric or poorly-drained soils.



PHOTO 38: View of SP-2 looking south from INT 3.



PHOTO 39: View of stormwater basin located east of Wetland 1. Note lack of vegetation in the basin, large amount of plastic in the water, and plastic corrugated pipe.



PHOTO 40: View of riprap lined swale looking southwest from stormwater basin. Note excessive refuse.



APPENDIX D: ACOE Datasheets

Project/Site:	Route 15/Rou	ite 7 Interchang	e Co	unty:	Fairfield		Sampling Date	te:	9/29/2016
			,	<u></u>	State:	СТ		oint:	Wet 1 PEM
Investigator(s):	KB	and	RMH Se	ection, Townshi	p, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Hillslope	_	ocal relief (cond		none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat: 41.				,	
Soil Map Unit Name:			ton and Charlton (62				Classification:		
Are climatic / hydrologic con				es / No)	No		explain in Ren		
		or Hydrology		,		`	•	,	X No
		or Hydrology	·				explain any an		
		_		•	•		•		•
SUMMARY OF FINE	JINGS - Att	acn site ma	ip snowing sai	mpling pol	nt locatioi	ns, tran	isects, imp	portant rea	atures, etc.
Hydrophytic Vegetation Pre	esent? Ye	s X	No						
Hydric Soil Present?	Ye		No	Is the Sample	ed Area				
Wetland Hydrology Presen			No	within a Wet		Υ	'es X	No	
B 1 .				If yes, op	tional Wetland	Site ID: _		Netland 1	
Remarks:	This n	oint was determ	ined to be within a w	etland due to th	a nresence of	all 3 wetl:	and criteria		
	Tills p				•	all 5 Well	and Cinteria.		
-			The survey was com	-	-				
The wetland is loca	ited between hig	ghway, a develo	ped commercial lot, a development of the			and veget	tation appear t	o be distrurbe	d due to the
				-	•				
LIVEROL OCV			PEM portion of	f larger wetland	system				
HYDROLOGY Wetland bydrology In	dicators:								
Wetland hydrology In									two required)
Primary Indicators (mir				(50)			Surface Soil C		
Surface Water (A	*	<u>X</u>	_ Water-Stained Le	` ,			Drainage Patte		
High Water Tabl	e (A2)		_ Aquatic Fauna (B				Moss Trim Lin		
Saturation (A3)			_ Marl Deposits (B1	-			Dry-Season W	-	2)
X Water Marks (B1			_ Hydrogen Sulfide				Crayfish Burro		
Sediment Depos			Oxidized Rhizospl	_	Roots (C3)		Saturation Vis		
X Drift Deposits (B	3)		Presence of Redu	iced Iron (C4)			Stunted or Str	essed Plants (D1)
Algal Mat or Cru	st (B4)		Recent Iron Redu	ction in Tilled S	oils (C6)	X	Geomorphic P	osition (D2)	
Iron Deposits (B	5)		Thin Muck Surface				Shallow Aquita	ard (D3)	
Inundation Visibl	e on Aerial Imag	gery (B7)	Other (Explain in I	Remarks)			Microtopograp)
Sparsely Vegeta	ted Concave Su	ırface (B8)					FAC-Neutral T	est (D5)	
Field Observations:		N. V	Destille (Control)	A1/A					
Surface Water Present?	Yes	_ No <u>X</u>	_ Depth (inches):	N/A					
Water Table Present?	Yes	_ NoX	_ Depth (inches):	>18					
Saturation Present?	Yes	_ NoX	Depth (inches):	>18	Wetland H	lydrology	Present?	Yes X	_ No
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge, n	nonitoring well,	aerial photos, previou	us inspections),	if available:				
Remarks:									
A			17.2						
A positive indication of	wetland hydrolo	gy was observe	d (primary and secoi	ndary indicators	were present).			

	A la = = l: .t =	Daminant	la di a atau	Dominance Test worksheet:		
Trace Chartering (Diet sine) 20 ft	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	_	(4)
1				That Are OBL, FACW, or FAC.	5	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	7	(D)
4				Species Across Air Strata.		(B)
5				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	71%	(A/R)
7	0 = T	otal Cover		That Are OBE, I ACW, of I AC.	7 1 70	(A/B)
		olai Covei		Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 ft.	`			Total % Cover of:	Multiply	bv:
1. Rosa multiflora	_ <i>)</i> 5	Yes	FACU	OBL species 25		.5 .5
2. Rubus idaeus	5	Yes	FACU	FACW species 45		0
		165	PACU	FAC species 15		.5
3	-			FACU species 15	-	50
4				UPL species 0		0
5				Column Totals: 100		20 (B)
6				Column rotals.	(A) <u>22</u>	(B)
7	10 = T	otal Cover	-	Prevalence Index = B/A =	= 2.20	
		otal Covel		Trevalence index – B/A	2.20	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicate	nre.	
1. Phragmites australis	20	Yes	FACW	1 - Rapid Test for Hydrop		
Impatiens capensis	15	Yes	FACW	X 2 - Dominance Test is >5	- -	
3. Persicaria sagittata	10	Yes	OBL	X 3 - Prevalence Index is ≤		
4. Mikania scandens	10	Yes	OBL	4 - Morphological Adapta		innorting
5. Solidago rugosa	10	Yes	FAC	data in Remarks or o		-
6. Persicaria perfoliata	5	No	FAC	Problematic Hydrophytic		•
7. Onoclea sensibilis	5	No	FACW	i Toblematic Hydrophytic	vegetation (Expir	ani)
	5	No	FACW	¹ Indicators of hydric soil and wet	land budralagu mu	ıot
Fraxinus pennsylvanica Rosa multiflora	5	No	FACU	be present, unless disturbed or pr		151
10. Alnus serrulata	5	No	OBL	Definitions of Five Vegetation S		
		140	OBL	Tree - Woody plants 3 in. (7.6 cm		eter
11 12.			-	at breast height (DBH) regardless	-	Cici
12.		otal Cover		at breast neight (DBH) regardless	or neight.	
	90 - 1	otal Covel		Sapling/Shrub - Woody plants Ise	es than 3 in. DBH	
Woody Vine Stratum 'Plot size: 30 ft.)				and greater than or equal to 3.28		
				3	, , ,	
·				Herb - All herbaceous (non-wood)	v) plants, regardle	SS
2 3.				of size, and woody plants less tha	-	
4			-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
4	0 = T	otal Cover	-	Woody vine - All woody vines gre	ater than 3.28 ft ir	n heiaht.
		otal Covel				J
				Hydrophytic		
				Vegetation		
				Present? Yes X	No	
				Tresenti res X		
Remarks:				1		
romano.						
A positive indication of hydro	phytic vegetation	on was observe	ed (>50% of dom	inant species indexed as OBL, FACW	, or FAC).	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Sampling Point: Wet 1 PEM

SOIL Sampling Point: Wet 1 PEM

epth	ription: (Describe Matrix	aopt			eatures			
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 4/1						Mucky Silt Loam	
5-16	10YR 3/2	93	2.5YR 3/6	7	С	M	Loamy Coarse Ssand	<u> </u>
					C		<u> </u>	
16-18	10YR 5/4	60	5YR 4/6	40		M	Coarse Sand	_
							<u> </u>	
	oncentration, D=De	nlation DM-	Daduaad Matrix N	IC-Mookoo	L Cand Crains	2 _{1 acation} [DI - Dara Lining M-Matrix	
		pietion, Rivi=	Reduced Matrix, N	iS=iviasked	Sand Grains.	Location: F	PL=Pore Lining, M=Matrix	oblematic Hydric Soils ³ :
-	Indicators:							
Histosol			 -		Surface (S8) (L l	RR R,		A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		M	LRA 149B)	1		Coast Prairie	e Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Da	ark Surface	(S9) (LRR R,	VILRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R
 Hydroge	en Sulfide (A4)		Loamy	Mucky Min	eral (F1) (LRR	K, L)	Dark Surface	e (S7) (LRR K, L)
_ · ·	d Layers (A5)			Gleyed Ma		•		elow Surface (S8) (LRR K, L)
	d Below Dark Surfa	ace (A11)		ed Matrix (F			 '	urface (S9) (LRR K, L)
		ioc (ATT)		•	•			
	ark Surface (A12)			Dark Surfa	, ,			nese Masses (F12) (LRR K, L, F
	Mucky Mineral (S1)			ed Dark Su				oodplain Soils (F19) (MLRA 149
Sandy C	Gleyed Matrix (S4)		Redox	Depression	ıs (F8)			c (TA6) (MLRA 144A, 145, 149
Sandy F	Redox (S5)						Red Parent	Material (F12)
X Stripped	d Matrix (S6)						Very Shallov	v Dark Surface (F22)
	ırface (S7) (LRR R,	MLRA 149E	3)				Other (Expla	in in Remarks)
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,					,
emarks:								
			A pos	itive indica	tion of hydric so	oil was observed	i.	

Project/Site:	Route 15/Rou	ite 7 Interchang	je Co	unty:	Fairfield		Sampling Date	te:	9/29/2016
					State:	CT	Sample P		Wet 1 PSS
Investigator(s):	KB	and	RMH S	ection, Townshi	p, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Hillslop		ocal relief (cond		none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):				_Lat:41.				,	
Soil Map Unit Name:			nton and Charlton (62				Classification:		-
Are climatic / hydrologic con-				res / No)	No		explain in Ren		
	,Soil Yes			,		`	•	,	X No
	,Soil No	_					explain any an		
				•	•		•		•
SUMMARY OF FIND	INGS - Atta	ach site ma	ap snowing sai	mpling pol	nt locatioi	ns, tran	isects, imp	portant rea	itures, etc.
Hydrophytic Vegetation Pre	esent? Yes	s X	No						
Hydric Soil Present?	Yes		No	Is the Sample	ed Area				
Wetland Hydrology Presen	t? Yes	s X	No	within a Wet		Υ	'es X	No	
Trouble Try are rogy 1 1000.1									
				If yes, op	tional Wetland	Site ID:	\	Netland 1	
Remarks:	Thion	oint was dotorn	nined to be within a w	otland due to th	o procence of	Fall 2 wath	and critoria		
	inis p	omi was detern			•	all 3 well	and criteria.		
			The survey was com	-	=				
The wetland is loca	ted between hig	ghway, a develo	pped commercial lot,			and vege	tation appear t	o be distrurbed	due to the
			development of the	-	•				
HIVDDOL GOV			PSS portion of	f larger wetland	system				
HYDROLOGY									
Wetland hydrology Inc									two required)
Primary Indicators (min							Surface Soil C		
Surface Water (A	.1)	_X	_ Water-Stained Le	aves (B9)			Drainage Patte	erns (B10)	
High Water Table	∍ (A2)		_ Aquatic Fauna (B	13)			Moss Trim Lin	es (B16)	
Saturation (A3)		_	Marl Deposits (B1	5)			Dry-Season W	/ater Table (C	2)
Water Marks (B1)		_ Hydrogen Sulfide	Odor (C1)			Crayfish Burro	ws (C8)	
Sediment Depos	its (B2)		Oxidized Rhizospl	heres on Living	Roots (C3)		Saturation Vis	ible on Aerial I	magery (C9)
X Drift Deposits (B3	3)		Presence of Redu	iced Iron (C4)		X	Stunted or Str	essed Plants (.D1)
Algal Mat or Crus	st (B4)		Recent Iron Redu	ction in Tilled S	oils (C6)	X	Geomorphic P	osition (D2)	
Iron Deposits (B5	i)		Thin Muck Surfac	e (C7)			Shallow Aquita	ard (D3)	
Inundation Visible	e on Aerial Imaç	gery (B7)	Other (Explain in I	Remarks)			Microtopograp	hic Relief (D4))
Sparsely Vegetat	ed Concave Su	ırface (B8)	_				FAC-Neutral T	est (D5)	
Field Observations:									
Surface Water Present?	Yes	NoX	Depth (inches):	N/A					
Water Table Present?	Yes	NoX	Depth (inches):	>18					
Saturation Present?	Yes	NoX	Depth (inches):	>18	Wetland H	lydrology	Present?	Yes X	No
(includes capillary fringe)									
Describe Recorded Data (s	tream gauge, m	nonitoring well,	aerial photos, previou	us inspections),	if available:				
Remarks:									
A positive indication of	wetland hydrolo	gy was observe	ed (primary and seco	ndary indicators	were present).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	20	Yes	FAC	That Are OBL, FACW, or FAC: 9 (A)
2.				
3				Total Number of Dominant
4				Species Across All Strata: 9 (B)
5				
6				Percent of Dominant Species
7	20 =	Total Cover		That Are OBL, FACW, or FAC: (A/B)
		Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 fi	,			Total % Cover of: Multiply by:
Alnus serrulata	40	Yes	OBL	OBL species 70 x 1 = 70
2. Frangula alnus	15	Yes	FAC	FACW species 55 x 2 = 110
2 Frayinus nannaulusniss	10	No	FACW	FAC species 60 x 3 = 180
Fraxirus perinsylvanica Cornus amomum	10	No	FACW	FACU species 0 x 4 = 0
5			171011	UPL species 0 x 5 = 0
6.				Column Totals: 185 (A) 360 (B)
7.				(1) <u>300</u> (2)
·· <u> </u>	75 =	Total Cover		Prevalence Index = B/A =1.95
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. Phragmites australis	15	Yes	FACW	1 - Rapid Test for Hydrophytic Vegetation
2. Onoclea sensibilis	15	Yes	FACW	X 2 - Dominance Test is >50%
3. Persicaria sagittata	10	Yes	OBL	X 3 - Prevalence Index is ≤ 3.0 ¹
4. Solidago rugosa	10	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
5. Frangula alnus	10	Yes	FAC	data in Remarks or on a separate sheet)
6. Mikania scandens	10	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
7. Symplocarpus foetidus	5	No	OBL	
8. Persicaria perfoliata	5	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
9. Alnus serrulata	5	No	OBL	be present, unless disturbed or problematic.
10. Fraxinus pennsylvanica	5	No	FACW	Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12.				at breast height (DBH) regardless of height.
	90 =	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.				and greater than or equal to 3.28 ft (1 m) tall.
1. None Observed				Harb All harbacoous (non woody) plants, regardless
2				Herb - All herbaceous (non-woody) plants, regardless
3				of size, and woody plants less than 3.28 ft tall.
4				Woody vine - All woody vines greater than 3.28 ft in height.
	=	Total Cover		Woody vine - All woody vines greater than 3.20 it in neight.
				Hydrophytic
				Vegetation
				Present? Yes <u>X</u> No
Remarks:				1
A manifely in direction of bound			d /5 500/ ef de	einant angeige indexed as ODL FACW or FAC)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Sampling Point: Wet 1 PSS

SOIL Sampling Point: Wet 1 PSS

epth	Matrix				Features		nce of indicators.)	
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 4/1		. ,,				mucky silt loam	
5-16	10YR 3/2	93	2.5YR 3/6	7	C	M	Loamy coarse sand	
16-18	10YR 5/4	60	5YR 4/6	40	C	M	coarse sand	
10-10	10111 3/4		311(4/0	40		IVI	coarse sand	
								
								_
Γype: C=Cα	oncentration, D=De	pletion, RM	=Reduced Matrix, N	//S=Masked	d Sand Grains.	² Location: I	PL=Pore Lining, M=Matrix	ζ.
ydric Soils	s Indicators:							roblematic Hydric Soils ³ :
Histoso	ol (A1)		Polyva	lue Below S	Surface (S8) (LF	RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)			LRA 149B)		,		ie Redox (A16) (LRR K, L, R)
	Histic (A3)				, e (S9) (LRR R, I	MI PA 1/0R)		Peat or Peat (S3) (LRR K, L, R
	, ,					=		, , , , , , , , , , , , , , , , , , , ,
	en Sulfide (A4)			-	neral (F1) (LRR	N, L)		ce (S7) (LRR K, L)
	ed Layers (A5)			Gleyed Ma			 '	Below Surface (S8) (LRR K, L)
	ed Below Dark Surfa	ace (A11)		ed Matrix (F				Surface (S9) (LRR K, L)
	Oark Surface (A12)			Dark Surfa	` '			nese Masses (F12) (LRR K, L, R
Sandy N	Mucky Mineral (S1)		Deplete	ed Dark Su	rface (F7)		Piedmont F	loodplain Soils (F19) (MLRA 149
Sandy (Gleyed Matrix (S4)		Redox	Depression	ns (F8)		Mesic Spoo	dic (TA6) (MLRA 144A, 145, 149
Sandy F	Redox (S5)		_				Red Parent	Material (F12)
	d Matrix (S6)							w Dark Surface (F22)
	urface (S7) (LRR R,	. MLRA 149	9B)					ain in Remarks)
	Layer (if observed)):						
Type:								
	ches):					Hydric	: Soil Present? Yes _	X No
Depth (in	iches):					Hydric	Soil Present? Yes _	X No
	ches):					Hydric	: Soil Present? Yes _	X No
Depth (in	ches):					Hydric	: Soil Present? Yes _	X No
Depth (in	iches):					Hydric	Soil Present? Yes _	X No
Depth (in	ches):			sitive indica	ition of hydric sc		_	X No
Depth (in	ches):			sitive indica	ition of hydric sc		_	X No
Depth (in	iches):			sitive indica	tion of hydric sc		_	No
Depth (in	iches):			sitive indica	tion of hydric so		_	No
Depth (inc	iches):			sitive indica	tion of hydric so		_	No
Depth (in	iches):			sitive indica	tion of hydric sc		_	No
Depth (in	iches):			sitive indica	tion of hydric sc		_	X No
Depth (in	iches):			sitive indica	tion of hydric sc		_	X No
Depth (inc	iches):			sitive indica	tion of hydric sc		_	X No
Depth (inc	iches):			sitive indica	tion of hydric so		_	X No
Depth (inc	iches):			sitive indica	tion of hydric so		_	X No
Depth (inc	iches):			sitive indica	tion of hydric sc		_	X No
Depth (inc	iches):			sitive indica	tion of hydric sc		_	X No
Depth (inc	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	ition of hydric so		_	X No
Depth (in	iches):			sitive indica	ition of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	ches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (in	iches):			sitive indica	tion of hydric so		_	X No
Depth (inc	iches):			sitive indica	tion of hydric so		_	X No
Depth (inc	iches):			sitive indica	tion of hydric so		_	X No

Project/Site:	Route 15/Ro	ute 7 Interchange	e Cou	unty:	Fairfield		Sampling Date:		11/16/2016
			_	<u> </u>	State:	СТ	Sample Poi	nt:	Upl 1
Investigator(s):	KB	and	RMH Se	ection, Townshi	p, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Terrace		ocal relief (cond	·	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R				_	-73.42392		
Soil Map Unit Name:			3-15 percent slopes			_			N/A
Are climatic / hydrologic con				es / No)			explain in Rema		
		or Hydrology	, ,	,			•	,	∢ No
		or Hydrology					explain any ansv		
-		_			•		•		
SUMMARY OF FIND	INGS - Att	ach site ma	p snowing sar	npling poi	nt locatio	ns, tran	sects, impo	ortant fea	tures, etc.
Hydrophytic Vegetation Pre Hydric Soil Present? Wetland Hydrology Presen	Ye	es X	No X	Is the Samp		Y	es	No	х
Remarks:				ir yes, op	tional Wetland	a Site ID: _			
	·		ot to be within a wetla The survey was com nd adjacent to on-rar	pleted during a	mild drought.			y.	
HYDROLOGY									
Wetland hydrology Inc	dicators:					Secon	dary Indicators (minimum of	two required)
Primary Indicators (min	imum of one is	required: check	all that apply)				Surface Soil Cra		o roquirou)
Surface Water (A		roquirou, oricon	Water-Stained Lea	aves (B9)			Drainage Patter		
High Water Table	•		Aquatic Fauna (B1	. ,			Moss Trim Lines		
Saturation (A3)	· (· · · ·)		Marl Deposits (B1				Dry-Season Wa		2)
Water Marks (B1	1	-	Hydrogen Sulfide	-			Crayfish Burrow	-	,
	•		Oxidized Rhizosph		Poote (C3)		Saturation Visible		magany (CO)
Sediment Depos			=	_	Roots (C3)				
Drift Deposits (B	· ·		Presence of Redu				Stunted or Stres	•	J1)
Algal Mat or Crus	st (B4)		Recent Iron Reduc	ction in Tilled S	oils (C6)	<u>X</u> (Geomorphic Pos	sition (D2)	
Iron Deposits (B5	5)		Thin Muck Surface			;	Shallow Aquitare	d (D3)	
Inundation Visible	e on Aerial Ima	gery (B7)	Other (Explain in F	Remarks)		'	Microtopographi	c Relief (D4)	
Sparsely Vegeta	ed Concave S	urface (B8)				'	FAC-Neutral Te	st (D5)	
					1				
Field Observations:									
Surface Water Present?	Yes	NoX	Depth (inches):	N/A					
Water Table Present?	Yes	NoX	Depth (inches):	>16					
Saturation Present?	Yes	NoX	Depth (inches):	>16	Wetland F	lydrology	Present? Ye	es	No X
(includes capillary fringe)									
Describe Recorded Data (s	tream gauge, r	monitoring well, a	erial photos, previou	is inspections),	if available:				
Remarks:									
Nomarko.									
One (1) secondary indi	cator was prese	ent; however, du	e to the absence of to	wo (2) or more	secondary ind	licators, the	hydrology crite	rion has not b	been met.
, ,	·				•		, ,,		

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
ee Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species	
Acer rubrum	50	Yes	FAC	That Are OBL, FACW, or FAC: 4	(A)
Ulmus americana	40	Yes	FACW		
Acer saccharum	10	No	FACU	Total Number of Dominant	
Prunus serotina	5	No	FACU	Species Across All Strata: 6	(B)
				Percent of Dominant Species	
				·	(A/B)
	105 =	Total Cover			,
				Prevalence Index Worksheet:	
oling/Shrub Stratum (Plot size: 15 ft	.)			Total % Cover of: Multiply by:	
Acer rubrum	<u></u> / 15	Yes	FAC	OBL species 0 x 1 = 0	
Frangula alnus	10	Yes	FAC	FACW species 40 x 2 = 80	
		103	1710	FAC species 80 x 3 = 240	
				FACU species 70 x 4 = 280	
				UPL species 40 x 5 = 200	_
				· ————————————————————————————————————	
		-	-	Column Totals: 230 (A) 800	(B
	25 =	Total Cover		Prevalence Index = B/A = 3.48	
erb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:	
Alliaria petiolata	50	Yes	FACU	1 - Rapid Test for Hydrophytic Vegetation	
Celastrus orbiculatus	10	No	UPL	X 2 - Dominance Test is >50%	
Lonicera japonica	5	No	FACU	$\frac{\chi}{3} = 2 - 20000000000000000000000000000000000$	
Toxicodendron radicans	5	No	FAC	4 - Morphological Adaptations ¹ (Provide suppo	rtina
			TAC	· · · · · · · · · · · · · · · · · · ·	illig
				data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)	
			-	Problematic Hydrophytic Vegetation (Explain)	
				1	
				¹ Indicators of hydric soil and wetland hydrology must	
				be present, unless disturbed or problematic.	
				Definitions of Five Vegetation Strata:	
				Tree - Woody plants 3 in. (7.6 cm) or more in diameter	
				at breast height (DBH) regardless of height.	
	=	Total Cover			
				Sapling/Shrub - Woody plants lses than 3 in. DBH	
oody Vine Stratum Plot size: 30 ft.				and greater than or equal to 3.28 ft (1 m) tall.	
Celastrus orbiculatus	30	Yes	UPL		
				Herb - All herbaceous (non-woody) plants, regardless	
				of size, and woody plants less than 3.28 ft tall.	
	=	Total Cover		Woody vine - All woody vines greater than 3.28 ft in hei	ight.
				Hydrophytic	
				Vegetation	
				Present? Yes X No No	
Remarks:					

US Army Corps of Engineers

Sampling Point: Upl 1

SOIL Sampling Point:

Profile Des	cription: (Describe	e to the dep	th needed to docu			nfirm the absend	ce of indicators.)	
Depth	Matrix			Redox	Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR 3/3	100					Silt Loam	
14-16+	10YR 3/3	95	10YR 6/1	5	D	M	Silt Loam	Roots
								
1Typo: C=C	oncentration, D=De	nlotion DM-	-Poducod Matrix M	19-Masko	d Sand Grains	² Location: DI	 _=Pore Lining, M=N	Matrix
		pietion, Kivi-	-Neduced Matrix, IV	IS-IVIASKE	u Sanu Gianis.	LUCATION. FL		for Problematic Hydric Soils ³ :
=	s Indicators:							•
Histoso	ol (A1)		Polyval	ue Below S	Surface (S8) (LR	RR R,		Muck (A10) (LRR K, L, MLRA 149B)
Histic E	Epipedon (A2)		M	LRA 149B)		Coast	Prairie Redox (A16) (LRR K, L, R)
Black H	Histic (A3)		Thin Da	ark Surface	e (S9) (LRR R, N	/ILRA 149B)	5 cm N	Mucky Peat or Peat (S3) (LRR K, L, R)
Hvdroa	en Sulfide (A4)		Loamy	Mucky Mir	neral (F1) (LRR I	K, L)	Dark S	Surface (S7) (LRR K, L)
	ed Layers (A5)			Gleyed Ma		, ,		lue Below Surface (S8) (LRR K, L)
	ed Below Dark Surfa	oce (Δ11)		ed Matrix (I				ark Surface (S9) (LRR K, L)
		ace (ATT)			-			
	Dark Surface (A12)			Dark Surfa	` ,			anganese Masses (F12) (LRR K, L, R)
Sandy	Mucky Mineral (S1)		Deplete	ed Dark Su	ırface (F7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)
Sandy	Gleyed Matrix (S4)		Redox	Depression	ns (F8)		Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy	Redox (S5)						Red Pa	arent Material (F12)
Strippe	d Matrix (S6)						Very S	hallow Dark Surface (F22)
Dark S	urface (S7) (LRR R	, MLRA 149	В)				Other	(Explain in Remarks)
	, , ,		•					,
3Indicators of	of hydrophytic veget	ation and we	atland hydrology mu	et ha nrae	ant unlace dietu	rhed or problems	atic	
	Layer (if observed		alana nyarology me	iot be pres	crit, driicoo diota	ibed of probleme	illo.	
	Layor (ii oboor rou	,.						
Type:								
Depth (in	iches):					Hydric S	Soil Present? Y	es NoX
Remarks:								
			No pos	sitive indica	ation of hydric so	ils was observed		

Upl 1

Project/Site:	Route 15/Rou	ite 7 Intercha	nge (County:	Fairfield		Sampling Dat	te:	9/28/2016
Applicant/Owner:		C.	TDOT		State:	CT	Sample P	oint:	Wet 2
Investigator(s):	KB	and	RMH	Section, Towns	hip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Hillslo	ре	Local relief (cor	ncave, convex, r	none): _	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-	-R	Lat: 4	1.14187	Long: _	-73.42670	Datum:	N/A
Soil Map Unit Name:		Udorth	ents-Urban land com	plex (306)		NWI	Classification:		N/A
Are climatic / hydrologic con-	ditions on the si	ite typical for	this time of year?	(Yes / No)	NO	(if no,	explain in Ren	narks.)	
Are Vegetation Yes	,Soil No	or Hydrolo	gy <u>Yes</u> signific	cantly disturbed?	Are "Norma	al Circums	stances" preser	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrolo	gy <u>No</u> natural	lly problematic?	(1)	f needed,	explain any an	swers in Rema	arks.)
SUMMARY OF FIND	INGS - Att:	ach site n	nan showing s	ampling po	int location	ns trar	sects imr	ortant fea	itures etc
	71100	uon ono n	nap onowing o	unpinig po		10, 11 41		Jortant 100	
Hydrophytic Vegetation Pre	esent? Yes	s <u>X</u>	No						
Hydric Soil Present?	Yes	sX	No	Is the Sam	pled Area				
Wetland Hydrology Presen	t? Yes	sX	No	within a W	etland?)	res X	No	
				If ves. o	ptional Wetland	Site ID:	\	Netland 2	
Remarks:				,, -					
	This p	oint was dete	rmined to be within a	wetland due to	the presence of	all 3 wetl	and criteria.		
			The survey was co	ompleted during	a mild drought.				
The wetland is located	adjacent to the	river, a comm	nercial development.	the highway off	ramp, and Main	Street. It	receives hydro	loav from over	land flows and
	,		ent watercourse that						
HYDROLOGY									
Wetland hydrology Inc	dicators:					Secor	ndary Indicators	(minimum of	two required)
Primary Indicators (min		required: che	ck all that apply)			00001	Surface Soil C		two required)
Surface Water (A		roquirou, orio	Water-Stained I	Leaves (R9)			Drainage Patte		
High Water Table	•	_	Aquatic Fauna	` ,			Moss Trim Lin	` '	
Saturation (A3)	· (· ·=)	_	Marl Deposits (I				Dry-Season W		2)
Water Marks (B1)	_	Hydrogen Sulfic	•			Crayfish Burro	•	-,
Sediment Depos	•	_		spheres on Livin	a Roots (C3)		Saturation Vis		magery (C9)
X Drift Deposits (B3		_		duced Iron (C4)	g 1 (0010 (00)		Stunted or Str		. ,
Algal Mat or Crus	·	_		duction in Tilled	Soils (C6)		Geomorphic F	,	31)
Iron Deposits (B5		_	Thin Muck Surfa		00113 (00)		Shallow Aquita		
Inundation Visible	•	nery (R7)	Other (Explain i				Microtopograp		1
Sparsely Vegetat	_		Other (Explain)	iii iteiliaiks)			FAC-Neutral T		;
Operacity vegetal	ica concave ca	illacc (DO)					1710 Neutral 1	CSt (DO)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches	s): N/A					
Water Table Present?	Yes	No X	Depth (inches	· ——					
Saturation Present?	Yes	No X	Depth (inches	-	Wetland H	lvdrology	Present?	Yes X	No
(includes capillary fringe)	100	_ 110X	Bopai (illonoc	5). <u> 10 - </u>	Would I	, yui ology	i rocont.	<u>x</u>	
Describe Recorded Data (s	tream gauge in	nonitoring we	Il aerial photos prev	ious inspections) if available:				
Describe Necorded Data (s	tream gauge, ii	ionitoning we	ii, aeriai priotos, prev	ious irispections), ii avallable.				
Remarks:									
itemarks.									
A positive indication of	wetland hydrolo	nav was ohsei	rved (nrimary and sec	condary indicato	rs were present	1			
71 positive indication of	Wolland Hydrolo	gy was oboo	voa (piiilai y alia oo	oondary maioato	to word producing	<i>)</i> .			

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Free Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1. Acer negundo	20	Yes	FAC	That Are OBL, FACW, or FAC:	4	(A)
2					<u>.</u>	_ (*,)
3				Total Number of Dominant		
4.				Species Across All Strata:	5	(B)
5				opened / torode / tir offatta.		_ (5)
6				Percent of Dominant Species		
7				That Are OBL, FACW, or FAC:	80%	(A/B)
··	20 =	Total Cover		matrice obe, triow, of trio.	0070	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		Total Cover		Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of:	Multiply	bv:
1. Frangula alnus	/ 	Yes	FAC	OBL species 0	x 1 = 0	
2				FACW species 50	x 2 = 10	
3.			-	FAC species 65	x3 = 19	
4.				FACU species 10	x 4 = 40	
5				UPL species 10	x 5 = 50	
6				Column Totals: 135	(A) 38	
7				Column rotale. 100	(/ ()	(5)
	10 =	Total Cover		Prevalence Index = B/A =	2.85	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicate	ore:	
1. Impatiens capensis	50	Yes	FACW	1 - Rapid Test for Hydrop		
Toxicodendron radicans	20	Yes	FAC	X 2 - Dominance Test is >5		
3. Artemisia vulgaris	10	No	UPL	X 3 - Prevalence Index is ≤		
4. Solidago rugosa	5	No	FAC	4 - Morphological Adapta		pporting
	5		FAC	data in Remarks or o		
5. <u>Symphyotrichum lateriflorum</u> 6. Frangula alnus	<u>5</u>	No No	FAC FAC	Problematic Hydrophytic		•
		<u>No</u>	TAC	r roblematic riyurophytic	vegetation (Expir	aii i)
7				1 Indicators of budgio pail and wet	land budsalagu sau	o.t
8				¹Indicators of hydric soil and wetl		Si
9				be present, unless disturbed or pro Definitions of Five Vegetation S		
10				Tree - Woody plants 3 in. (7.6 cm		ator
11.				at breast height (DBH) regardless	•	Stoi
12		Total Cover	-	at breast fielgrit (DBH) regardless	of fleight.	
	95=	Total Cover		Sapling/Shrub - Woody plants Ise	es than 3 in. DBH	
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 f		
1. Vitis labrusca	10	Voc	FACU		, , , ,	
		Yes	TACO	Herb - All herbaceous (non-wood)	v) plants, regardles	SS
2. 3.				of size, and woody plants less that	-	
4						
7	10 =	Total Cover		Woody vine - All woody vines gre	ater than 3.28 ft in	height.
				Hydrophytic		
				Vegetation		
				Present? Yes X	No	
Remarks:						
A manifely in distance of the state	anhudia	ion was -b	.d /> E00/ -f -l ∘ · ·	inent enesies indexed == ODL FACIAL	or EAC)	
A positive indication of hydr	opnytic vegetat	ion was observe	mob to %uc<) u	inant species indexed as OBL, FACW	, or FAC).	

Sampling Point:

Wet 2

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

SOIL

Sampling Point: Wet 2

epth	Matrix			Redox F	eatures			
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 2/2	100					mucky Silt Loam	
2-3	10YR 4/3	100					Loam	
			10VP F/0	15				
3-16	10YR 3/1	85	10YR 5/2	<u>15</u>	D	M	Silt Loam	
								_
						2,		
		pletion, RM	=Reduced Matrix, N	/IS=Masked	Sand Grains.	Location:	PL=Pore Lining, M=Matri	
ydric Soils	Indicators:						Indicators for F	Problematic Hydric Soils ³ :
Histoso	l (A1)		Polyval	lue Below S	Surface (S8) (L	.RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		М	LRA 149B))		Coast Prai	rie Redox (A16) (LRR K, L, R)
	listic (A3)		Thin Da	ark Surface	(S9) (LRR R.	MLRA 149B)	5 cm Muck	y Peat or Peat (S3) (LRR K, L, R
	en Sulfide (A4)				eral (F1) (LRR			ce (S7) (LRR K, L)
						· · · · · · · · · · · · · · · · · · ·		
	ed Layers (A5)			Gleyed Ma			 -	Below Surface (S8) (LRR K, L)
	ed Below Dark Surfa	ace (A11)		ed Matrix (F	•			Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)		Redox	Dark Surfa	ce (F6)		Iron-Manga	anese Masses (F12) (LRR K, L, F
Sandy I	Mucky Mineral (S1)		X Deplete	ed Dark Su	rface (F7)		Piedmont I	Floodplain Soils (F19) (MLRA 14
	Gleyed Matrix (S4)		Redox	Depression	ns (F8)		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149
	Redox (S5)				· ~/			t Material (F12)
	` '							
	d Matrix (S6)							ow Dark Surface (F22)
Dark Si	urface (S7) (LRR R,	, MLRA 149) B)				Other (Exp	lain in Remarks)
emarks:								
			A pos	sitive indica	tion of hydric s	oil was observed	d.	

Project/Site:	Route 15/Ro	ute 7 Interchanç	ge Co	ounty:	Fairfield		Sampling Da	te:	11/16/2016
Applicant/Owner:		СТІ	DOT		State:	CT	Sample P	oint:	Upl 2 & 3
Investigator(s):	KB	and	RMH S	ection, Towns	hip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Terrace	e L	ocal relief (co	ncave, convex, r	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		_ Lat:4	1.14161	Long: _	-73.42691	Datum:	N/A
Soil Map Unit Name:		Udorthen	ts-Urban Land Comp	lex (306)		NWI	Classification:	-	N/A
Are climatic / hydrologic con	ditions on the	site typical for th	is time of year? (Yes / No)	NO	(if no,	explain in Rer	narks.)	
Are Vegetation Yes	_,SoilYes	or Hydrology,	No significa	ntly disturbed?	Are "Norma	al Circums	tances" prese	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology	No naturally	problematic?	(1	f needed,	explain any ar	nswers in Rem	arks.)
SUMMARY OF FIND	- A+	- tach cito m	an showing sa	malina na	int location	ne tran	eacte im	nortant for	aturos oto
SOMINANT OF THE	/IIIOO - ALI	acii site iii	ap snowing sa	inpinig po	int location	is, trair	isecis, iiii	portant lea	itures, etc.
Hydrophytic Vegetation Pre	esent? Ye	es	No X						
Hydric Soil Present?	Υє	es	No X	Is the Sam	pled Area				
Wetland Hydrology Presen	t? Ye	es	No X	within a W	etland?	Υ	'es	No	X
				If yes	ptional Wetland	l Sita ID:			
Remarks:				ii yes, c	puonai vveuano	Site ib.			
Nemarks.	This po	oint was determ	ined not to be within a	a wetland due	to the lack of all	I three wet	tland criteria.		
		omit was astern.	The survey was com				aara ortona.		
Unland point for W	Iotlanda 2 and	2 located adjace		-	=	ooo of fill	I Inland batura	an two wotland	lo io lorgoly
Opiana point for w	elianus z anu	o localed adjace	ent to a parking garag manicured lawr			ice of fill.	Opiano betwee	en two wettand	s is largely
			mamourod law	r arra rarracoa,	ou planto.				
HYDROLOGY									
Wetland hydrology Inc	dicators:								
								`	two required)
Primary Indicators (min		required; checl			<u></u>		Surface Soil (` ,	
Surface Water (A	•		Water-Stained Le	` '			Drainage Patt	, ,	
High Water Table	e (A2)		Aquatic Fauna (B				Moss Trim Lir		_,
Saturation (A3)			Marl Deposits (B1	•			=	Vater Table (C	2)
Water Marks (B1	*		Hydrogen Sulfide				Crayfish Burro		
Sediment Depos			_ Oxidized Rhizosp		g Roots (C3)			ible on Aerial	
Drift Deposits (B:	3)		Presence of Redu	uced Iron (C4)			Stunted or Str	essed Plants (D1)
Algal Mat or Crus	st (B4)		_ Recent Iron Redu	ction in Tilled	Soils (C6)		Geomorphic F	Position (D2)	
Iron Deposits (B5	5)		Thin Muck Surfac	e (C7)			Shallow Aquit	ard (D3)	
Inundation Visible	e on Aerial Ima	agery (B7)	Other (Explain in	Remarks)			Microtopograp	ohic Relief (D4)
Sparsely Vegeta	ted Concave S	urface (B8)					FAC-Neutral	Γest (D5)	
					1				
Field Observations:									
Surface Water Present?	Yes	NoX	Depth (inches):	N/A					
Water Table Present?	Yes	NoX	Depth (inches):	>12					
Saturation Present?	Yes	NoX	Depth (inches):	>12	Wetland H	lydrology	Present?	Yes	No X
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge,	monitoring well,	aerial photos, previo	us inspections), if available:				
Remarks:									
No positive indication of	f wetland hydro	ology was obser	ved.						

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1. Betula populifolia	30	Yes	FAC	· ·	3 (A)
2. Acer platanoides	20	Yes	UPL		
3. Acer rubrum	10	No	FAC	Total Number of Dominant	
	10	110	1710	Species Across All Strata:	6 (B)
4				opecies Across Air Strata.	(B)
5			-	Percent of Dominant Species	
6			-	That Are OBL, FACW, or FAC:	50% (A/B)
7	60 =	Total Cover	-	That Are OBE, I ACW, of I AC.	(A/B)
		Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (Plot size: 15 ft	1			Total % Cover of:	Multiply by:
1. Acer rubrum	<u></u>	Yes	FAC	OBL species 0	x 1 = 0
2. Frangula alnus	5	Yes	FAC	FACW species 0	x 2 = 0
3. Acer platanoides	5	Yes	UPL	FAC species 55	x 3 = 165
	2	No	FACU	FACU species 2	x 4 = 8
-		140	17100	UPL species 100	x 5 = 500
5				Column Totals: 157	(A) 673 (B)
7				Column rotals. 101	(3)
·· <u> </u>	22 =	Total Cover		Prevalence Index = B/A =	4.29
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicato	ors:
1. Mowed grass	75	Yes	UPL	1 - Rapid Test for Hydrop	hytic Vegetation
2.				2 - Dominance Test is >5	0%
3.				3 - Prevalence Index is ≤	3.0 ¹
4				4 - Morphological Adapta	tions ¹ (Provide supporting
5				data in Remarks or or	n a separate sheet)
6.			·	Problematic Hydrophytic	Vegetation ¹ (Explain)
7.			·		
8.				¹ Indicators of hydric soil and wetl	and hydrology must
9				be present, unless disturbed or pro	oblematic.
10			. <u></u> .	Definitions of Five Vegetation St	trata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless	of height.
	<u>75</u> =	Total Cover			
				Sapling/Shrub - Woody plants Ise	s than 3 in. DBH
Woody Vine Stratum [Plot size: 30 ft.)				and greater than or equal to 3.28 f	t (1 m) tall.
1. None Observed					
2				Herb - All herbaceous (non-woody	y) plants, regardless
3				of size, and woody plants less than	า 3.28 ft tall.
4					
	=	Total Cover		Woody vine - All woody vines greater	ater than 3.28 ft in height.
				Hydrophytic	
				Vegetation	
				Present? Yes	No X
Remarks:					
No positive indication of	hydrophytic ve	getation was obs	served (≥50% of	dominant species indexed as FAC- or	drier).
	Mowed g	rass composed	the majority of th	ne sample plot.	

Sampling Point: Upl 2 & 3

SOIL Sampling Point:

Profile Description: (Describe Depth Matrix	to the depth heeded		eatures	เมษ สมอัสได้	or maicators.)	
inches) Color (moist)	% Color (m		Type ¹	Loc ²	Texture	Remarks
		70	1,700		· · · · · · · · · · · · · · · · · · ·	Romano
	100				Sandy Loam	
6-12+ 2.5Y 3/3	100				Loamy Sand	Rocks
			·	<u> </u>		
						
Type: C=Concentration, D=Dep	letion, RM=Reduced	Matrix, MS=Masked	Sand Grains.	² Location: PL	=Pore Lining, M=M	latrix.
lydric Soils Indicators:					Indicators f	or Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Below S	Surface (S8) (I R	RR	2 cm M	uck (A10) (LRR K, L, MLRA 149B)
		-		,		
Histic Epipedon (A2)		MLRA 149B)				Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)		Thin Dark Surface	(S9) (LRR R, N	ILRA 149B)	5 cm M	ucky Peat or Peat (S3) (LRR K, L, F
Hydrogen Sulfide (A4)		Loamy Mucky Min	eral (F1) (LRR I	(, L)	Dark Si	urface (S7) (LRR K, L)
Stratified Layers (A5)		Loamy Gleyed Ma				ue Below Surface (S8) (LRR K, L)
			. ,			
Depleted Below Dark Surface	e (A11)	_Depleted Matrix (F	-			ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	_	Redox Dark Surfa	ce (F6)		Iron-Ma	anganese Masses (F12) (LRR K, L,
Sandy Mucky Mineral (S1)		Depleted Dark Su	rface (F7)		Piedmo	ont Floodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix (S4)		Redox Depression	, ,			Spodic (TA6) (MLRA 144A, 145, 14
	-	_ Redux Depression	15 (ГО)			
Sandy Redox (S5)						rent Material (F12)
Stripped Matrix (S6)					Very Sh	nallow Dark Surface (F22)
Dark Surface (S7) (LRR R, I	VILRA 149B)				Other (Explain in Remarks)
Depth (inches):					Soil Present? Ye	es No X
		No positive indica	tion of hydric so	ils was observed		

Upl 2 & 3

Project/Site:	Route 15	/Route 7 Interch	ange	County	<i>r</i> :	Fairfield		Sampling Da	te:	9/28/2016
-		(CTDOT			State:	СТ	Sample F	oint:	Wet 3
Investigator(s):	KB	and	RMH	Section	on, Township	-			N/A	
Landform (hillslope, terrace					relief (conca	· · -	none).	None		0-3
Subregion (LRR or MLRA):		LRF					_	-73.42700	,	
Soil Map Unit Name:			hents-Urban land			1000		Classification:		R2UBH
Are climatic / hydrologic co	nditions on tl				/ No)	NO		explain in Rer		REODIT
		es ,or Hydrol	-		disturbed?		`	•	,	X No
				aturally prob						
		or Hydrol						explain any a		
SUMMARY OF FINI	DINGS - A	Attach site	map showi	ng samp	ling poin	t locatio	ns, trar	nsects, im	portant fea	atures, etc.
				-						
Hydrophytic Vegetation Pr	esent?	Yes X	No							
Hydric Soil Present?		Yes <u>X</u>	No	Is	the Sample	d Area				
Wetland Hydrology Prese	nt?	Yes X	No	w	ithin a Wetla	and?	ì	res X	No	
					If ves. option	onal Wetlan	d Site ID:		Wetland 3	
Remarks:				<u> </u>	, ,					
	Th	nis point was det	ermined to be w	thin a wetla	nd due to the	presence o	f all 3 wetl	and criteria.		
			The survey w	as complet	ed during a n	nild drought.				
The wetland	is disturbed	by the developm	nent of the nearb		_	_		has been land	scaped and pl	anted
THE Westerna	io aiotai boa	2) and dovelop		,	a. zananig, a	po			ocapou ana pi	
HYDROLOGY										
Wetland hydrology Ir	dicators:									
							Secon			two required)
Primary Indicators (mi		e is required; ch						Surface Soil (` ,	
Surface Water (A1)	-	X Water-Sta	ined Leaves	s (B9)		<u>X</u>	Drainage Pat	erns (B10)	
High Water Tab	le (A2)	-	Aquatic F	auna (B13)				Moss Trim Lir	nes (B16)	
X Saturation (A3)		-	Marl Depo	sits (B15)				Dry-Season V	Vater Table (C	2)
Water Marks (B	1)	. <u>-</u>	Hydrogen	Sulfide Odd	or (C1)			Crayfish Burro	ows (C8)	
Sediment Depo	sits (B2)		Oxidized I	Rhizosphere	es on Living R	Roots (C3)		Saturation Vis	sible on Aerial	Imagery (C9)
X Drift Deposits (E	33)	•	Presence	of Reduced	I Iron (C4)			Stunted or St	essed Plants	(D1)
Algal Mat or Cru	ıst (B4)	-	Recent Iro	n Reduction	n in Tilled Soi	ils (C6)	X	Geomorphic F	Position (D2)	
Iron Deposits (E		-		Surface (C		(/		Shallow Aquit		
Inundation Visib	-	Imagen/ (B7)		olain in Rem					ohic Relief (D4	`
			Other (LX	Jiaiii iii i Keii	iai koj					7
Sparsely Vegeta	ileu Concavi	e Surface (Bo)						FAC-Neutral	rest (D5)	
Field Observations:										
	V	No. N	Danith (NI/A					
Surface Water Present?	Yes	No	· `	· —	N/A_					
Water Table Present?	Yes	No	' ' '	· —	>16			_		
Saturation Present?	Yes	X No	Depth (i	nches):	12	Wetland I	Hydrology	Present?	Yes X	_ No
(includes capillary fringe)										
Describe Recorded Data (stream gaug	ge, monitoring w	ell, aerial photos	, previous in	nspections), if	available:				
Remarks:										
A positive indication of	f wetland hyd	drology was obse	erved (primary a	nd secondar	ry indicators v	were presen	t).			
,	,	0,	" ,		•	•	,			

				Dominance Test worksheet:
T Ol (Dl.)	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Fraxinus pennsylvanica	25	Yes	FACW	That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant
4				Species Across All Strata: 3 (B)
5				
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: (A/B)
	25=	= Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.			E4.014	Total % Cover of: Multiply by:
1. Cornus amomum	50	Yes	FACW	OBL species
2.				FACW species 110 x 2 = 220
3				FAC species 0 x 3 = 0
4				FACU species <u>5</u> x 4 = <u>20</u>
5				UPL species $0 \times 5 = 0$
6				Column Totals:(A)(B)
7				Decordance in the DAA
	50 =	= Total Cover		Prevalence Index = B/A = 2.09
Had Olat a (Blatain 5 ft)				H. L. J. C. W. J. C. J. P. J. J.
Herb Stratum (Plot size: 5 ft.)	20	V	E4.0\41	Hydrophytic Vegetation Indicators:
1. Impatiens capensis	30	Yes	FACW	1 - Rapid Test for Hydrophytic Vegetation
2. Onoclea sensibilis	5	No	FACW	X 2 - Dominance Test is >50%
3. Parthenocissus quinquefolia	5	No	FACU	X 3 - Prevalence Index is ≤ 3.0 ¹
4				4 - Morphological Adaptations (Provide supporting
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				4
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	<u>40</u> =	= Total Cover		Sapling/Shrub - Woody plants Ises than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.26 it (1 iii) tail.
1. None Observed				Herb - All herbaceous (non-woody) plants, regardless
2				of size, and woody plants less than 3.28 ft tall.
3				of size, and woody plants less than 3.26 it tall.
4				Woody vine - All woody vines greater than 3.28 ft in height.
	=	= Total Cover		Woody Ville - All Woody Villes greater than 3.20 it in height.
				Hadronbade
				Hydrophytic
				Vegetation
				Present? Yes <u>X</u> No
Remarks:				
Nomano.				
			=00/	
A positive indication of hydro	ophytic vegeta	ation was observe	ed (>50% of dom	inant species indexed as OBL, FACW, or FAC).
A == -00 1	adioation -f!	udrophytic !	tion was at	ad /Provalence Index is < 2.00\
A positive II	idication of h	yuropriyiic vegeta	uon was observe	ed (Prevalence Index is ≤ 3.00).

Sampling Point: Wet 3

SOIL

Sampling Point: Wet 3

	Matrix			Redox	Features			
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-0	10YR 2/1	100					Peat	
0-4	10YR 2/2	100	·				Silt Loam	
4-12	10YR 3/2	85	7.5YR 4/6	15	С	M, PL	Silt Loam	
12-16	2.5Y 3/1	85	7.5YR 4/6	15		M	Silt Loam	
								
						-		
	oncentration, D=De	nletion BM	I=Reduced Matrix N	1S=Naaka	d Sand Grains	² Location: F	PL=Pore Lining, M=Ma	
	s Indicators:	pieliUII, KIV	i–rveduced Matrix, IV	io-iviaSKE(u Janu Glailis.	LUCATION. F		r Problematic Hydric Soils ³ :
			Dahasal	uo Bolow (Purfoso (CO) (I	DD D		<u>-</u>
Histoso					Surface (S8) (L	KK K,		ick (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)			LRA 149B)	•			rairie Redox (A16) (LRR K, L, R)
	Histic (A3)				e (S9) (LRR R,			icky Peat or Peat (S3) (LRR K, L, R
	en Sulfide (A4)				eral (F1) (LRR	K, L)		rface (S7) (LRR K, L)
	ed Layers (A5)			Gleyed Ma				e Below Surface (S8) (LRR K, L)
	ed Below Dark Surfa	ice (A11)		ed Matrix (F	,			k Surface (S9) (LRR K, L)
Thick D	Dark Surface (A12)		X Redox	Dark Surfa	ice (F6)			nganese Masses (F12) (LRR K, L, I
Sandy	Mucky Mineral (S1)		Deplete	ed Dark Su	rface (F7)		Piedmor	nt Floodplain Soils (F19) (MLRA 14
Sandy	Gleyed Matrix (S4)		Redox	Depression	ns (F8)		Mesic S	podic (TA6) (MLRA 144A, 145, 149
Sandy	Redox (S5)						Red Par	ent Material (F12)
Strippe	d Matrix (S6)						Very Sha	allow Dark Surface (F22)
Dark S	urface (S7) (LRR R,	MLRA 149	9B)				Other (E	xplain in Remarks)
Depth (in	iches):					1.1,4.1.0	John resent: 16.	s <u>X</u> No
emarks:						yu.io	John resent: Te.	5 <u>X</u> NO
						i yano	Son resent: Te.	<u> </u>
	ones).			itive indica	tion of hydric s	oil was observed		NO
	ones).			itive indica	ition of hydric s			NO
	ones).			itive indica	ition of hydric s			NO
	iones).			itive indica	ition of hydric s			NO
	ones).			itive indica	tion of hydric s			NO
	ones).			itive indica	tion of hydric s			
	ones).			itive indica	tion of hydric s			
	ones).			itive indica	tion of hydric s			
	ones).			itive indica	tion of hydric s			<u> </u>
	initial).			itive indica	ition of hydric s			
	inicis).			itive indica	tion of hydric s			
	inicis).			itive indica	tion of hydric s			
	inicis).			itive indica	tion of hydric s			

Project/Site:	Route 15/Ro	oute 7 Interchange	e Co	unty:	Fairfield		Sampling Dat	e:	9/29/2016
Applicant/Owner:		CTD	OT		State:	CT	Sample Po	oint:	Wetland 4
Investigator(s):	KB	and	RMH S	ection, Townsh	ip, Range:			N/A	
Landform (hillslope, terrace	e, etc.):	Hillslope	<u> </u>	ocal relief (cond	cave, convex, r	none): _	None	Slope (%):	0-3
Subregion (LRR or MLRA):	· <u> </u>	LRR-R		_Lat:41.	.14192	Long: _	-73.42729	Datum:	#N/A
Soil Map Unit Name:		Hollis-Chatfe	ild -Rock outcrop cor	nplex (75C)		NWIC	Classification: _		N/A
Are climatic / hydrologic co	nditions on the	site typical for this	s time of year? (Y	'es / No)	NO	(if no,	explain in Rem	narks.)	
Are Vegetation Yes	,Soil Yes	or Hydrology	No significar	ntly disturbed?	Are "Norma	al Circums	tances" preser	nt? Yes >	No
Are Vegetation No	,Soil Yes	or Hydrology	No naturally	problematic?	(1)	f needed,	explain any an	swers in Rema	ırks.)
SUMMARY OF FIN	DINGS - At	tach site ma	n showing sa	mnlina noi	nt location	ns tran	sects imr	ortant fea	tures etc
	J	tuon ono me	p onowing ou	pg poi	in ioodiioi	10,		- Tortunit rou	
Hydrophytic Vegetation P	resent? Y	es X	No						
Hydric Soil Present?	Y	es X	No	Is the Samp	led Area				
Wetland Hydrology Prese	nt? Y	es X	No	within a We	tland?	Υ	es X	No	
				If yes on	tional Wetland	Site ID	V	Vetland 4	
Remarks:				300, 00	and the state of	0.10 121	<u>·</u>		
	This	point was determ	ined to be within a w	etland due to the	ne presence of	all 3 wetla	and criteria.		
		•	The survey was com	pleted during a	mild drought.				
Wetland is adjacent t	o the railroad h		-	-	=	vithin the w	vetland hounda	erv and was del	ineated as an
Welland is adjacent t			Area is disturbed du					iry and was aci	incutcu as an
		•				•			
HYDROLOGY									
Wetland hydrology li	ndicators:					Socon	dany Indicators	(minimum of t	wo required)
Primary Indicators (mi		e required: check	all that apply)				Surface Soil C	`	wo required)
Surface Water		s required, crieck	Water-Stained Le	avec (R0)	-		Drainage Patte		
High Water Tab	` '		Aquatic Fauna (B	. ,			Moss Trim Lin		
X Saturation (A3)			Marl Deposits (B1					ater Table (C2	١
Water Marks (B			Hydrogen Sulfide	-			Crayfish Burro	•)
Sediment Depo	*		Oxidized Rhizospl		Poots (C3)		-	ble on Aerial Ir	nagony (CQ)
			_	_	Roots (C3)				• • • •
Drift Deposits (I	-		Presence of Redu		reile (CC)			essed Plants (D	71)
X Algal Mat or Cru			_ Recent Iron Redu		oolis (Cb)		Geomorphic P		
Iron Deposits (E	•		_ Thin Muck Surfac				Shallow Aquita		
Inundation Visit			Other (Explain in I	Remarks)			Microtopograp		
Sparsely Veget	ated Concave S	surrace (B8)					FAC-Neutral T	est (D5)	
Field Observations									
Field Observations:	V	N- V	Donath (in about)	NI/A					
Surface Water Present?	Yes	NoX	_ Depth (inches):	N/A					
Water Table Present?	Yes	NoX	_ Depth (inches):	<u>>18</u>	347.41		D		NI.
Saturation Present? (includes capillary fringe)	Yes X	No	_ Depth (inches):	10	Wetland H	yarology	Present?	Yes X	No
					<u> </u>				
Describe Recorded Data	stream gauge,	monitoring well, a	aerial photos, previou	us inspections),	if available:				
Remarks:									
A positive indication o	f wetland hydro	logy was observe	d (primary and seco	ndary indicators	s were present).			

				Dominance Test worksheet:
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	60	Yes	FAC	That Are OBL, FACW, or FAC: (A)
Quercus palustris	10	No	FACW	
3				Total Number of Dominant
4				Species Across All Strata: 6 (B)
5				
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 83% (A/B)
	<u>70</u> =	Total Cover		Decorder on Index Westerlands
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.				Total % Cover of: Multiply by:
1. Cornus amomum	30	Yes	FACW	OBL species 60 x 1 = 60
2. Frangula alnus	10	Yes	<u>FAC</u>	FACW species 65 x 2 = 130
3. Fraxinus pennsylvanica	5	No	FACW	FAC species <u>85</u> x 3 = <u>255</u>
4				FACU species 0 x 4 = 0
5				UPL species 10 x 5 = 50
6				Column Totals: (A) (B)
7				
	<u>45</u> =	Total Cover		Prevalence Index = B/A = 2.25
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
Persicaria sagittata	40	Yes	OBL	1 - Rapid Test for Hydrophytic Vegetation
2. Symphyotrichum lateriflorum	15	Yes	<u>FAC</u>	X 2 - Dominance Test is >50%
3. Peltandra virginica	10	No	OBL_	X 3 - Prevalence Index is ≤ 3.0 ¹
4. Mikania scandens	10	<u>No</u>	OBL_	4 - Morphological Adaptations (Provide supporting
5. Impatiens capensis	10	<u>No</u>	FACW	data in Remarks or on a separate sheet)
6. Phragmites australis	10	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	95 =	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
Ampelopsis brevipedunculata*	10	Yes	UPL	
2				Herb - All herbaceous (non-woody) plants, regardless
3				of size, and woody plants less than 3.28 ft tall.
4				
	10 =	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes <u>X</u> No
Remarks:				
A positive indication of hydro	ophytic vegetat	ion was observe	ed (>50% of dom	inant species indexed as OBL, FACW, or FAC).
,			•	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: Wetland 4

SOIL Sampling Point: Wetland 4

nches) 0-9 9-13	Matrix Color (moist) 10YR 2/1	<u>%</u> 100	Color (moist)	<u>%</u>	Features Type ¹	Loc ²	Texture	Remarks
0-9	10YR 2/1		22.3. (. / ٢٠			
		100					Mucky peat	
J-1J	10YR 2/1	45	5YR 4/6	10			<u> </u>	
			3117 4/0	10		IVI	Mucky coarse sand	
10.10	10YR 5/2	45					Mucky coarse sand	
13-18	10YR 2/1	95					Mucky silt loam	
 Гуре: C=Co	oncentration, D=De	pletion, RM:	=Reduced Matrix, M	MS=Masked	Sand Grains.	² Location: F	PL=Pore Lining, M=Matrix	
	Indicators:	•	,					oblematic Hydric Soils ³ :
Histosol	(A1)		Polyval	ue Below S	Surface (S8) (LR	R R.	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			LRA 149B)		,		e Redox (A16) (LRR K, L, R)
						II DA 440D)		
	istic (A3)				(S9) (LRR R, N	=		Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		Loamy	Mucky Min	eral (F1) (LRR I	(, L)		e (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy	Gleyed Ma	trix (F2)		Polyvalue B	elow Surface (S8) (LRR K, L)
Depleted	d Below Dark Surfa	ace (A11)	Deplete	ed Matrix (F	⁻ 3)		Thin Dark S	urface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox	Dark Surfa	ce (F6)		Iron-Mangar	nese Masses (F12) (LRR K, L, R
	Mucky Mineral (S1)			ed Dark Su				oodplain Soils (F19) (MLRA 149
	Bleyed Matrix (S4)			Depression				c (TA6) (MLRA 144A, 145, 149
	Redox (S5)			Poblessi01	(1 0)			Material (F12)
	I Matrix (S6)							v Dark Surface (F22)
Dark Su	rface (S7) (LRR R,	, MLRA 149	в)				Other (Expla	in in Remarks)
Depth (inc	ches):					Hydric	: Soil Present? Yes	X No
			A pos	sitive indica	tion of hydric soi	il was observed	I.	

Project/Site:	Route 15/Ro	oute 7 Interchan	ge C	County:	Fairfield		Sampling Da	te:	11/16/2016
Applicant/Owner:		CT	DOT		State:	CT	Sample P	oint:	Upl 4
Investigator(s):	KB	and	RMH	Section, Town	ship, Range: _			N/A	
Landform (hillslope, terrace,	etc.):	Hillslop	oe	Local relief (co	ncave, convex,	none):	None	Slope (%):	10-12
Subregion (LRR or MLRA):		LRR-F	२	Lat:4	11.14204	Long: _	-73.42776	Datum:	#N/A
Soil Map Unit Name:			Urban Land (307)			NWI	Classification:		N/A
Are climatic / hydrologic con-	ditions on the	site typical for th	nis time of year?	(Yes / No)	NO	(if no,	explain in Ren	narks.)	
Are Vegetation No	,Soil Yes	or Hydrolog	y No signific	antly disturbed	? Are "Norma	al Circums	tances" presei	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrolog	y <u>No</u> natural	ly problematic?	' (If needed,	explain any ar	nswers in Rem	arks.)
SUMMARY OF FIND	INGS - At	tach site m	an showing s	ampling p	oint locatio	ns tran	sects imi	ortant fea	atures etc
			ap onowing o			110, trai		Jortani iot	
Hydrophytic Vegetation Pre	sent? Y	'es	No <u>X</u>						
Hydric Soil Present?	Y	'es	No <u>X</u>	Is the San	npled Area				
Wetland Hydrology Presen	t? Y	'es	No <u>X</u>	within a V	/etland?	١	/es	No	X
				If ves.	optional Wetland	d Site ID:			
Remarks:				, , , , , , , , , , , , , , , , , , , ,					
	This p	oint was determ	nined not to be within	n a wetland due	to the lack of a	Il three we	tland criteria.		
			The survey was co	mpleted during	a mild drought.				
	ι	Jpland for Wetla	and 4 located on a fill	l embankment	adjacent to Rou	te 15 and	railroad.		
		•							
HYDROLOGY									
Wetland hydrology Inc	dicators:					Secor	ndary Indicator	s (minimum of	two required)
Primary Indicators (min	imum of one i	s required: chec	k all that apply)			00001	Surface Soil C		two required)
Surface Water (A		5 required, eries	Water-Stained L	eaves (R9)			Drainage Patt		
High Water Table	,		Aquatic Fauna (Moss Trim Lin	, ,	
Saturation (A3)	· (· ·=/	_	Marl Deposits (E				Dry-Season W		2)
Water Marks (B1)	_	Hydrogen Sulfid	-			Crayfish Burro		-/
Sediment Depos	•		Oxidized Rhizos		na Roots (C3)		Saturation Vis		Imagery (C9)
Drift Deposits (B3			Presence of Re	-	-		Stunted or Str		
Algal Mat or Crus	•		Recent Iron Rec	•			Geomorphic F		,5 ,7
Iron Deposits (B5		_	Thin Muck Surfa		00113 (00)		Shallow Aquit		
Inundation Visible	•	 ageny (B7)	Other (Explain in				Microtopograp)
Sparsely Vegetat			Other (Explain ii	i Remarks)			FAC-Neutral		,
Operacity vegetal	ca concave c	Juliace (Bo)					17to reducar	(50)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches): N/A					
Water Table Present?	Yes	No X	Depth (inches	<i>,</i>					
Saturation Present?	Yes	No X	Depth (inches		Wetland H	- - - - - - - - - - - - - - - - - - -	Present?	Yes	No X
(includes capillary fringe)				,. <u></u>	1101141141	., 0.09,			
Describe Recorded Data (s	tream gauge	monitoring well	aerial nhotos previ	ous inspection	s) if available				
Describe Necorded Data (S	tream gauge,	morntoning wen	, acriai priotos, previ	ous mopeonom	o), ii avallabic.				
Remarks:									
rtomarito.									
No positive indication o	f wetland hydr	rology was obse	rved						
1									

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	30	Yes	FAC	That Are OBL, FACW, or FAC: 1 (A)
2. Quercus rubra	20	Yes	FACU	
3. Malus sp.*	15	Yes	UPL	Total Number of Dominant
4. Betula populifolia	10	No	FAC	Species Across All Strata: 7 (B)
5				(5)
6.			-	Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 14% (A/B)
	75 =	Total Cover	-	
		. otal ooro.		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. Euonymus alatus**	_ [/] 30	Yes	UPL	OBL species 0 x 1 = 0
2. Rosa multiflora	10	Yes	FACU	FACW species 0 x 2 = 0
3		100	17100	FAC species 40 x 3 = 120
4			·	FACU species 45 x 4 = 180
			-	UPL species 60 x 5 = 300
5				Column Totals: 145 (A) 600 (B)
6				Column Totals. 143 (A) 000 (B)
7	40 =	Total Cover		Prevalence Index = B/A = 4.14
		Total Cover		Prevalence index – B/A – 4.14
Herb Stratum [Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
' 	15	Voc	FACU	1 - Rapid Test for Hydrophytic Vegetation
1. Lonicera japonica	<u>15</u> 15	Yes Yes		
2. Euonymus alatus**		<u>Yes</u>	<u>UPL</u>	2 - Dominance Test is >50% 3 - Prevalence Index is ≤ 3.0 ¹
3				4 - Morphological Adaptations¹ (Provide supporting
4				
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	30 =	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. None Observed				
2				Herb - All herbaceous (non-woody) plants, regardless
3				of size, and woody plants less than 3.28 ft tall.
4				
	=	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes No X
Remarks:				

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

*Genus does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

**Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point:

Upl 4

SOIL Sampling Point: Upl 4

	ription: (Describe Matrix	e to the dept	n needed to docu		indicator or co Features	ntirm the abse	ence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
			Color (moist)	70	Туре			Remarks
0-6	10YR 2/2	100					fine Sandy Loam	
6-12	10YR 3/2	100					Silt Loam	-
•								
1 _T			Dadward Matrix M		d Carad Caraina	2,	DI -Dara Linina M-Matri	
Hydric Soils	oncentration, D=De	pietion, Rivi=	Reduced Matrix, M	S=IVIASKE	a Sana Grains.	Location:	PL=Pore Lining, M=Matri	x. Problematic Hydric Soils ³ :
-			Debarel	o Dolow (Curfoss (CO) (LI	DD D		•
Histoso					Surface (S8) (Li	KK K,		(A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			RA 149B	•			rie Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Da	rk Surface	e (S9) (LRR R, I	MLRA 149B)	5 cm Muck	y Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy I	Mucky Min	neral (F1) (LRR	K, L)	Dark Surfa	ce (S7) (LRR K, L)
Stratifie	d Layers (A5)		_ Loamy	Gleyed Ma	atrix (F2)		Polyvalue I	Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surfa	ace (A11)	Deplete	d Matrix (F	=3)		Thin Dark S	Surface (S9) (LRR K, L)
	ark Surface (A12)	. ,		Dark Surfa	•			anese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)				rface (F7)			Floodplain Soils (F19) (MLRA 149)
	Gleyed Matrix (S4)			u Dark Su Depressior				dic (TA6) (MLRA 144A, 145, 149E
	• , ,		Redox I	pepression	iis (Fo)			
	Redox (S5)							t Material (F12)
	d Matrix (S6)						Very Shallo	ow Dark Surface (F22)
Dark Su	ırface (S7) (LRR R,	, MLRA 149E	3)				Other (Exp	lain in Remarks)
Remarks:								
iveillai ks.								
			No posi	tive indica	ation of hydric so	oils was observ	ed.	
				Refus	sal at 12" due to	rock		
				rteius	sarat 12 due to	TOCK.		

Project/Site:	Route 15/Rou	ite 7 Interchang	je Co	unty:	Fairfield	Sam	npling Date:	9/2	8/2016
-					State:		Sample Point:	V	Vet 5
Investigator(s):	KB	and	RMH S	ection, Townsh	nip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Hillslope		ocal relief (con	· · -	none): n	one Slo	pe (%):	0-3
Subregion (LRR or MLRA):				Lat: 41			73.42695	Datum:	
Soil Map Unit Name:			Urban land (307)				ification:	R5UBH, R4SI	
Are climatic / hydrologic cond	ditions on the si	ite typical for thi		res / No)	YES		in in Remarks		
· -		or Hydrology,	= -	,		al Circumstance		,	No
		or Hydrology		=		If needed, expla	•		
				-	·	· · · · · · · · · · · · · · · · · · ·	-	•	
SUMMARY OF FIND	INGS - Atta	ach site ma	ap snowing sai	mpling poi	int location	ns, transec	ts, import	ant reature	s, etc.
Hydrophytic Vegetation Pre	sent? Yes	s X	No						
Hydric Soil Present?	Yes	s X	No	Is the Samp	oled Area				
Wetland Hydrology Present	? Yes	s X	No	within a We		Yes	х	No	
, 0,						_			
Domarko				ir yes, or	otional vvetiano	d Site ID:	Wetla	na 5	
Remarks:	This n	oint was detern	nined to be within a w	etland due to t	he presence of	f all 3 wetland c	riteria		
	Tills p	onit was detern	The survey was com		•		interia.		
	Adian	ant to Nonvalle I	River, highly disturbed	-	_		mont		
	Aujace	ent to Norwark i	viver, mgmy disturbed	u anu mampula	iteu, iariuscape	ed riprap embris	differit.		
HYDROLOGY									
Wetland hydrology Ind	icators:					Socondary	Indicators (min	nimum of two re	auirod)
Primary Indicators (mini		roquirod: chock	all that apply)				ace Soil Cracks		<u>:quirea)</u>
Surface Water (A		required, crieck	Water-Stained Le	2V05 (P0)			nage Patterns (
High Water Table	•		Aquatic Fauna (B	` '			Trim Lines (B		
X Saturation (A3)	(A2)		Marl Deposits (B1				Season Water	•	
Water Marks (B1)			Hydrogen Sulfide	•			fish Burrows (C		
			Oxidized Rhizospl		Poots (C3)		-	n Aerial Image	n/ (C0)
Sediment Deposit		-	_	_	Roots (C3)			=	y (C9)
X Drift Deposits (B3	-	-	Presence of Redu		Seile (CG)		ted or Stressed		
Algal Mat or Crus			_ Recent Iron Redu		solis (Cb)		morphic Positio		
Iron Deposits (B5			_ Thin Muck Surfac				ow Aquitard (D		
Inundation Visible	-		Other (Explain in I	Remarks)			otopographic R		
Sparsely Vegetate	ed Concave Su	іпасе (вв)				FAC-	-Neutral Test (I	D5)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):						
Saturation Present?	Yes X		Depth (inches):	10	Wetland H	Hydrology Pres	ent? Yes	X No	
(includes capillary fringe)	165 <u>X</u>	_ 110	Deptil (illicites).		Wetland	lyulology Fles	entrics_	<u> </u>	
Describe Recorded Data (si	troam gaugo n	anitoring well	agrial photos, proviou	ue inenactione)	if available:				
Describe Recorded Data (s	ream gauge, m	ionitoring weil,	aeriai priotos, previot	us irispections)	, ii avaliable.				
Remarks:									
A positive indication of v	wetland hydrolc	ogy was observe	ed (primary and seco	ndary indicator	s were present	t).			
'	,	0,	" ,	,	•	,			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. None observed				That Are OBL, FACW, or FAC: 2 (A)
2.				()
3.				Total Number of Dominant
4				Species Across All Strata: 3 (B)
5.				(S)
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 67% (A/B)
·		= Total Cover		That file OBE, I flow, of the
		- Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.	`			Total % Cover of: Multiply by:
1. None Observed	_/			OBL species 55 x 1 = 55
2.				FACW species 25 x 2 = 50
3.				FAC species 0 x 3 = 0
				FACU species 25 x 4 = 100
4. 5.				UPL species 0 x 5 = 0
				Column Totals: 105 (A) 205 (B)
6		-		Column Totals. 103 (A) 203 (B)
7	0 :	= Total Cover		Prevalence Index = B/A = 1.95
		- Total Cover		1 Tevalence index - B/A - 1.33
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
Boehmeria cylindrica	25	Yes	OBL	1 - Rapid Test for Hydrophytic Vegetation
Symphyotrichum lanceolatum	25	Yes	FACW	X 2 - Dominance Test is >50%
3. Rosa multiflora	25	Yes	FACU	X 3 - Prevalence Index is ≤ 3.0 ¹
4. Myosotis scorpioides	10	No No	OBL	4 - Morphological Adaptations ¹ (Provide supporting
5. Lythrum salicaria	10	No	OBL	data in Remarks or on a separate sheet)
6. Persicaria hydropiperoides	5	No	OBL	Problematic Hydrophytic Vegetation (Explain)
7. Mikania scandens	5	No	OBL	
		110	OBL	¹ Indicators of hydric soil and wetland hydrology must
8 9		-		be present, unless disturbed or problematic.
10.				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH) regardless of height.
12	105 :	= Total Cover		at breast height (DDH) regardless of height.
	100	- Total Gover		Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. None Observed				
2.				Herb - All herbaceous (non-woody) plants, regardless
3.				of size, and woody plants less than 3.28 ft tall.
4.				
···	0 :	= Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No
Remarks:				
A positive indication of hydro	nhytic veget:	ation was observe	ed (>50% of dom	ninant species indexed as OBL, FACW, or FAC).
A positive indication of flydro	priyuc vegeu	ation was observe	sa (~30 % or dom	illiant species indexed as OBL, I AOV, of I AOJ.
Δ nositive in	dication of h	vdrophytic vegeta	ation was observe	ed (Prevalence Index is ≤ 3.00).
A positive in	a.oudon Oi II	, aropriyuo vegeta		55 (. 15. Signification in 45.00).

Sampling Point: Wet 5

SOIL Sampling Point:

Depth (inches)	Matrix Color (moist)	%	Color (moist)	%	Features Type ¹	Loc ²	Texture	Remarks
4-0	10YR 2/1	100					Muck	
0-6	10YR 5/2	95	10YR 5/6	5		M	Loamy Coarse Sand	
6-9	10YR 2/1	100					Mucky sand	
9-12+	10YR 5/2	95	10YR 5/6	5	С	М	Loamy Coarse Sand	
		oletion, RM	=Reduced Matrix, M	1S=Masked	d Sand Grains.	² Location:	PL=Pore Lining, M=Ma	
lydric Soils								r Problematic Hydric Soils ³ :
Histosol					Surface (S8) (LF	RR R,		ick (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			LRA 149B	•			rairie Redox (A16) (LRR K, L, R)
Black His	stic (A3)				e (S9) (LRR R, I	· ·		icky Peat or Peat (S3) (LRR K, L,
	n Sulfide (A4)			-	neral (F1) (LRR	K, L)		rface (S7) (LRR K, L)
	l Layers (A5)		Loamy	Gleyed Ma	atrix (F2)			e Below Surface (S8) (LRR K, L)
	d Below Dark Surfa	ce (A11)		ed Matrix (F	-			k Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)			Dark Surfa				nganese Masses (F12) (LRR K, L,
	lucky Mineral (S1)			ed Dark Su	` ,			nt Floodplain Soils (F19) (MLRA 1
Sandy G	lleyed Matrix (S4)		Redox	Depressio	ns (F8)		Mesic S	podic (TA6) (MLRA 144A, 145, 14
X Sandy R	edox (S5)						Red Par	ent Material (F12)
Stripped	Matrix (S6)						Very Sha	allow Dark Surface (F22)
Dark Sur	rface (S7) (LRR R,	MLRA 149	В)				Other (E	xplain in Remarks)
	ayer (if observed)	:	etland hydrology mu	st be pres	ent, unless distu	irbed or probler	natic.	
Type: Depth (inc	ayer (if observed)	:		st be prese	ent, unless distu			s <u>X</u> No
Type: Depth (inc	ayer (if observed)	:			ent, unless distu	Hydric	s Soil Present? Yes	s X No
Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydric	s Soil Present? Yes	sXNo
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydrid	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydrid	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type:	ayer (if observed)	:				Hydrid	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydrid	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydrid	s Soil Present? Yes	s <u>X</u> No
Restrictive La Type: Depth (inc	ayer (if observed)	:				Hydrid	s Soil Present? Yes	s <u>X</u> No

Wet 5

Project/Site:	Route 15/Ro	ute 7 Interchan	ge C	County:	Fairfield		Sampling Da	te:	11/16/2016		
Applicant/Owner:		CT	DOT		State:	СТ	Sample P	oint:	Upl 5		
Investigator(s):	KB	and	RMH	Section, Townsh	nip, Range:			N/A			
Landform (hillslope, terrace,	etc.):	Hillslop	oe	Local relief (con	cave, convex, r	none):	None	Slope (%):	10-12		
Subregion (LRR or MLRA):		LRR-F	?	Lat:41	.14424	Long: _	-73.42700	Datum:	#N/A		
Soil Map Unit Name:			Urban Land (307)			NWI	Classification:		N/A		
Are climatic / hydrologic con	ditions on the s	site typical for th	nis time of year?	(Yes / No)	NO	(if no,	explain in Ren	narks.)			
Are Vegetation Yes	,Soil Yes	or Hydrolog,	y No significa	antly disturbed?	Are "Norma	al Circums	tances" preser	nt? Yes	X No		
Are Vegetation No	,Soil No _	or Hydrolog,	y No naturall	ly problematic?	(1	If needed,	explain any ar	swers in Rem	arks.)		
SUMMARY OF FIND	INGS - Att	tach site m	ap showing s	ampling po	int location	ns. tran	sects. imi	ortant fea	atures, etc.		
			<u>ар оно и нід о</u>	pg po		,					
Hydrophytic Vegetation Pre	esent? Ye	es X	No								
Hydric Soil Present?	Ye	es	No X	Is the Samp	oled Area						
Wetland Hydrology Presen	t? Ye	es	No X	within a We	tland?	Y	'es	No	X		
				If yes, or	otional Wetland	Site ID:					
Remarks:											
	This point w	as determined	not to be within a we	etland due to the	lack of hydric s	soils and v	vetland hydrolo	ogy.			
			The survey was co	mpleted during a	a mild drought.						
	Uplan	d point for Wetl	and 5, located on a l	landscaped fill e	mbankment ad	jacent to a	a parking lot.				
HYDROLOGY											
Wetland hydrology Inc	dicators:					Secor	dary Indicators	s (minimum of	two required)		
Primary Indicators (min	imum of one is	required; chec	k all that apply)				Surface Soil C				
Surface Water (A		1	Water-Stained L	_eaves (B9)			Drainage Patt				
High Water Table	•		Aquatic Fauna (, ,			Moss Trim Lines (B16)				
Saturation (A3)	,		Marl Deposits (E					-Season Water Table (C2)			
Water Marks (B1)		Hydrogen Sulfid	· ·			Crayfish Burro	-	-,		
Sediment Depos	•		_	spheres on Living	Roots (C3)		Saturation Vis		magery (C9)		
Drift Deposits (B			Presence of Rec	-	,		Stunted or Str				
Algal Mat or Crus	•			duction in Tilled S	Soils (C6)		Geomorphic F		/		
Iron Deposits (B			Thin Muck Surfa		JOIIG (GG)		Shallow Aquita				
Inundation Visible	-	agery (B7)	Other (Explain in				Microtopograp)		
Sparsely Vegeta			Outor (Explain ii	Tromano,			FAC-Neutral 1		r		
		(20)						001 (20)			
Field Observations:											
Surface Water Present?	Yes	No X	Depth (inches): N/A							
Water Table Present?	Yes	No X	Depth (inches	<u></u>							
Saturation Present?	Yes	No X	Depth (inches	<u></u>	Wetland H	lydrology	Present?	Yes	No X		
(includes capillary fringe)			<u> </u>	, <u> </u>					· <u></u>		
Describe Recorded Data (s	tream gauge,	monitoring well	aerial photos, previ	ous inspections)	, if available:						
(-	33-,	3 -	, , , , , , , , , , , , , , , , , , , ,	.,	,						
Remarks:											
No positive indication of	f wetland hydro	ology was obse	rved.								

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Liquidambar styraciflua	40	Yes	FAC	That Are OBL, FACW, or FAC: 4 (A)
2. Quercus bicolor	40	Yes	FACW	(,
3. Acer rubrum	10	No.	FAC	Total Number of Dominant
			1710	Species Across All Strata: 4 (B)
4				(b)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100% (A/B)
7		Total Cover		That Are OBE, I AOW, OF I AO.
		Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.	\			Total % Cover of: Multiply by:
1. None Observed	_,			OBL species 10 x 1 = 10
				FACW species 40 x 2 = 80
2			-	FAC species 65 x 3 = 195
3			-	FACU species 5 x 4 = 20
4			-	UPL species 5 x 5 = 25
5				Column Totals: 125 (A) 330 (B)
6			•	Column Totals. 125 (A) 350 (B)
7	0 =	Total Cover		Prevalence Index = B/A = 2.64
Hat Out a Color				II to the Worlden to the
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. Toxicodendron radicans	15	Yes	FAC	1 - Rapid Test for Hydrophytic Vegetation
2. Boehmeria cylindrica	10	Yes	OBL	X 2 - Dominance Test is >50%
3. Celastrus orbiculatus	5	No	UPL	$\underline{\mathbf{X}}$ 3 - Prevalence Index is ≤ 3.0 ¹
4. <u>Vitis aestivalis</u>	5	No	FACU	4 - Morphological Adaptations ¹ (Provide supporting
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				1
8				¹Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	35=	Total Cover		Sanling/Shrub Woody plants loss than 2 in DBH
				Sapling/Shrub - Woody plants Ises than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.20 it (1 iii) tail.
1. None Observed				Herb - All herbaceous (non-woody) plants, regardless
2				of size, and woody plants less than 3.28 ft tall.
3				of size, and woody plants less than 5.20 it tall.
4			·	Woody vine - All woody vines greater than 3.28 ft in height.
	=	Total Cover		Woody vine - All woody vines greater than 5.25 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No
				130 <u>— X — 130 — — — — — — — — — — — — — — — — — — —</u>
Remarks:				·
A positive indication of hydro	phytic vegeta	tion was observe	ed (>50% of dom	inant species indexed as OBL, FACW, or FAC).
Δ nocitive in	dication of h	dronhytic vegeta	ition was observe	ed (Prevalence Index is ≤ 3.00).
∠ bositive ii	aloution of Hy	aropriyuo vegeta	MOIT WAS ODSEIVE	53 (1 10 talol 10 a 10
Landscaped hillside - S	weet gum (L.	styraciflua) and	swamp white oal	k (Q. bicolor) appear to have been planted.

Sampling Point: Upl 5

SOIL Sampling Point: Upl 5

	OYR 2/2	% Color 100		edox Featur T T T T T T T T T T T T T	ype ¹	Loc ²	Texture gravelly Silt Lo	am	Remarks	
Type: C=Concentra	OYR 2/2							am	. Comunica	
Type: C=Concentra							gravelly Silt Lo			
lydric Soils Indica	ation, D=Depleti									
lydric Soils Indica	ation, D=Depleti									
lydric Soils Indica	ation, D=Depleti									
lydric Soils Indica	ation, D=Depleti			<u> </u>						
lydric Soils Indica	ation, D=Depleti						-			
lydric Soils Indica	ation, D=Depleti									
lydric Soils Indica	ation, D=Depleti									
lydric Soils Indica	ation, D=Depleti		<u></u>							-
lydric Soils Indica	ation, D=Depleti									
lydric Soils Indica	ation, D=Depleti						-			
lydric Soils Indica	ation, D-Depicti	on RM=Reduc	ed Matrix MS=N	Asked San	d Grains 21	Location: P	L=Pore Lining	M=Matrix		
-	tors:	on, rawi–radao	CO WIGHTA, WIO-N	naskea Gari	<u> </u>	Location. 1		ors for Proble	matic Hvdri	c Soils ³ :
TIISIOSOI (AT)	.0.0.		Polyvalue F	lalow Surfac	e (S8) (LRR R	,		cm Muck (A10)	•	
Histia Falasalas	(40)	_			e (SO) (ERIX IX	,			-	-
Histic Epipedor				149B)	(1 DD D 141 D	A 440D)		past Prairie Red		
Black Histic (A3	-	_			(LRR R, MLRA	-		cm Mucky Peat		
Hydrogen Sulfic		_			F1) (LRR K, L))		ark Surface (S7		
Stratified Layer	` '	_	Loamy Gley	ed Matrix (F	2)		P	olyvalue Below	Surface (S8)	(LRR K, L)
Depleted Below	/ Dark Surface (A11) _	Depleted M	atrix (F3)			T	nin Dark Surfac	e (S9) (LRR	K, L)
Thick Dark Sur	face (A12)		Redox Dark	Surface (F	ŝ)		Iro	on-Manganese	Masses (F12) (LRR K, L, F
Sandy Mucky M	lineral (S1)	_	Depleted D	ark Surface	(F7)		Pi	edmont Floodp	lain Soils (F1	9) (MLRA 149
Sandy Gleyed I	Matrix (S4)	_	Redox Depi	ressions (F8)		M	esic Spodic (TA	6) (MLRA 1	44A, 145, 149
Sandy Redox (_		,	,		R	ed Parent Mate	rial (F12)	
Stripped Matrix	-							ery Shallow Dar		22)
	67) (LRR R, ML	RΔ 149R)						ther (Explain in		
	<i>51)</i> (L 1(1(1(, 11) L	10.1.1402)					<u> </u>	inci (Explain in	rtemants)	
Indicators of hydrop	butio vocatation	and watland by	udrala au muat h		alaaa diatuurbad		atia			
Restrictive Layer (i		and welland ny	yarology must be	e present, ui	iless disturbed	i di piobleili	alic.			
	se fragments									
Depth (inches):		4				Hydric	Soil Present?	Yes	No	X
Remarks:										
			No positive	indication o	f hydric soils w	as observe	d.			
			. 10 pool		yano como m		.			
			Steep riprap sle	ope. Refusa	l at 4" due to co	oarse fragm	ents.			

nvestigator(s): KB and RMH Section, Township, Range: N/A Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3 Subregion (LRR or MLRA): LRR-R Lat: 41.14156 Long: -73.42816 Datum: N/A Soil Map Unit Name: Hollis-Chatfield-Rock Outcrop complex (75E) NWI Classification: PUBHx Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.) Are Vegetation Yes , Soil No ,or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No	Project/Site:	Route	15/Route 7 Interch	nange	County:	Fairfield		Sampling Dat	e:	9/29/2016		
Lat: 41.1456 Long: 7-2.42816 Datum: N/A Subregion (LRR or MLRA): Let: 41.1456 Long: 7-2.42816 Datum: N/A Subregion (LRR or MLRA): Let: 41.1456 Long: 7-2.42816 Datum: N/A Subregion (LRR or MLRA): Holls: Chattelet-Rock Outcrop complex (75E) N/W (Classification: PUBHx via climate / hydrologic conditions on the site hypical for this time of year? (Yes / No) N/O (if no. explain in Remarks.) N/A cycleptation Yes _ Soil N/O , or Hydrology N/O significantly disturbed? Are "Normal Circumstances" preserve? Yes _ X NO N/A via Vegetation N/O _ Soil N/O , or Hydrology N/O naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes _ X NO	Applicant/Owner:			CTDOT		State:	CT	Sample Po	oint:	Wet 6		
Subtregion (LRR or MLRA): LER.R. Lat: 41.4156 Long: -73.42516 Datum: N/A Soil Map Unit Name: Hollis-Chatfield-Rock Cucrop complex (756) NO (If no, explain in Remarks.) Ive climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (If no, explain in Remarks.) Ive Vegetation No Soil No or hydrology No admitted proteins (750) NO (If no, explain in Remarks.) Ive Vegetation No Soil No or hydrology No admitted proteins (750) NO (If no, explain in Remarks.) Ive Vegetation No Soil No or hydrology No admitted proteins (750) NO (If no, explain in Remarks.) Is the Sampled Area (750) NO (If no, explain in Remarks.) Is the Samp	Investigator(s):	KB	and	RMH	Section, Towr	ship, Range:			N/A			
Soil Map Ini Name:	Landform (hillslope, terra	ace, etc.): _	Depr	ession	Local relief (c	oncave, convex, r	none):	Concave	Slope (%):	0-3		
Ave climate? hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.) **Ver Vest Vestedation	Subregion (LRR or MLR	A):	LR	R-R	Lat:	41.14156	Long: _	-73.42816	Datum:	N/A		
Are Vegetation	Soil Map Unit Name:		Hollis-Cl	hatfield-Rock Outcro	p complex (75E)		NWI	Classification:		PUBHx		
Summarks No	Are climatic / hydrologic	conditions of	on the site typical for	or this time of year?	(Yes / No)	NO	(if no,	explain in Rem	narks.)			
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Pydrology Present? Yes X No If yes, optional Wetland Pydrology Present? Yes X No If yes, optional Wetland Pydrology Present? Yes X No If yes, optional Wetland Site ID: Wetland 6 Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) Primary Indicators (minimum of two required) P	Are Vegetation Y	'es_,Soil_	No ,or Hydro	logy <u>No</u> sigr	ificantly disturbed	l? Are "Norma	al Circums	tances" preser	nt? Yes X	. No		
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Pydrology Present? Yes X No If yes, optional Wetland Site ID: Wetland 6 Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Mar Deposits (B15) Dop-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) In Deposits (B3) Presence of Reduced Iron (C4) Suttled or Stressed Plants (D1) Alpid Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C8) X Geomorphic Position (D2) In Deposits (B5) Thin Muck Surface (C7) Sallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) X Sparsely Vegetated Concave Surface (B8) Depth (Inches): 0 Wetland Hydrology Present? Yes X No Depth (Inches): 0 Wetland Hydrology Present? Yes X No Depth (Inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Are Vegetation	No Soil	No ,or Hydro	logy No natu	urally problematic	? (I	If needed,	explain any an	swers in Rema	rks.)		
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Pydrology Present? Yes X No If yes, optional Wetland Site ID: Wetland 6 Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Mar Deposits (B15) Dop-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) In Deposits (B3) Presence of Reduced Iron (C4) Suttled or Stressed Plants (D1) Alpid Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C8) X Geomorphic Position (D2) In Deposits (B5) Thin Muck Surface (C7) Sallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) X Sparsely Vegetated Concave Surface (B8) Depth (Inches): 0 Wetland Hydrology Present? Yes X No Depth (Inches): 0 Wetland Hydrology Present? Yes X No Depth (Inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	SIIMMADV OF E	MDINGS	- Attach cito	man showing	, campling p	oint location	ne tran	seacte imr	ortant foa	turos oto		
Hydric Soil Present? Yes X No	SOMMAN OF T	INDINGS	- Allacii Sile	map snowing	, sampling p	onit location	iis, ii ai	isecis, iiiip	ortant iea	iuies, etc.		
Hydric Soil Present? Yes X No												
Wetland Hydrology Present? Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embarkment for Route 15, and is immediately adjacent to the railroad.Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) A Water-Stained Leaves (B9) A Suturation (A3) Mart Deposits (B15) Water Marks (B1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Sunted or Stressed Plants (D1) A plad Mart Or Crust (B4) Recent from Reduction in Tilled Soils (C6) X Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Methand Present? Yes No Methand Present? Y	Hydrophytic Vegetation	Present?	Yes X	No	_							
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water-Stained Leaves (B9) Surface Water (A1) X Surface (A1) X Surfac	Hydric Soil Present?		Yes X	No	Is the Sa	mpled Area						
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad.Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) X Water-Stained Leaves (B9) Drainage Patterns (B10) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Mal Deposits (B15) Dy-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Remarks:	Wetland Hydrology Pre	esent?	Yes X	No	within a \	Vetland?	١	res X	No			
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad.Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) X Water-Stained Leaves (B9) Drainage Patterns (B10) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Mal Deposits (B15) Dy-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Remarks:					If ves	ontional Wetland	Site ID:		Vetland 6			
This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad.Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water-Stained Leaves (B9) Surface Water (A1) X Water-Stained Leaves (B9) Drainage Patterns (B10) X Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Sodiera Phizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Recent from Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Recent from Reduction in Tilled Soils (C6) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Water Table (D4) Feld Observations: Surface Water Present? Yes No Depth (inches): Water Table (C2) Wetland Hydrology Present? Yes X No Depth (inches): Water Table (C2) Wetland Hydrology Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No Depth (inches): Water Table (C6) Remarks:	Remarks:				ıı yes,	optional Wettane	OILC ID.		venario o			
The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad Land to the west consists of rocky outcrops. Receives flows from INT-4. HYDROLOGY Wetland hydrology indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Primary Indicators (minimum of two required) Moss Trim Lines (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Sediment Deposits (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes X No Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Nomai no.		This point was de	etermined to be withi	n a wetland due t	o the presence of	f all 3 wetl	and criteria.				
The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad.Land to the west consists of rocky outcrops. Receives flows from INT-4. Hyprology						•						
Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water-Stained Leaves (B9) Aguatic Fauna (B13) X Saturation (A3) Marl Deposits (B15) Drinage Patterns (B10) X Saturation (A3) Marl Deposits (B15) Drinage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Saturation Visible on Aerial Imagery (B7) In in Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Metland Hydrology Present? Yes X No Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 10 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	The wetland is	located at th	ne hase of a steen	-	•	_	t to the ra	ilroad Land to t	he west consis	te of rocky		
Wetland hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) X Water-Stained Leaves (B9) Drainage Patterns (B10) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Y Sparsely Vegetated Concave Surface (B8) Popth (inches): N/A Water Table Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Sa	The Welland is	iocated at ti	ie base of a steep				it to the ra	iii oad.Laiid to t	ile west collsis	is of focky		
Wetland hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) X Water-Stained Leaves (B9) Drainage Patterns (B10) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) X Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Y Sparsely Vegetated Concave Surface (B8) Popth (inches): N/A Water Table Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Sa												
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Surface Water (A1)	, ,	•		hack all that annly)			36001			wo required)		
X High Water Table (A2)			Torie is required, c		ad Leaves (RQ)				` '			
X Saturation (A3)				•	, ,							
Water Marks (B1)												
Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Vinity Inundation Visible on Aerial Imagery (B7) X Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
Drift Deposits (B3)		` '				ing Poots (C3)		-		nagony (CO)		
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) X Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					-							
Iron Deposits (B5) X Inundation Visible on Aerial Imagery (B7) X Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:					· ·	•			•	71)		
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) X Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Concludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						d Solls (C6)	<u> </u>					
X Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Concave Surface (B8) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:			·					· ·				
Field Observations: Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Moderate Present? Yes X No Pepth (inches): 1 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:				Otner (Expla	in in Remarks)							
Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	X Sparsely Veg	getated Con-	cave Surrace (B8)					FAC-Neutral I	est (D5)			
Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:												
Surface Water Present? Yes No X Depth (inches): N/A Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Field Observations:											
Water Table Present? Yes X No Depth (inches): 8 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:		12 Van	No	V Donth (inc	hoo): N/A							
Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:		_		· `	· ——							
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:		_				Wetlend U		Dracent2	V V	Na		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:		_	X NO	Depth (inc	nes): <u> </u>	wetiand H	iyarology	Present?	res X	NO		
Remarks:				.0								
	Describe Recorded Da	ta (stream g	auge, monitoring v	vell, aerial photos, p	revious inspectior	is), if available:						
	D											
A positive indication of wetland hydrology was observed (primary and secondary indicators were present).	Remarks:											
A positive indication of wetland hydrology was observed (primary and secondary indicators were present).	A positive indication	n of wotland	hudrologu vyoo obe	an and Insiman and	accordent indica	ara wara mraaant						
	A positive indicatio	n or wetland	nydrology was obs	served (primary and	secondary indica	ors were present	.).					

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1. Carpinus caroliniana	20	Yes	FAC	That Are OBL, FACW, or FAC:	4	_ (A)
2				Total Number of Dominant		
3			-	Species Across All Strata:	5	(D)
4				Species Across Air Strata.	5	_ (D)
5						
6				Percent of Dominant Species		
7				That Are OBL, FACW, or FAC:	80%	_ (A/B)
	=	Total Cover		Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of:	Multiply b	y:
1. Cornus amomum		Yes	FACW	OBL species 90	x 1 = 90	
2.				FACW species 50	x 2 = 100	<u> </u>
3.				FAC species 20	x 3 = 60	
4.				FACU species 25	x 4 = 100	
				UPL species 0	x5= 0	
5				Column Totals: 185	(A) 35 0	
6	-			Column rotals. 183	(A) <u>33(</u>) (D)
7	50 =	Total Cover		Prevalence Index = B/A =	= 1.89	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicate		
Asclepias incarnata	55	Yes	OBL	1 - Rapid Test for Hydrop		
Nymphaea odorata	25	Yes	OBL	X 2 - Dominance Test is >5	, ,	
	10		OBL	X 3 - Prevalence Index is ≤		
3. Mikania scandens		<u>No</u>	OBL	4 - Morphological Adapta		nortina
4						-
5				data in Remarks or o	•	
6				Problematic Hydrophytic	Vegetation' (Explai	in)
7						
8				¹ Indicators of hydric soil and wet	land hydrology mus	st
9				be present, unless disturbed or pre-	oblematic.	
0				Definitions of Five Vegetation S	trata:	
11				Tree - Woody plants 3 in. (7.6 cm	ı) or more in diame	ter
12.				at breast height (DBH) regardless	s of height.	
	90 =	Total Cover		, , , , , ,	. .	
				Sapling/Shrub - Woody plants Ise	es than 3 in. DBH	
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 to	ft (1 m) tall.	
1. Vitis labrusca	15	Yes	FACU			
2. Lonicera japonica	10	Yes	FACU	Herb - All herbaceous (non-woody	v) plants, regardles	S
		165	TACO	of size, and woody plants less tha		
3				o. o.zo, and woody plante loop tha	0.20	
4	25 =	Total Cover		Woody vine - All woody vines gre	ater than 3.28 ft in	height.
				11.1.1.6		
				Hydrophytic		
				Vegetation		
				Present? Yes X	No	
Remarks:						
Nemarks.						
A positive indication of hydr	ophytic vegetati	ion was observe	ed (>50% of dom	ninant species indexed as OBL, FACW	, or FAC).	
A positive i	ndication of hyd	Irophytic vegeta	ition was observe	ed (Prevalence Index is ≤ 3.00).		

Sampling Point: Wet 6

SOIL Sampling Point: Wet 6

Profile Desc	cription: (Describe	e to the de	oth needed to docu	ment the	indicator or cor	nfirm the absen	nce of indicators.)	
Depth	Matrix			Redox I	Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/1	100					Peat	
5-16	10YR 3/1	100					Muck	
16-24+	10YR 3/1	100					Mucky Peat	
10 24.	10111 3/1	100					Mucky i cat	
¹ Type: C=C	oncentration D=De	enletion RM	=Reduced Matrix, M	MS=Masked	d Sand Grains	² Location: P	L=Pore Lining, M=Ma	atrix
	s Indicators:	prodon, rav	rtoudood Matrix, W	io maono	a Caria Cramo.	Location: 1		r Problematic Hydric Soils ³ :
-			Dohard	uo Polow 9	Surface (SS) (I B	D D		ick (A10) (LRR K, L, MLRA 149B)
X Histoso					Surface (S8) (LR	KK K,		
	pipedon (A2)			LRA 149B)	•			rairie Redox (A16) (LRR K, L, R)
Black H	Histic (A3)				e (S9) (LRR R, N			icky Peat or Peat (S3) (LRR K, L, R)
Hydrog	en Sulfide (A4)		Loamy	Mucky Min	neral (F1) (LRR I	K, L)	Dark Su	rface (S7) (LRR K, L)
Stratifie	ed Layers (A5)		Loamy	Gleyed Ma	atrix (F2)		Polyvalu	e Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surfa	ace (A11)	Deplete	ed Matrix (F	=3)		Thin Dar	rk Surface (S9) (LRR K, L)
	Oark Surface (A12)			Dark Surfa	•			nganese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)			ed Dark Su				nt Floodplain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)			Depression				podic (TA6) (MLRA 144A, 145, 149B)
	• , ,		Nedox	Debiessioi	115 (1 0)			
	Redox (S5)							ent Material (F12)
	d Matrix (S6)							allow Dark Surface (F22)
Dark S	urface (S7) (LRR R	, MLRA 149	9B)				Other (E	xplain in Remarks)
			etland hydrology mu	st be prese	ent, unless distu	rbed or problem	atic.	
Restrictive	Layer (if observed):						
Type:								
Depth (in						Hvdric	Soil Present? Yes	s X No
	,					1		
Remarks:								
			A pos	itive indica	ition of hydric so	il was observed.	•	

Project/Site:	Route 15/F	Route 7 Interchan	ge Co	unty:	Fairfield		Sampling Da	ate:	11/16/2016		
Applicant/Owner:		CT	DOT		State:	CT	Sample F	Point:	Upl 6		
Investigator(s):	KB	and	RMH S	ection, Towns	nip, Range:			N/A			
Landform (hillslope, terra	ce, etc.):	Hillslop	<u>e</u> L	ocal relief (cor	cave, convex, no	one):	Concave	Slope (%):	5-8		
Subregion (LRR or MLR/	A):	LRR-F	?	_ Lat:4	.14183 I	Long:	-73.42864	Datum	. N/A		
Soil Map Unit Name:	Hollis-	Chatfield-Rock Ou	tcrop Complex 15 to	45 percent slo	pes (75E)	NWI CI	assification:		N/A		
Are climatic / hydrologic	conditions on th	e site typical for th	is time of year? (res / No)	NO	(if no, e	xplain in Re	marks.)			
Are Vegetation N	o ,Soil Ye	s ,or Hydrolog	/ No significar	ntly disturbed?	Are "Normal	Circumsta	nces" prese	nt? Yes	X No		
Are Vegetation N	o ,Soil N	o ,or Hydrolog	/ No naturally	problematic?	(If	needed, e	xplain any a	nswers in Rer	narks.)		
SUMMARY OF FI	NDINGS - A	ttach site m	ap showing sa	mplina po	int location	s. trans	ects. im	portant fe	atures, etc.		
								p 0			
İ											
Hydrophytic Vegetation	Present?	Yes	No <u>X</u>								
Hydric Soil Present?		Yes	No <u>X</u>	Is the Sam	oled Area						
Wetland Hydrology Pre	sent?	Yes	No <u>X</u>	within a We	etland?	Ye	s	No	<u> </u>		
				If yes, o	ptional Wetland	Site ID:	_				
Remarks:											
	This	point was determ	ined not to be within a	a wetland due	to the lack of all	three wetla	and criteria.				
			The survey was com	pleted during	a mild drought.						
		Upland point for	Wetland 6, located o	n steep fill em	oankment adjace	ent to Rout	e 15.				
HYDROLOGY											
Wetland hydrology	Indicators:					Second	ary Indicato	rs (minimum c	f two required)		
Primary Indicators (minimum of one	is required; chec	k all that apply)			S	urface Soil (Cracks (B6)	<u> </u>		
Surface Wate			Water-Stained Le	aves (B9)			rainage Pat				
High Water T	able (A2)	·	Aquatic Fauna (B	13)		Moss Trim Lines (B16)					
Saturation (A			Marl Deposits (B1				Dry-Season Water Table (C2)				
Water Marks		·	Hydrogen Sulfide	-			rayfish Burr	•	•		
Sediment De	` '		Oxidized Rhizosp		Roots (C3)		-		Imagery (C9)		
Drift Deposits			Presence of Redu		,			ressed Plants			
Algal Mat or (Recent Iron Redu		Soils (C6)			Position (D2)	,		
Iron Deposits			Thin Muck Surfac		202 (20)		hallow Aqui				
	sible on Aerial Ir	magery (B7)	Other (Explain in	-				phic Relief (D	1)		
	etated Concave		Other (Explain in	rtemarks)			AC-Neutral		τ)		
oparodry vog	otatoa oonoavo	Canado (20)					710 Houliui	1001 (20)			
Field Observations:											
Surface Water Present	? Yes	No X	Depth (inches):	N/A							
Water Table Present?	Yes	No X	Depth (inches):								
Saturation Present?	Yes	No X	Depth (inches):		Wetland Hy	drology P	resent?	Yes	No X		
(includes capillary fringe		NoX			Troutana 11,	, a. c.ogy .					
Describe Recorded Dat	a (stream gauge	e monitoring well	aerial photos, previou	us inspections	if available						
Dooding Rooding Dat	a (olloani gaagi	o, morntoring won,	donai priotoc, provio	do inopoditorio	, ii avaliabio.						
Remarks:											
No positive indication	n of wetland hy	drology was obse	ved.								
	,										

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)				Number of Dominant Species
	<u>% cover</u> 60	Species?	Status UPL	·
1. Acer platanoides		Yes		That Are OBL, FACW, or FAC: (A)
2. Quercus rubra	40	Yes_	FACU	
3. Carya ovata	5	No	FACU	Total Number of Dominant
4				Species Across All Strata: 6 (B)
5				
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: (A/B)
	105 =	Total Cover		
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. Rosa multiflora	40	Yes	FACU	OBL species 0 x 1 = 0
2. Euonymus alatus*	15	Yes	UPL	FACW species 0 x 2 = 0
3. Carya ovata	10	No	FACU	FAC species 0 x 3 = 0
4.				FACU species 110 x 4 = 440
5.				UPL species 100 x 5 = 500
6.				Column Totals: 210 (A) 940 (B)
7.				(-)
·· <u> </u>	65 =	Total Cover		Prevalence Index = B/A = 4.48
		Total Cover		Trevelence index Ent
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
	15	Vaa	FACU	1 - Rapid Test for Hydrophytic Vegetation
1. Rosa multiflora		<u>Yes</u>	FACU	
2				2 - Dominance Test is >50%
3				3 - Prevalence Index is ≤ 3.0¹
4	-			4 - Morphological Adaptations (Provide supporting
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10			-	Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	15=	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. Celastrus orbiculatus	25	Yes	UPL	
2.				Herb - All herbaceous (non-woody) plants, regardless
3.				of size, and woody plants less than 3.28 ft tall.
4.				
·· ·	25 =	Total Cover	-	Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes No X
				1103CHL1 163 HO A
Domorko				1
Remarks:				

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: Upl 6

SOIL Sampling Point: Upl 6

Profile Description: (Describe to the dep Depth Matrix		lox Features		•	
nches) Color (moist) %	Color (moist) %		Loc ²	Texture	Remarks
0-6 10YR 2/2 100				fine Sandy Loam	Roots
6-12 10YR 3/4 100				Sandy Loam	
1011(0)4 100				Carlay Loam	
					
					
					
Гуре: C=Concentration, D=Depletion, RM:	=Reduced Matrix MS=Ma	sked Sand Grains	² Location: P	L=Pore Lining, M=N	Matrix
ydric Soils Indicators:	-reduced Matrix, Mo-IMa	sked Garia Grains.	Location. 1		or Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Bel	ow Surface (S8) (L l	RRR		luck (A10) (LRR K, L, MLRA 149B)
			ιι ιι,		
Histic Epipedon (A2)	MLRA 1	•			Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)		face (S9) (LRR R,	-		lucky Peat or Peat (S3) (LRR K, L, F
Hydrogen Sulfide (A4)	Loamy Mucky	Mineral (F1) (LRR	K, L)	Dark S	urface (S7) (LRR K, L)
Stratified Layers (A5)	Loamy Gleyed	d Matrix (F2)		Polyval	ue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Mate	rix (F3)		Thin Da	ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark S	Surface (F6)		Iron-Ma	anganese Masses (F12) (LRR K, L,
Sandy Mucky Mineral (S1)		Surface (F7)			ont Floodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix (S4)	Redox Depres	` '			Spodic (TA6) (MLRA 144A, 145, 14
	Redox Depres	5310113 (1 0)			
Sandy Redox (S5)					arent Material (F12)
Stripped Matrix (S6)					hallow Dark Surface (F22)
Dark Surface (S7) (LRR R, MLRA 149	В)			Other (Explain in Remarks)
Depth (inches): 12			riyano	Soil Present? Ye	es No X
Remarks:			I		
omarko.					
	·	dication of hydric so		I.	
	F	Refusal at 12" due to	rock		

Project/Site:	Route 15/Rou	ite 7 Interchange	Cou	unty:	Fairfield		Sampling Da	te:	11/16/2016
Applicant/Owner:		CTD	TC		State:	СТ	Sample P	oint:	Wet 7
Investigator(s):	KB	and	RMH Se	ection, Townsh	ip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Depressio	n Lo	ocal relief (con	cave, convex, n	one):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat: 41	.13990	Long:	-73.42819	Datum:	N/A
Soil Map Unit Name:	Hollis-Cha	atfield-Rock out	crop complex, 15 to 4	15 percent slop	es (75E)	NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the si	ite typical for this	time of year? (Y	'es / No)	NO	(if no,	explain in Ren	narks.)	
Are Vegetation No	,Soil No	or Hydrology	No significan	tly disturbed?	Are "Norma	l Circums	stances" presei	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology	No naturally	problematic?	(If	needed,	explain any ar	nswers in Rem	arks.)
CLIMMADY OF FINE		_ oob oito ma		mpling poi	nt location	a tran	saata imi	aartant fac	
SUMMARY OF FIND	INGS - Alla	acii Sile illa	p snowing sai	iipiiiig po	ini iocation	is, li ai	isecis, iiii	Jortani iea	itures, etc.
Hydrophytic Vegetation Pre			No						
Hydric Soil Present?	Yes		No	Is the Samp					
Wetland Hydrology Presen	t? Yes	sX	No	within a We	tland?	,	res X	No	
				If yes, or	otional Wetland	Site ID:		Wetland 7	
Remarks:									
	This p	oint was determ	ned to be within a w	etland due to t	he presence of	all 3 wetl	and criteria.		
		-	The survey was com	pleted during a	mild drought.				
			A depression locate	ed on top of a	ock outcrop.				
				-					
HYDROLOGY									
Wetland hydrology Inc	dicators:					Sacar	adanı Indicator	s (minimum of	two required)
Primary Indicators (min		required: check	all that annly)			06001	Surface Soil C		two required)
Surface Water (A			Water-Stained Lea	avec (R0)	-		Drainage Patt		
	,		Aquatic Fauna (B1				_		
High Water Table	s (AZ)		•				Moss Trim Lin		2)
Saturation (A3)	,	-	Marl Deposits (B1	•			-	/ater Table (Ca	2)
Water Marks (B1	•		Hydrogen Sulfide				Crayfish Burro		(22)
Sediment Depos			Oxidized Rhizosph	_	Roots (C3)	<u> </u>	Saturation Vis		
Drift Deposits (B:	3)		Presence of Redu	ced Iron (C4)			Stunted or Str	essed Plants (D1)
Algal Mat or Crus	it (B4)		Recent Iron Reduc	ction in Tilled S	Soils (C6)		Geomorphic F	Position (D2)	
Iron Deposits (B5	j)		Thin Muck Surface	e (C7)			Shallow Aquit	ard (D3)	
X Inundation Visible	e on Aerial Imaç	gery (B7)	Other (Explain in F	Remarks)			Microtopograp	hic Relief (D4))
Sparsely Vegeta	ed Concave Su	ırface (B8)	-				FAC-Neutral 1	Test (D5)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):	>16					
Saturation Present?	Yes	No X	Depth (inches):	>16	Wetland H	ydrology	Present?	Yes X	No
(includes capillary fringe)			,						
Describe Recorded Data (s	tream gauge in	nonitoring well a	erial nhotos, previou	is inspections)	if available				
Describe Necorded Data (e	ticam gaage, n	ionitoring wen, e	criai priotos, previoc	is inspections)	, ii avaliabic.				
Domorko									
Remarks:									
A:4: :4:4:			d (
A positive indication of	wetiand nydroio	gy was observe	a (primary and secor	ndary indicator	s were present)				

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1. Quercus palustris	25	Yes	FACW	That Are OBL, FACW, or FAC:	4	(A)
2.						_ ` '
				Total Number of Dominant		
3	-				5	(D)
4				Species Across All Strata:		_ (D)
5						
6	-			Percent of Dominant Species		
7				That Are OBL, FACW, or FAC:	80%	_ (A/B)
	=	Total Cover				
				Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of:	Multiply b	y:
Vaccinium corymbosum	20	Yes	FACW	OBL species 0	x 1 =0	
2. Quercus palustris	10	Yes	FACW	FACW species 55	x 2 = 110	<u>) </u>
3. Kalmia latifolia	10	Yes	FACU	FAC species 10	x 3 = 30	
4. Clethra alnifolia	10	Yes	FAC	FACU species10	x 4 =40	<u> </u>
5.				UPL species 0	x 5 = 0	
6.				Column Totals: 75	(A) 180) (B)
7.					_ ` '	
	50 =	Total Cover		Prevalence Index = B/A	= 2.40	
Herb Stratum (Plot size: 5 ft \				Hydrophytic Vegetation Indica	tors:	
Herb Stratum (Plot size: 5 ft.) 1. None Observed						
				1 - Rapid Test for Hydro		
2				X 2 - Dominance Test is >		
3				X 3 - Prevalence Index is		
4				4 - Morphological Adapt		-
5					on a separate sheet	
6				Problematic Hydrophytic	c Vegetation¹ (Expla	in)
7						
8	-			¹ Indicators of hydric soil and we	etland hydrology mus	st .
9				be present, unless disturbed or p	oroblematic.	
10.				Definitions of Five Vegetation	Strata:	
11.				Tree - Woody plants 3 in. (7.6 c	m) or more in diame	ter
12.				at breast height (DBH) regardles	ss of height.	
	0 =	Total Cover			g	
				Sapling/Shrub - Woody plants Is	ses than 3 in. DBH	
Woody Vine Stratum [Plot size: 30 ft.)				and greater than or equal to 3.28		
4 Nama Obas must					,	
1. None Observed				Herb - All herbaceous (non-wood	dv) nlants regardles	2
2				of size, and woody plants less th		3
3				of size, and woody plants less th	ali 5.20 il lali.	
4				Manada Allana di calana		la a laulad
	=	Total Cover		Woody vine - All woody vines gr	reater than 3.28 π in	neignt.
				Hydrophytic		
				Vegetation		
				=	Na	
				Present? Yes X	_ No	
Remarks:						
. tomano.						
A positive indication of hydr	anhutia vagatat	ion was absorve	ad (>E00/ of domi	nant species indexed as OBL, FACV	N or EAC)	
A positive indication of rigur	opriylic vegetal	ion was observe	eu (>50% oi uoiiii	nant species indexed as OBL, FAC	N, OI FAC).	
A positive i	ndication of hy	drophytic vegeta	ation was observe	d (Prevalence Index is ≤ 3.00).		
All plants were rooted along	the wetland b	oundary - no pla	ants were present	throughout the concave portion of the	ne wetland.	
,		,	r	J		

Sampling Point: Wet 7

SOIL

Sampling Point: Wet 7

nches) 0-3	Color (moist)	0/						
0-3		<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	10YR 2/1	100					Silt Loam	
3-8	2.5Y 4/3	60	5YR 3/4	40	С	M	Silt Loam	
8-16+	10YR 5/1	95	10YR 4/6	5		M	Silt Loam	
<u> </u>			10111 110				<u> </u>	_
	-							
								
					<u> </u>			
Type: C=Co	oncentration, D=De	pletion, RM	=Reduced Matrix, N	//S=Masked	d Sand Grains.	² Location: P	L=Pore Lining, M=Matri	x.
ydric Soils	Indicators:						Indicators for F	Problematic Hydric Soils ³ :
Histosol	l (A1)		Polyva	lue Below S	Surface (S8) (L	RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			LRA 149B)		,		rie Redox (A16) (LRR K, L, R)
	istic (A3)				(S9) (LRR R,	MI RA 149R)		y Peat or Peat (S3) (LRR K, L, R
	en Sulfide (A4)				eral (F1) (LRR	rx, L <i>j</i>		ce (S7) (LRR K, L)
	d Layers (A5)	,		Gleyed Ma	, ,			Below Surface (S8) (LRR K, L)
	d Below Dark Surfa	ace (A11)	X Deplete		-			Surface (S9) (LRR K, L)
	ark Surface (A12)			Dark Surfa	, ,			anese Masses (F12) (LRR K, L, F
Sandy N	Mucky Mineral (S1)		Deplete	ed Dark Su	rface (F7)		Piedmont F	Floodplain Soils (F19) (MLRA 14
Sandy C	Gleyed Matrix (S4)		X Redox	Depression	ns (F8)		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149
Sandy F	Redox (S5)						Red Paren	t Material (F12)
Stripped	d Matrix (S6)						Very Shallo	ow Dark Surface (F22)
	ırface (S7) (LRR R,	MLRA 149)B)					lain in Remarks)
Type:								
Depth (inc	ches):					Hydric	Soil Present? Yes _	XNo
			A pos	sitive indica	tion of hydric s	oil was observed.		

Project/Site:	Route 15/Ro	ute 7 Interchang	e Co	unty:	Fairfield		Sampling Da	ite:	11/16/2016
Applicant/Owner:		CTE	OT		State:	CT	Sample F	oint:	Upl 7
Investigator(s):	KB	and	RMH Se	ection, Towns	hip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Terrace	e Lo	ocal relief (cor	ncave, convex, n	one):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat: 4	1.13982	Long: _	-73.42821	Datum:	#N/A
Soil Map Unit Name:	Holls-Ch	natfield-Rock out	crop complex, 15 to 4	15 percent slo	pes (75E)	NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the	site typical for thi	is time of year? (Y	'es / No)	NO	(if no,	explain in Rei	marks.)	
Are Vegetation No	,Soil No	or Hydrology,	No significar	ntly disturbed?	Are "Normal	l Circums	tances" prese	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology,	No naturally	problematic?	(If	needed,	explain any a	nswers in Ren	narks.)
SUMMARY OF FIND	INGS - Att	tach site ma	an showing sai	mnling no	int location	s tran	sects im	nortant fe	atures etc
			.p 0.10111119 041			io, ii ai.		portant ro	u.u. 00, 0.0.
Hydrophytic Vegetation Pre	esent? Ye	es	No <u>X</u>						
Hydric Soil Present?	Ye	es	No <u>X</u>	Is the Sam	pled Area				
Wetland Hydrology Presen	.t? Ye	es	No <u>X</u>	within a W	etland?	Y	/es	No	X
				If yes, o	ptional Wetland	Site ID:			
Remarks:						_			
	This p	oint was determi	ned not to be within a	a wetland due	to the lack of all	three we	tland criteria.		
			The survey was com	pleted during	a mild drought.				
		Upla	and point for Wetland	7, located on	top of rock outer	ор.			
HYDROLOGY									
Wetland hydrology In-	dicators:					Secor	ndary Indicator	s (minimum o	f two required)
Primary Indicators (min	imum of one is	required; check	all that apply)				Surface Soil (
Surface Water (A	¥1)		Water-Stained Le	aves (B9)			Drainage Pat	terns (B10)	
High Water Table	e (A2)		Aquatic Fauna (B	13)			Moss Trim Lir	nes (B16)	
Saturation (A3)			Marl Deposits (B1				Dry-Season V	Vater Table (C	22)
Water Marks (B1	i)		Hydrogen Sulfide	Odor (C1)			Crayfish Burr	ows (C8)	
Sediment Depos	its (B2)		Oxidized Rhizospl	heres on Livin	g Roots (C3)		Saturation Vis	sible on Aerial	Imagery (C9)
Drift Deposits (B	3)		Presence of Redu	iced Iron (C4)			Stunted or St	ressed Plants	(D1)
Algal Mat or Crus	•		Recent Iron Redu		Soils (C6)		Geomorphic I		. ,
Iron Deposits (B			Thin Muck Surface				Shallow Aquit		
Inundation Visible	· ·	agery (B7)	Other (Explain in I				-	ohic Relief (D4	1)
Sparsely Vegeta			_ ` ` '	,			FAC-Neutral		,
		, ,						, ,	
Field Observations:									
Surface Water Present?	Yes	NoX	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):	>10					
Saturation Present?	Yes	No X	Depth (inches):	>10	Wetland Hy	ydrology	Present?	Yes	No X
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge,	monitoring well,	aerial photos, previou	us inspections), if available:				
,				·					
Remarks:									
No positive indication of	of wetland hydro	ology was obser	ved.						

				Dominance Test worksheet:
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
Quercus alba	35	Yes	FACU	That Are OBL, FACW, or FAC: (A)
2. Fagus grandifolia	25	Yes	FACU	
3. Quercus palustris	5	No	FACW	Total Number of Dominant
4				Species Across All Strata: 5 (B)
5.				
6.				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 20% (A/B)
	65 =	Total Cover		(/
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.	`			Total % Cover of: Multiply by:
Vaccinium corymbosum	/ 40	Yes	FACW	OBL species 0 x 1 = 0
Kalmia latifolia	20	Yes	FACU	FACW species 45 x 2 = 90
3. Fagus grandifolia	10	No	FACU	FAC species 0 x 3 = 0
			TACO	· — — — — — — — — — — — — — — — — — — —
4				
5				UPL species
6	-			Column Totals: <u>160</u> (A) <u>550</u> (B)
7				
	<u>70</u> =	Total Cover		Prevalence Index = B/A = 3.44
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
Vaccinium angustifolium	25	Yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
2	-			2 - Dominance Test is >50%
3				3 - Prevalence Index is ≤ 3.0 ¹
4				4 - Morphological Adaptations (Provide supporting
5				data in Remarks or on a separate sheet)
6.				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8.				¹ Indicators of hydric soil and wetland hydrology must
9.				be present, unless disturbed or problematic.
10.				Definitions of Five Vegetation Strata:
				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
11	-			at breast height (DBH) regardless of height.
12		Total Cover		at breast neight (DBH) regardless of height.
		Total Cover		Sapling/Shrub - Woody plants Ises than 3 in. DBH
West May Olyalay (Dist.)				and greater than or equal to 3.28 ft (1 m) tall.
Woody Vine Stratum [Plot size: 30 ft.]				and greater than or equal to 5.20 ft (1 fil) tall.
1. None Observed				Herb - All herbaceous (non-woody) plants, regardless
2				, , , , ,
3				of size, and woody plants less than 3.28 ft tall.
4				Week to the All and the contest of the COO file below
	=	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes NoX
Remarks:				
No positive indication of	budranbutia ua	antation was abo	nonvod (>E00/ of a	deminent energies indeved as EAC as dries)
ino positive indication of	nyaropnytic ve	yetation was obs	serveu (≥50% 0f (dominant species indexed as FAC- or drier).

Sampling Point: Upl 7

SOIL Sampling Point: Upl 7

enth Matrix	<u></u>	Redox Fea			e of indicators.)	
	% Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	00				Silt Loam	
	35 10YR 3/2	15	D	M	Silt Loam	
2 10 1011(4/0	10111 0/2				Ont Eddin	
						
		· — -				
		·				
						_
Гуре: C=Concentration, D=Depletio	n. RM=Reduced Matrix	. MS=Masked S	and Grains.	² Location: PL	=Pore Lining, M=Matr	ix.
lydric Soils Indicators:	ing i tito a do do di india.	.,	<u> </u>	2000		Problematic Hydric Soils ³ :
•	Poly	value Below Sur	face (SR) (I P	D D		(A10) (LRR K, L, MLRA 149B)
Histosol (A1)	Foly		iace (36) (EK	ι ι,		
Histic Epipedon (A2)		MLRA 149B)				rie Redox (A16) (LRR K, L, R)
Black Histic (A3)		Dark Surface (S		-		sy Peat or Peat (S3) (LRR K, L, F
Hydrogen Sulfide (A4)		ny Mucky Minera		(, L)		ice (S7) (LRR K, L)
Stratified Layers (A5)	Loar	my Gleyed Matrix	(F2)		Polyvalue	Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A	\11) Dep	leted Matrix (F3)			Thin Dark	Surface (S9) (LRR K, L)
Thick Dark Surface (A12)		ox Dark Surface	(F6)		Iron-Mang	anese Masses (F12) (LRR K, L,
Sandy Mucky Mineral (S1)		leted Dark Surfa	` ,			Floodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix (S4)	 -	ox Depressions (dic (TA6) (MLRA 144A, 145, 14 9
		ox Depressions (1 0)			· · · · · · · · · · · · · · · · · · ·
Sandy Redox (S5)						t Material (F12)
Stripped Matrix (S6)						ow Dark Surface (F22)
Dark Surface (S7) (LRR R, MLF	₹A 149B)				Other (Exp	lain in Remarks)
emarks:						
	No	positive indication	n of hydric soi	ls was observed.		
			at 10" due to			
		Relusai	at 10 due to	rock.		
		Relusar	at 10 due to	rock.		
		Relusai	at 10 due to	rock.		
		Neiusai	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		
		Relusal	at 10 due to	rock.		

Project/Site:	Route 15/Rou	te 7 Interchang	e Cou	unty:	Fairfield		Sampling Dat	e:	9/29/2016
Applicant/Owner:		CTD	OT		State:	CT	Sample Po	oint:	Wet 8
Investigator(s):	KB	and	RMH Se	ection, Townsh	ip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Depression	on Lo	ocal relief (con	cave, convex, n	one):	Concave	Slope (%): _	0-3
Subregion (LRR or MLRA):		LRR-R		Lat: 41	.14028	Long: _	-73.42907	Datum: _	N/A
Soil Map Unit Name:		Hollis-Chatfie	eld-Rock outcrop com	nplex (75E)		NWI	Classification:		PFO1E
Are climatic / hydrologic con	ditions on the si	te typical for thi	s time of year? (Y	es / No)	NO	(if no,	explain in Rem	narks.)	
Are Vegetation Yes	,Soil No	_,or Hydrology	Yes significan	tly disturbed?	Are "Normal	Circums	tances" preser	nt? Yes X	No
Are Vegetation No	,Soil No	or Hydrology	No naturally	problematic?	(If	needed,	explain any an	swers in Remai	·ks.)
SUMMARY OF FIND	INGS - Att:	ach site ma	n showing sar	nnlina noi	nt location	s tran	sects imr	ortant feat	ures etc
	711100 71111	2011 0110 1110	p onowing our	pg po.		o, trai			
Hydrophytic Vegetation Pre	esent? Yes	sX	No						
Hydric Soil Present?	Yes	sX	No	Is the Samp	led Area				
Wetland Hydrology Presen	t? Yes	sX	No	within a We	tland?	Y	'es X	No	
				If yes, or	tional Wetland	Site ID:	١	Vetland 8	
Remarks:				, , , , ,					
	This p	oint was determ	ined to be within a w	etland due to t	ne presence of	all 3 wetla	and criteria.		
			The survey was com	pleted during a	mild drought.				
Wetland is located in a	an interchange o	ore area and is	surrounded by bitum	ninous paveme	nt. causing dist	urbance t	to hydrology. L	arge rocky outc	rops are also
	g- 3		present within the gor				,		
HYDROLOGY									
Wetland hydrology In	dicators:					Secon	ndary Indicators	(minimum of ty	vo required)
Primary Indicators (min	imum of one is	required: check	all that apply)			00001	Surface Soil C		vo required)
Surface Water (A			Water-Stained Lea	aves (R9)		x	Drainage Patte		
High Water Table	•		Aquatic Fauna (B1				Moss Trim Lin	` '	
Saturation (A3)	o (,)		Marl Deposits (B1					ater Table (C2)	
Water Marks (B1	O.		Hydrogen Sulfide	-			Crayfish Burro		
Sediment Depos	*		Oxidized Rhizosph		Roots (C3)		=	ble on Aerial Im	lagery (C9)
Drift Deposits (B			Presence of Redu	_	110010 (00)			essed Plants (D	
Algal Mat or Crus	•		Recent Iron Reduc		oils (C6)		Geomorphic P	•	• ,
Iron Deposits (B			Thin Muck Surface		0013 (00)		Shallow Aquita		
Inundation Visible	•		Other (Explain in F				Microtopograp		
X Sparsely Vegeta	-		_ Other (Explain III I	(emarks)			FAC-Neutral T		
Operacity Vegeta	ica concave ca	ridec (Be)					1710 Neatian i	C31 (D3)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):	>10					
Saturation Present?	Yes	No X	Depth (inches):	>10	Wetland Hy	/drology	Present?	Yes X	No
(includes capillary fringe)		_ 110	_ Bopar (monoo).		Wotana II,	, a. o.ogy		<u> </u>	
Describe Recorded Data (s	etream gauge n	onitoring well	perial photos previou	e inenections)	if available:				
Describe Necorded Data (s	stream gauge, n	ionitoring well, a	deriai priotos, previot	is irispections),	ii avaliable.				
Remarks:									
Remarks.									
A positive indication of	wetland hydrole	av was observe	d (primary and socor	ndany indicators	wore present)				
A positive indication of	welland nydrolo	gy was observe	a (primary and secon	idary indicator.	were present).	•			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	75	Yes	FAC	·
-		165	TAC	That Are OBL, FACW, or FAC: 6 (A)
2				Total Number of Deminent
3				Total Number of Dominant
4				Species Across All Strata: 6 (B)
5				
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 100% (A/B)
	<u>75</u> =	Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. Fraxinus pennsylvanica	/ 	Yes	FACW	OBL species 18 x 1 = 18
Clethra alnifolia	15	Yes	FAC	FACW species 25 x 2 = 50
3. Acer rubrum	10	Yes	FAC	FAC species 100 x 3 = 300
		163	TAC	FACU species 0 x 4 = 0
4	·	•		UPL species 0 x 5 = 0
5				Column Totals: 143 (A) 368 (B)
6.				Column Totals. 143 (A) 300 (B)
7	40 =	Total Cover		Prevalence Index = B/A = 2.57
		rotal covol		
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
Boehmeria cylindrica	15	Yes	OBL	1 - Rapid Test for Hydrophytic Vegetation
2. Fraxinus pennsylvanica	10	Yes	FACW	X 2 - Dominance Test is >50%
3. Lycopus americanus	3	No	OBL	X 3 - Prevalence Index is ≤ 3.0 ¹
4.				X 4 - Morphological Adaptations ¹ (Provide supporting
5.				data in Remarks or on a separate sheet)
6.				Problematic Hydrophytic Vegetation ¹ (Explain)
7.				
8.		·		¹ Indicators of hydric soil and wetland hydrology must
9.				be present, unless disturbed or problematic.
10.		·		Definitions of Five Vegetation Strata:
11.				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12.				at breast height (DBH) regardless of height.
	28 =	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum 'Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. None Observed				
2.				Herb - All herbaceous (non-woody) plants, regardless
3.				of size, and woody plants less than 3.28 ft tall.
4.				
	0 =	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No No
Domoska				
Remarks:				
A positive indication of hydro	ophytic vegeta	tion was observe	ed (>50% of dom	inant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

A positive indication of hydrophytic vegetation was observed (Morphological Adaptations). Buttressed tree roots are present throughout the wetland

Sampling Point:

Wet 8

SOIL Sampling Point: Wet 8

	ription: (Describe Matrix	to the dep	oth needed to docu		indicator or co Features	nfirm the abse	nce of indicators.)	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
			Color (Illoist)		<u>r ype</u>	LOC		Remarks
8-0	10YR 2/1	100	FVD 4/0	40			Mucky Peat	
0-6	10YR 2/1	90	5YR 4/6	10	C	M	Mucky Silt Loam	
6-10	10YR 2/2	100					Silt Loam	
			-					
			·	<u> </u>				_
Type: C=Co	oncentration. D=De	pletion. RM	l=Reduced Matrix, M	S=Masked	d Sand Grains.	² Location: F	PL=Pore Lining, M=Matrix	<u> </u>
	Indicators:		,					roblematic Hydric Soils ³ :
Histoso	I (A1)		Polyval	ue Below S	Surface (S8) (Li	RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			RA 149B		•		ie Redox (A16) (LRR K, L, R)
X Black H					, e (S9) (LRR R, I	MI RA 149R)		Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)				eral (F1) (LRR	-		ce (S7) (LRR K, L)
	, ,			-		··, L)		
	d Layers (A5)	(644)		Gleyed Ma			 '	Selow Surface (S8) (LRR K, L)
	d Below Dark Surfa	ace (A11)		d Matrix (F	-			Surface (S9) (LRR K, L)
	ark Surface (A12)		X Redox I		` '			nese Masses (F12) (LRR K, L, R
	Mucky Mineral (S1)				rface (F7)			loodplain Soils (F19) (MLRA 149
Sandy C	Gleyed Matrix (S4)		Redox I	Depression	ns (F8)		Mesic Spoo	lic (TA6) (MLRA 144A, 145, 149 I
Sandy F	Redox (S5)						Red Parent	Material (F12)
Stripped	d Matrix (S6)						Very Shallo	w Dark Surface (F22)
Dark Su	ırface (S7) (LRR R,	MLRA 149	9B)				Other (Expl	ain in Remarks)
Depth (inc	ches):	10				Hydric	Soil Present? Yes _	X No
Remarks:								
			A pos	itive indica	ition of hydric so	il was observed	I .	
				Refus	sal at 10" due to	rock		
				reius	sar at 10 due to	TOOK.		

Project/Site:	Route 15/Ro	oute 7 Interchang	ge Cou	unty:	Fairfield	Samplin	g Date:	11/16/2016
-		CTI	OOT		State:	CT Samp	ole Point:	Upl 8
Investigator(s):	KB	and	RMH Se	ection, Townsh	ip, Range:		N/A	
Landform (hillslope, terrace,	etc.):			ocal relief (cond		none): None	Slope (%):	0-3
Subregion (LRR or MLRA):						Long:		
Soil Map Unit Name:			tcrop comples, 15 to 4					N/A
Are climatic / hydrologic con				es / No)		(if no, explain in		14/71
, ,		or Hydrology,	,	· -		al Circumstances" p	,	Y No
		or Hydrology,	·			f needed, explain a		<u> </u>
					•	·	-	•
SUMMARY OF FINE)INGS - At	tach site ma	ap showing saı	npling poi	nt locatior	ns, transects,	important fe	atures, etc.
Hydrophytic Vocatation Dr	nont? V	v	No					
Hydrophytic Vegetation Pre		es X	No	l- 4b - C	I I A			
Hydric Soil Present?		es	No X	Is the Samp		V		v
Wetland Hydrology Presen	.t? Y	es	No X	within a We	tiand?	Yes	No	X
				If yes, op	tional Wetland	Site ID:		
Remarks:								
	This point v	vas determined r	not to be within a wetla	and due to the	lack of hydric s	soils and wetland hy	drology.	
			The survey was com	pleted during a	mild drought.			
			Upland Po	oint for Wetland	18.			
HYDROLOGY								
Wetland hydrology In	dicators:					Secondary India	cators (minimum c	of two required)
Primary Indicators (min	imum of one i	s required: check	(all that apply)				Soil Cracks (B6)	
Surface Water (A			Water-Stained Lea	aves (B9)			Patterns (B10)	
High Water Tabl	•		Aquatic Fauna (B	` '			n Lines (B16)	
Saturation (A3)	o (//		Marl Deposits (B1				on Water Table (0	32)
Water Marks (B1	1)		Hydrogen Sulfide	•			Burrows (C8)	<i>32)</i>
Sediment Depos	•		Oxidized Rhizosph		Poots (C3)		n Visible on Aerial	I Imagony (CO)
			_	_	K0015 (C3)			
Drift Deposits (B	•		Presence of Redu				or Stressed Plants	(101)
Algal Mat or Cru			_ Recent Iron Reduc		olis (C6)		hic Position (D2)	
Iron Deposits (B	•		_ Thin Muck Surface				Aquitard (D3)	
Inundation Visibl			Other (Explain in F	Remarks)			ographic Relief (De	4)
Sparsely Vegeta	ted Concave S	Surface (B8)				FAC-Neu	tral Test (D5)	
= 1.1.61								
Field Observations:								
Surface Water Present?	Yes	NoX	_ Depth (inches):	N/A				
Water Table Present?	Yes		_ Depth (inches):	>16				
Saturation Present?	Yes	NoX_	Depth (inches):	<u>>16</u>	Wetland H	lydrology Present?	Yes	NoX
(includes capillary fringe)								
Describe Recorded Data (s	stream gauge,	monitoring well,	aerial photos, previou	is inspections),	if available:			
Remarks:								
No positive indication of	of wetland hydr	ology was obser	ved.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species		
1. Acer rubrum	60	Yes	FAC	•	4	(A)
2. Quercus rubra	20	Yes	FACU	, , , , , ,		_ ` ′
3.				Total Number of Dominant		
4.				Species Across All Strata:	7	(B)
5.						_ ` ′
6.				Percent of Dominant Species		
7				That Are OBL, FACW, or FAC:	57%	(A/B)
	80 =	Total Cover				_ ` '
				Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 ft	.)			Total % Cover of:	Multiply t	oy:
1. Clethra alnifolia		Yes	FAC	OBL species 0	x 1 = 0	
2. Acer rubrum	20	Yes	FAC	FACW species 0	x 2 = 0	
3.				FAC species 130	x 3 = 39	0
4.				FACU species 47	x 4 = 18	8
5.				UPL species 15	x 5 = 75	
6.				Column Totals: 192	(A) 65	3 (B)
7.					. ,	``
	55 =	Total Cover		Prevalence Index = B/A =	3.40	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicato	ors:	
1. Reynoutria japonica	25	Yes	FACU	1 - Rapid Test for Hydrop		
2. Clethra alnifolia	10	Yes	FAC	X 2 - Dominance Test is >5		
3. Frangula alnus	5	No	FAC	3 - Prevalence Index is ≤		
4. Celastrus orbiculatus	5	No	UPL	4 - Morphological Adapta		porting
5. Rosa multiflora	2	No	FACU	data in Remarks or o		
6.				Problematic Hydrophytic		•
7				<u> </u>		,
8.				¹ Indicators of hydric soil and wet	land hydrology mu	st
9.				be present, unless disturbed or pre-		
0.				Definitions of Five Vegetation S		
1.				Tree - Woody plants 3 in. (7.6 cm	n) or more in diame	eter
2.				at breast height (DBH) regardless	s of height.	
	47 =	Total Cover			o .	
				Sapling/Shrub - Woody plants Ise	es than 3 in. DBH	
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28	ft (1 m) tall.	
1. Celastrus orbiculatus	10	Yes	UPL			
2.				Herb - All herbaceous (non-wood)	y) plants, regardles	S
3.	·			of size, and woody plants less that	n 3.28 ft tall.	
4.	·					
	10 =	Total Cover		Woody vine - All woody vines gre	ater than 3.28 ft in	height.
				Hydrophytic		
				Vegetation		
				Present? Yes X	No	
Remarks:						
A positive indication of hyd	rophytic vegetat	tion was observe	ed (>50% of dom	ninant species indexed as OBL, FACW	. or FAC)	
positive	.,, 1090101		(22.0 0. 0011		, , .	

Sampling Point: Upl 8

SOIL Sampling Point:

Profile Description Depth	Matrix	- and dept			eatures	are absent	5	
•	or (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	10YR 2/2	100			- 77-		Silt Loam	
	10YR 2/1	100					Silt Loam	
12-10+	1011 2/1	100					Siit Loaiii	
					-	-		
								_
Type: C=Concentr	ration. D=Deple	etion. RM=	Reduced Matrix, M	S=Masked	d Sand Grains.	² Location: PL	=Pore Lining, M=Matr	ix.
Hydric Soils Indica		,	,					Problematic Hydric Soils ³ :
Histosol (A1)			Polyvalı	ie Below S	Surface (S8) (LR	R R.	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic Epipedo	n (A2)			RA 149B		,		irie Redox (A16) (LRR K, L, R)
						U D A 440D)		
Black Histic (A	,				e (S9) (LRR R, N	-		ky Peat or Peat (S3) (LRR K, L, F
Hydrogen Sulfi				-	eral (F1) (LRR I	(, L)		ace (S7) (LRR K, L)
Stratified Laye			Loamy	Gleyed Ma	trix (F2)			Below Surface (S8) (LRR K, L)
Depleted Below	w Dark Surface	e (A11)	Deplete	d Matrix (F	⁻ 3)		Thin Dark	Surface (S9) (LRR K, L)
Thick Dark Su	rface (A12)		Redox [Oark Surfa	ce (F6)		Iron-Mang	anese Masses (F12) (LRR K, L,
Sandy Mucky I	Mineral (S1)		Deplete	d Dark Su	rface (F7)		Piedmont	Floodplain Soils (F19) (MLRA 14
Sandy Gleyed	Matrix (S4)			Depression			Mesic Spo	dic (TA6) (MLRA 144A, 145, 149
Sandy Redox				,	` '			nt Material (F12)
Stripped Matrix								ow Dark Surface (F22)
Dark Surface (. ,	NI DA 1400	٥١					plain in Remarks)
Daik Suilace (37) (LKK K, W	ILNA 1431	-)				Other (Exp	olalii iii Reiliaiks)
Remarks:								
			No posi	tive indica	ition of hydric so	ls was observed.		

Upl 8

Project/Site:	Route 15/Rou	ite 7 Interchange	Cou	inty:	Fairfield		Sampling Date:	9.	/28/2016
-			,		State:	СТ	Sample Poir		Wet 9
Investigator(s):	KB	and	RMH Se	ction, Township	 o, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Hillslope		cal relief (conca	· · -	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R					-73.43115		
Soil Map Unit Name:			5), and Udorthents-L					_	, R5UBH
Are climatic / hydrologic con				es / No)	NO		explain in Rema		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		or Hydrology	= -				tances" present?	•	No
		or Hydrology		-			explain any ansv		
	_				•		-		•
SUMMARY OF FINE	INGS - Atta	acn site map	showing san	npling poir	it location	ns, tran	sects, impo	rtant featu	res, etc.
Hydrophytic Vegetation Pre	esent? Ye	s X	No						
Hydric Soil Present?	Ye		No	Is the Sample	ed Area				
Wetland Hydrology Presen			No	within a Wetl		Y	'es X	No	
		<u> </u>						-	
B I.				If yes, opt	ional Wetland	d Site ID: _	We	etland 9	
Remarks:	Thion	oint was datarmin	and to be within a we	atland due to the	o procence of	f all 2 wate	and oritoria		
	msp		ed to be within a we		•	i ali 3 wella	and chiena.		
			he survey was comp	_	_				
		Located	adjacent to Route 7	at the base of a	a steeply slop	ea niii.			
HYDROLOGY									
Wetland hydrology In	dicators:					0			
			II dhad anab A				dary Indicators (requirea)
Primary Indicators (min				(DO)			Surface Soil Cra		
Surface Water (A	*		Water-Stained Lea	, ,			Drainage Pattern	` '	
High Water Tabl	a (A2)	<u> </u>	Aquatic Fauna (B1				Moss Trim Lines		
Saturation (A3)			Marl Deposits (B15	-			Dry-Season Wat		
Water Marks (B1	*		Hydrogen Sulfide C				Crayfish Burrows	` ,	
Sediment Depos			Oxidized Rhizosph	_	Roots (C3)		Saturation Visibl	-	
Drift Deposits (B	3)		Presence of Reduc	ced Iron (C4)			Stunted or Stres	sed Plants (D1)	
Algal Mat or Crus	st (B4)		Recent Iron Reduc	tion in Tilled So	oils (C6)	X	Geomorphic Pos	sition (D2)	
Iron Deposits (B	5)		Thin Muck Surface	e (C7)			Shallow Aquitare	i (D3)	
X Inundation Visible	e on Aerial Imaç	gery (B7)	Other (Explain in R	Remarks)			Microtopographi	c Relief (D4)	
Sparsely Vegeta	ted Concave Su	ırface (B8)					FAC-Neutral Tes	st (D5)	
Field Observations:	.,		5 " "						
Surface Water Present?	Yes	_ NoX	Depth (inches):	N/A					
Water Table Present?	Yes	_ NoX	Depth (inches):	>8					
Saturation Present?	Yes	_ NoX	Depth (inches):	>8	Wetland H	lydrology	Present? Ye	es X No	'
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge, n	nonitoring well, ac	erial photos, previous	s inspections), i	f available:				
Remarks:									
A			4. 3	de la Carllanda de la con-		`			
A positive indication of	wetland nydroid	ogy was observed	(primary and secon	dary indicators	were present	:).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	50	Yes	FAC	That Are OBL, FACW, or FAC: (A)
2. Fraxinus pennsylvanica	10	No	FACW	
3. Quercus bicolor	10	No	FACW	Total Number of Dominant
4				Species Across All Strata: 7 (B)
5				
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 71% (A/B)
	70 =	Total Cover		
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. Lindera benzoin	15	Yes	FACW	OBL species 4 x 1 = 4
2. Rosa multiflora	15	Yes	FACU	FACW species 103 x 2 = 206
3. Acer rubrum	10	Yes	FAC	FAC species 65 x 3 = 195
4.		' <u> </u>		FACU species 20 x 4 = 80
5.				UPL species 15 x 5 = 75
6.				Column Totals: 207 (A) 560 (B)
7.				
	40 =	Total Cover		Prevalence Index = B/A = 2.71
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
Phragmites australis	30	Yes	FACW	1 - Rapid Test for Hydrophytic Vegetation
2. Impatiens capensis	25	Yes	FACW	X 2 - Dominance Test is >50%
3. Thelypteris palustris	10	No	FACW	X 3 - Prevalence Index is ≤ 3.0 ¹
4. Toxicodendron radicans	5	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
5. Onoclea sensibilis	3	No	FACW	data in Remarks or on a separate sheet)
6. Persicaria hydropiperoides	2	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
7. Boehmeria cylindrica	2	No	OBL	
8.				¹ Indicators of hydric soil and wetland hydrology must
9.				be present, unless disturbed or problematic.
10.				Definitions of Five Vegetation Strata:
11.				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12.				at breast height (DBH) regardless of height.
·-·	77 =	Total Cover		at 51000t Holghit (2211) Hogal alooe of Holghit
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. Celastrus orbiculatus	10	Yes	UPL	
2. Vitis labrusca	5	Yes	FACU	Herb - All herbaceous (non-woody) plants, regardless
3. Ampelopsis brevipedunculata*	5	Yes	UPL	of size, and woody plants less than 3.28 ft tall.
4			<u> </u>	
·· <u></u>	20 =	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No
Remarks:				
. comuno.				

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point:

Wet 9

SOIL Sampling Point: Wet 9

	Matrix	s to the deb	th needed to docu		indicator or co Features	mani uie absend	e or mulcators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
				5	С			Remarks
0-3	10YR 3/1	95	10YR 5/8			M	Silt Loam	
3-8	2.5Y 4/2	85	7.5YR 4/6	<u>15</u>	C	M	Silt Loam	
Typo: C=Co	ncontration D=Do	nlotion DM-	Reduced Matrix, M	S-Maskor	d Sand Grains	2l ocation: DI	=Pore Lining, M=Mat	
Hydric Soils		pietion, Kivi-	-Reduced Matrix, M	S-IVIASKE	a Sanu Granis.	LOCATION. PL		Problematic Hydric Soils ³ :
•			D.I. I					· ·
Histosol					Surface (S8) (LF	KK K,		ck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			RA 149B)	•			airie Redox (A16) (LRR K, L, R)
Black Hi	istic (A3)		Thin Da	rk Surface	e (S9) (LRR R, I	MLRA 149B)	5 cm Muc	ky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy I	Mucky Min	eral (F1) (LRR	K, L)	Dark Surfa	ace (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy	Gleyed Ma	atrix (F2)		Polyvalue	Below Surface (S8) (LRR K, L)
	d Below Dark Surfa	ace (A11)	X Deplete	-			Thin Dark	Surface (S9) (LRR K, L)
	ark Surface (A12)	. ,		Dark Surfa	-			ganese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)				rface (F7)			Floodplain Soils (F19) (MLRA 149B
	Gleyed Matrix (S4)			Depression				odic (TA6) (MLRA 144A, 145, 149B)
			Redux I	Jepressioi	15 (ГО)			
	Redox (S5)							nt Material (F12)
	Matrix (S6)		_,					llow Dark Surface (F22)
Dark Su	ırface (S7) (LRR R,	, MLRA 149	В)				Other (Ex	plain in Remarks)
Depth (inc		8				Hydric 3	Soil Present? Yes	X No
Remarks:			A posi		ition of hydric so	oil was observed.		

Project/Site:	Route 15/Rou	ute 7 Interchange	Cou	nty:	Fairfield		Sampling Date	e:	9/28/2016
-					State:	CT	Sample Po		Wet 9 PEM
Investigator(s):	KB		RMH Se	ction, Township	_			N/A	
Landform (hillslope, terrace,				cal relief (conca	_	none).	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R					-73.43115	–	
Soil Map Unit Name:	Udorthents	Pits complex (305),					Classification:		I1F, R5UBH
Are climatic / hydrologic con				es / No)	NO		explain in Rem		,
		or Hydrology	No significant				stances" present	,	No
			No naturally p	-			explain any ans		
		_							·
SUMMARY OF FIND	DINGS - Att	ach site map s	showing sam	npling poin	t location	ns, tran	isects, imp	ortant feat	ures, etc.
Hydrophytic Vegetation Pre	esent? Ye	s X N	0						
Hydric Soil Present?	Ye		o	Is the Sample	d Araa				
Wetland Hydrology Presen			o	within a Wetla		,	res X	No	
Wetland Hydrology Fresen	. 10	3 <u> </u>	·	within a well	iliu:			No	
				If yes, option	onal Wetland	d Site ID: _	W	etland 6	
Remarks:	This is			41		£ =11 O=41			
	I his p	oint was determined			•		and criteria.		
			survey was comp	_	_				
		Located ad	jacent to Route 7	at the base of a	steeply slop	oed hill.			
HADBOI OCA									
HYDROLOGY Wetland hydrology In-	dicators:								
							ndary Indicators		wo requirea)
Primary Indicators (min				(DO)			Surface Soil Cr		
X Surface Water (A	•		Vater-Stained Lea	` '			Drainage Patte		
X High Water Table	e (A2)		quatic Fauna (B1				Moss Trim Line		
X Saturation (A3)			Marl Deposits (B15				Dry-Season Wa		
Water Marks (B1	•		lydrogen Sulfide C				Crayfish Burrov	, ,	
Sediment Depos			oxidized Rhizosphe	=	loots (C3)	<u> </u>	Saturation Visit		
Drift Deposits (B	3)	P	resence of Reduc	ed Iron (C4)			Stunted or Stre	ssed Plants (D	1)
Algal Mat or Crus	st (B4)	R	Recent Iron Reduct	tion in Tilled So	ils (C6)	<u> X</u>	Geomorphic Po	osition (D2)	
Iron Deposits (B	5)	T	hin Muck Surface	(C7)			Shallow Aquita	rd (D3)	
X Inundation Visible	e on Aerial Ima	gery (B7) C	Other (Explain in R	emarks)			Microtopograph	nic Relief (D4)	
Sparsely Vegeta	ted Concave Su	urface (B8)					FAC-Neutral Te	est (D5)	
Field Observations:			5 " "	_					
Surface Water Present?	Yes X	_ No	Depth (inches):						
Water Table Present?	Yes X	No	Depth (inches):	0					
Saturation Present?	Yes X	_ No	Depth (inches):	0	Wetland F	Hydrology	Present? Y	es X	No
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge, r	nonitoring well, aeria	al photos, previous	s inspections), if	available:				
Remarks:									
Remarks.									
A positive indication of	wetland hydrolo	ogy was observed (n	rimary and second	dary indicators v	were present	t)			
7 (poolar o maioadon o		γς) παο οροσίτου (ρ	and cocon		10.0 p.000	-,-			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
4. Nana ahaansad	70 COVC1	Орескоз:	Otatus	That Are OBL, FACW, or FAC:3 (A)
		-		That Are OBE, I AOW, OI I AO.
2				Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Species Across All Strata.
5				Bound of Boule and Occasion
6				Percent of Dominant Species
7		T-1-1-0		That Are OBL, FACW, or FAC: 60% (A/B)
	0	= Total Cover		Prevalence Index Worksheet:
0 11 101 1 01 1				
Sapling/Shrub Stratum (Plot size: 15 ft.		.,	E4.014/	Total % Cover of: Multiply by:
1. Lindera benzoin	10	Yes	FACW	OBL species 30 x 1 = 30
2. Rosa multiflora	10	Yes	FACU	FACW species x 2 = 100
3				FAC species
4				FACU species x 4 = 40
5			-	UPL species 10 x 5 = 50
6			-	Column Totals: <u>100</u> (A) <u>220</u> (B)
7				
	20	= Total Cover		Prevalence Index = B/A = 2.20
Herb Stratum (Plot size: 5 ft.)			F. C	Hydrophytic Vegetation Indicators:
1. Phragmites australis	40	Yes	FACW	1 - Rapid Test for Hydrophytic Vegetation
2. <u>Typha latifolia</u>	20	Yes	OBL	X 2 - Dominance Test is >50%
Typha angustifolia	10	No	OBL	X 3 - Prevalence Index is ≤ 3.0 ¹
4				4 - Morphological Adaptations (Provide supporting
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	70 :	= Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. Celastrus orbiculatus	10	Yes	UPL	
2			-	Herb - All herbaceous (non-woody) plants, regardless
3			UPL	of size, and woody plants less than 3.28 ft tall.
4			-	
	10:	= Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No
Remarks:				
A positive indication of hydro	phytic veget	ation was observe	ed (>50% of dom	ninant species indexed as OBL, FACW, or FAC).
•	-			•
A positive in	ndication of h	ydrophytic vegeta	tion was observe	ed (Prevalence Index is ≤ 3.00).
•		-		

Sampling Point: Wet 9 PEM

SOIL Sampling Point: Wet 9 PEM

Depth	Matrix				eatures		ce of indicators.)	
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
				5	С	M		Remarks
0-3	10YR 3/1	<u>95</u>	10YR 5/8				Silt Loam	
3-8	2.5Y 4/2	<u>85</u>	7.5YR 4/6	<u>15</u>	C	M	Silt Loam	
								_
 Гуре: C=Co	oncentration, D=De	pletion, RM	=Reduced Matrix, M	S=Masked	d Sand Grains.	² Location: Pl	_=Pore Lining, M=Matr	ix.
	Indicators:	,	,					Problematic Hydric Soils ³ :
Histoso	I (A1)		Polyval	ue Below S	Surface (S8) (LF	RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			RA 149B))		Coast Prai	rie Redox (A16) (LRR K, L, R)
	listic (A3)				, e (S9) (LRR R, I	MI RA 149R)		xy Peat or Peat (S3) (LRR K, L, F
	en Sulfide (A4)				eral (F1) (LRR	•		ice (S7) (LRR K, L)
						· · · , - /		Below Surface (S8) (LRR K, L)
	d Layers (A5)	(444)		Gleyed Ma			 -	
	d Below Dark Surfa	ice (A11)	X Deplete		-			Surface (S9) (LRR K, L)
	ark Surface (A12)			Dark Surfa				anese Masses (F12) (LRR K, L,
Sandy N	Mucky Mineral (S1)		Deplete	d Dark Su	rface (F7)		Piedmont	Floodplain Soils (F19) (MLRA 14
Sandy (Gleyed Matrix (S4)		Redox	Depression	ns (F8)			dic (TA6) (MLRA 144A, 145, 14 9
Sandy F	Redox (S5)						Red Paren	t Material (F12)
Stripped	d Matrix (S6)						Very Shall	ow Dark Surface (F22)
Dark Su	urface (S7) (LRR R,	MLRA 149)B)				Other (Exp	lain in Remarks)
Depth (ind	cnes):	8	 -			Hydric	Soil Present? Yes	XNo
emarks:								
			A pos	tive indica	tion of hydric so	oil was observed.		
				Б. (aal at 0" dua ta			
				Retu	sal at 8" due to	rock.		
				Refu	sarato due to	rock.		
				Retu	sararo que to	rock.		
				Refu	sarato due to	rock.		
				кети	sar at o due to	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		
				кети	sar at o que to	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		
				кети	sar ar o que ro	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		
				кети	sai ai o que io	rock.		

Project/Site:	Route 15	/Route 7 Inter	change	Cou	unty:	Fairfield		Sampling Da	te:	11/16/2016
Applicant/Owner:			CTDOT			State:	CT	Sample F	oint:	Upl 9
Investigator(s):	KB	and	RMH	Se	ection, Towns	ship, Range: _			N/A	
Landform (hillslope, terrace,	, etc.):	Te	errace	Lo	cal relief (co	ncave, convex,	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		L	RR-R		Lat:4	1.14493	Long: _	-73.43086	Datum:	#N/A
Soil Map Unit Name:		Udo	orthents-Urban l	and comple	ex (306)		NWI	Classification:		N/A
Are climatic / hydrologic cor	nditions on t	he site typical	for this time of y	ear? (Y	es / No)	NO	(if no,	explain in Rer	marks.)	
Are Vegetation No	,Soil !	or Hydı,	rology No	significan	tly disturbed	? Are "Norm	al Circums	stances" prese	nt? Yes	X No
Are Vegetation No	,Soil !	or Hydı,	rology No	_naturally p	problematic?	((If needed,	explain any a	nswers in Rem	arks.)
SUMMARY OF FINE	DINGS -	Attach site	e man shov	ving san	nnlina na	oint locatio	ns. trar	sects. im	portant fe	atures, etc.
		7 1114011 011	o map one:	9 04			,			
Hydrophytic Vegetation Pro	esent?	Yes X	No							
Hydric Soil Present?		Yes X	No		Is the Sam	pled Area				
Wetland Hydrology Preser	nt?	Yes	No	Х	within a W	etland?	١	res	No	<u> </u>
					If yes,	optional Wetlan	d Site ID:			
Remarks:										
		This point was	determined not	to be within	n a wetland o	lue to the lack o	of wetland	hydrology.		
			The surve	y was comp	pleted during	a mild drought.				
		Upland p	oint for Wetland	9, located i	in a forest ad	jacent to comm	ercial build	dings.		
HYDROLOGY										
Wetland hydrology In	dicators:						Secor	ndary Indicator	s (minimum of	two required)
Primary Indicators (mir	nimum of on	ne is required;	check all that ap	ply)				Surface Soil (<u></u> _
Surface Water (A		•		Stained Lea	aves (B9)			Drainage Pat		
High Water Tabl	le (A2)		Aquatio	Fauna (B1	3)			Moss Trim Lir		
Saturation (A3)	, ,			posits (B15					Vater Table (C	2)
Water Marks (B	1)			en Sulfide (-			Crayfish Burro	•	•
Sediment Depos	'					ng Roots (C3)		-	sible on Aerial	Imagery (C9)
Drift Deposits (B					ced Iron (C4)				essed Plants	
Algal Mat or Cru	•				ction in Tilled			Geomorphic F		· ,
Iron Deposits (B				uck Surface		000 (00)		Shallow Aquit		
Inundation Visible	•	Imagery (B7)		Explain in F					ohic Relief (D4)
Sparsely Vegeta					(ciliality)			FAC-Neutral		,
oparoory vogeta	nou conouv	o canaco (Bo	,					TAG Modiful	1001 (20)	
Field Observations:										
Surface Water Present?	Yes	No	X Depti	n (inches):	N/A					
Water Table Present?	Yes	No		n (inches):	>12					
Saturation Present?	Yes	No		n (inches):	>12	Wetland I	Hvdrology	Present?	Yes	No X
(includes capillary fringe)				· (oo.).		Wothana .	.yu.o.ogy			
Describe Recorded Data (stream gaug	ne monitorina	well aerial phot	os previou	s inspections	s) if available:				
Dodding Noodlada Data (stroum gaas	go, monitoring	won, donar prior	oo, proviou	о пторосиоти	o), ii avallabio.				
Remarks:										
No positive indication of	of wetland h	vdrology was	observed.							
'		, 0,								

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Betula populifolia	30	Yes	FAC	That Are OBL, FACW, or FAC: 6 (A)
Quercus palustris	25	Yes	FACW	
3. Fraxinus americana	25	Yes	FACU	Total Number of Dominant
4.		163	1700	Species Across All Strata: 8 (B)
			-	Opecies Across Air otrata.
5				Percent of Deminant Species
6				Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
7	80 =	Total Cover	-	That Are OBL, FACW, or FAC: (A/B)
		Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
Carpinus caroliniana	_ / 40	Yes	FAC	OBL species 0 x 1 = 0
Quercus palustris	20	Yes	FACW	FACW species 45 x 2 = 90
3		100	171011	FAC species 90 x 3 = 270
4				FACU species 35 x 4 = 140
				UPL species 5 x 5 = 25
5				Column Totals: 175 (A) 525 (B)
6				Column Totals. 173 (A) 323 (B)
	60 =	Total Cover		Prevalence Index = B/A = 3.00
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. Smilax rotundifolia	10	Yes	FAC	1 - Rapid Test for Hydrophytic Vegetation
2. Prunus serotina	5	Yes	FACU	X 2 - Dominance Test is >50%
3				X 3 - Prevalence Index is ≤ 3.01
4				4 - Morphological Adaptations (Provide supporting
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12	-	-	-	at breast height (DBH) regardless of height.
	15=	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum [Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. Smilax rotundifolia	10	Yes	FAC	
2. Celastrus orbiculatus	5	Yes	UPL	Herb - All herbaceous (non-woody) plants, regardless
3. Vitis aestivalis	5	Yes	FACU	of size, and woody plants less than 3.28 ft tall.
4				
	=	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No
				100 <u>X</u> NO
Remarks:				•
A positive indication of hydro	phytic vegetat	ion was observe	ed (>50% of dom	ninant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Sampling Point: Upl 9

SOIL Sampling Point: Upl 9

	Matrix	0/	0.1(Features 1	1 2	T. (Demot
nches) Color (n		<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
	2/2	100	40V/D 4/C	40			Loam	
	2/2	90	10YR 4/6	10	<u>C</u> D	M	Silt Loam	
8-12 10YF	8 6/6	60	10YR 2/1	40	<u> </u>	M	Silt Loam	
							-	
								_
Type: C=Concentration	n, D=Deple	etion, RM	=Reduced Matrix, M	IS=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=M	atrix.
ydric Soils Indicators								or Problematic Hydric Soils ³ :
Histosol (A1)			Polyval	ue Below S	Surface (S8) (LF	RR R,	2 cm Mi	uck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A	2)		MI	LRA 149B	5)		Coast P	rairie Redox (A16) (LRR K, L, R)
Black Histic (A3)			Thin Da	ark Surface	e (S9) (LRR R, I	VILRA 149B)	5 cm Mi	ucky Peat or Peat (S3) (LRR K, L, R
Hydrogen Sulfide (A4)		Loamy	Mucky Mir	neral (F1) (LRR	K, L)	Dark Su	ırface (S7) (LRR K, L)
Stratified Layers (A	.5)		Loamy	Gleyed Ma	atrix (F2)			ue Below Surface (S8) (LRR K, L)
Depleted Below Da	ark Surface	e (A11)	Deplete	ed Matrix (I	F3)		Thin Da	rk Surface (S9) (LRR K, L)
Thick Dark Surface	e (A12)		X Redox	Dark Surfa	ace (F6)			nganese Masses (F12) (LRR K, L, I
Sandy Mucky Mine					ırface (F7)			nt Floodplain Soils (F19) (MLRA 14
Sandy Gleyed Mat			Redox	Depression	ns (F8)			podic (TA6) (MLRA 144A, 145, 149
Sandy Redox (S5)								rent Material (F12)
Stripped Matrix (S6								allow Dark Surface (F22)
Dark Surface (S7)	(LKK K, IV	ILKA 149	в)				Other (E	Explain in Remarks)
Type: Rock	served):	40				III. salada	0-!! B	- V N-
Type: Rock Depth (inches):	eserved):	12				Hydric	Soil Present? Ye	s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12				Hydric	Soil Present? Ye	s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos	itive indica	ation of hydric sc	Hydric bil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		ation of hydric so	oil was observed		s <u>X</u> No
	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No
Type: Rock Depth (inches):	eserved):	12	A pos		•	oil was observed		s <u>X</u> No

Project/Site:	Route 15/Ro	ute 7 Interchange	Cou	ınty:	Fairfield		Sampling Date	e :	9/27/2016
					State:	СТ	Sample Po		Wet 10
Investigator(s):	KB	and	RMH Se	ection, Township	. Range:			N/A	
Landform (hillslope, terrace,				ocal relief (conca	_	none).	Concave		0-3
Subregion (LRR or MLRA):				Lat: 41.14					
Soil Map Unit Name:			nts-Pits complex (3				Classification:		1E, PEM5E
Are climatic / hydrologic con	ditions on the			es / No)	NO		explain in Rem		,
		or Hydrology	- ·				•	? Yes X	No
	_	or Hydrology		-				wers in Remar	
							•		•
SUMMARY OF FIND	INGS - At	tach site map	showing sar	npling poin	t locatior	ns, tran	sects, imp	ortant feat	ures, etc.
Hydrophytic Vegetation Pre	sent? V	es X	No						
Hydric Soil Present?			No No	Is the Sample	d Area				
Wetland Hydrology Presen			No	within a Wetla		v	es X	No	
Wetland Hydrology Fresen		<u>X</u>		within a wette	iiu:		<u> </u>	No	
				If yes, option	onal Wetland	Site ID: _	W	etland 10	
Remarks:	TU								
	This	point was determin			•	all 3 wetla	and criteria.		
			e survey was comp	_	_				
Wetland is located a	t the base of a		nd adjacent to Rou nd manipulated, pr				creek. The wetl	and appears to	be highly
		disturbed a	na mampulatea, pr	eviously a Conin	DOT miligation	on area.			
HYDROLOGY									
Wetland hydrology Inc	dicators:					Secon	dary Indicators	(minimum of tv	vo required)
Primary Indicators (min	imum of one is	required; check al	that apply)			;	Surface Soil Cr	acks (B6)	
X Surface Water (A	A1)		Water-Stained Lea	aves (B9)		1	Drainage Patte	rns (B10)	
X High Water Table	e (A2)	X	Aquatic Fauna (B1	3)		I	Moss Trim Line	es (B16)	
X Saturation (A3)			Marl Deposits (B1	5)		1	Dry-Season Wa	ater Table (C2)	
Water Marks (B1)	x	Hydrogen Sulfide (Odor (C1)			Crayfish Burrov	vs (C8)	
Sediment Depos	its (B2)		Oxidized Rhizosph	neres on Living R	Roots (C3)	<u>x</u> :	Saturation Visit	ole on Aerial Im	agery (C9)
Drift Deposits (B			Presence of Redu	=	, ,		Stunted or Stre	ssed Plants (D	1)
Algal Mat or Crus	•		Recent Iron Reduc	` '	ls (C6)		Geomorphic Po	•	,
Iron Deposits (B			Thin Muck Surface		()		Shallow Aquita		
X Inundation Visible	•		Other (Explain in F				Microtopograph		
Sparsely Vegeta			Outor (Explain in t	tomarko)			FAC-Neutral Te		
oparoory vogotal	.00 00110010 0	dilaco (Bo)					i / to i todiidi i t	561 (20)	
Field Observations:									
Surface Water Present?	Yes X	No	Depth (inches):	0					
Water Table Present?	Yes X	No	Depth (inches):	0					
Saturation Present?	Yes X	No	Depth (inches):	0	Wetland H	lvdrology	Present? V	'es X	No
(includes capillary fringe)	163 <u>X</u>		Deptil (iliches).		Wellandin	iyarology	i resent:	es <u>x</u>	
Describe Recorded Data (s	etroam gaugo	monitoring well ac	rial photos, proviou	e inepoetione) if	available:				
Describe Necolded Data (s	siream yauge,	monitoring well, ae	iai priotos, previou	is irispections), ii	avallable.				
Remarks:									
Nomarko.									
A positive indication of	wetland hydro	ogy was observed	orimary and secon	ndary indicators y	vere present)			
71 pooliivo indication of	wolland nyaro	ogy was observed	(primary and occor	idary maioatoro v	voro procent,	<i>,</i> ·			
Arona of inundation pro	acat througho	ut the wetland Free	a wore cheer od w	within the westlene	1				
Areas of inundation pre	sent througho	ut the wetland. Frog	is were observed v	within the welland	1,				

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Free Stratum</u> (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. None observed				That Are OBL, FACW, or FAC: 4 (A)
2.			·	, , ,
3.				Total Number of Dominant
4.				Species Across All Strata: 4 (B)
5.				
6.				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
	0 =	= Total Cover		
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. None Observed				OBL species 110 x 1 = 110
2.				FACW species 55 x 2 = 110
3.				FAC species 0 x 3 = 0
4.				FACU species 0 x 4 = 0
5.				UPL species 0 x 5 = 0
6.				Column Totals: 165 (A) 220 (B)
7				(-)
	0 =	= Total Cover		Prevalence Index = B/A = 1.33
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. Typha latifolia	40	Yes	OBL	X 1 - Rapid Test for Hydrophytic Vegetation
2. Onoclea sensibilis	35	Yes	FACW	X 2 - Dominance Test is >50%
3. Carex stricta	30	Yes	OBL	X 3 - Prevalence Index is ≤ 3.0 ¹
4. Juncus effusus	30	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting
5. Vaccinium corymbosum	20	No	FACW	data in Remarks or on a separate sheet)
6. Persicaria hydropiperoides	5	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
7. Boehmeria cylindrica	5	No	OBL	_
8.			·	¹ Indicators of hydric soil and wetland hydrology must
9.				be present, unless disturbed or problematic.
10.				Definitions of Five Vegetation Strata:
11.				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12.				at breast height (DBH) regardless of height.
	165 =	= Total Cover	·	
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.				and greater than or equal to 3.28 ft (1 m) tall.
1. None Observed				Herb - All herbaceous (non-woody) plants, regardless
2				of size, and woody plants less than 3.28 ft tall.
3				2. 2.2., and nood, planto look than oleo it tall.
4	0 =	= Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				Present? Yes X No
Remarks:				
A positive indication of hydro	phytic vegeta	ation was observe	ed (>50% of dom	ninant species indexed as OBL, FACW, or FAC).
A nositive in	dication of h	vdrophytic vegeta	ition was observe	ed (Prevalence Index is ≤ 3.00).
,				,
A positive indicati	on of hydropl	nytic vegetation w	as observed (Ra	apid Test for Hydrophytic Vegetation).

Sampling Point: Wet 10

SOIL Sampling Point: Wet 10

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Thioration: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Cast Prairie Redox (A10) (LRR K, L, MLRA 149B)		cription: (Describe Matrix	o ale depui			eatures	the about	o or maioatoroly	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. To Matrix MS=Masked Sand Grains. To Mucky (A10) (LRR K, L, MLRA 149B) Som Mucky (A10) (LRR K, L, MLRA 149B) Som Mucky Peat or Peat (S3) (LRR K, L, R, L) Depletion Bark Surface (S9) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sendy Gleyed Matrix (S4) Redox Dark Surface (F7) Peletion of Tipodiplain Solis (F19) (MLRA 149A) Sandy Redox (S5) Stripped Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1) Red Parent Material (F12) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks: A positive indication of hydric soil was observed.	Depth (inches)		%	Color (moist)			Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pl=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*! Indicators for Problematic Hydric Soil Present* Indicators for Problematic Hydric Soil Present* Indicators for Hydric Soil Present* Indica				00.01 (11.0.01)		.,,,,,			rtemante
Histic Soils Indicators:	<u> </u>	10111 0/1						Widok	_
ydric Soils Indicators: Histosol (A1)									
Histic Soils Indicators:									
Histic Soils Indicators:									
Hydric Soils Indicators: Histosol (A1)									
Hydric Soils Indicators: Histosol (A1)									
Hydric Soils Indicators: Histosol (A1)									
Hydric Soils Indicators: Histosol (A1)									
Hydric Soils Indicators: Histosol (A1)									
Hydric Soils Indicators: Histosol (A1)	<u>.</u>								_
Hydric Soils Indicators: Histosol (A1)	Type: C=C	oncentration, D=De	pletion, RM=R	educed Matrix, M	1S=Masked	d Sand Grains.	² Location: PL	=Pore Lining, M=Matri	X.
Histosol (A1)			,	,					
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) Depleted Dark Surface (B8) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks: A positive indication of hydric soil was observed.	-			Polyval	ue Below S	Surface (S8) (I R	RR		· ·
Black Histic (A3)							,		
X Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1444, 145, 1) Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No A positive indication of hydric soil was observed.							U D A 440D)		
Stratified Layers (A5)		` '					-		
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1 Red Parent Material (F12) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.	X Hydrog	en Sulfide (A4)					(, L)	Dark Surfa	ce (S7) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1 Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.	Stratifie	ed Layers (A5)		Loamy	Gleyed Ma	trix (F2)		Polyvalue	Below Surface (S8) (LRR K, L)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1 Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.	Deplete	ed Below Dark Surfa	ace (A11)	Deplete	ed Matrix (F	⁻ 3)		Thin Dark	Surface (S9) (LRR K, L)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1 Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.	Thick D	Oark Surface (A12)		Redox	Dark Surfa	ce (F6)		Iron-Manga	anese Masses (F12) (LRR K, L,
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1 Sandy Redox (S5) Red Parent Material (F12) Stripped Matrix (S6) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.						` ,			, , ,
Sandy Redox (S5) Red Parent Material (F12) Stripped Matrix (S6) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.		• , ,							
Stripped Matrix (S6) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Other (Explain in Remarks)				Redux	Debiessioi	15 (1 0)			
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):									
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.									
Restrictive Layer (if observed): Type: 4 Depth (inches): Rock Hydric Soil Present? Yes X No Remarks: A positive indication of hydric soil was observed.	Dark Si	urtace (S7) (LRR R ,	, MLRA 149B)					Other (Exp	lain in Remarks)
· · · · · · · · · · · · · · · · · · ·	Remarks:		rtook	_			yano o		
Multiple borings were taken, rock refusal consistently encountered at approximately 4", however soils are clearly hydric.				A pos	itive indica	tion of hydric soi	I was observed.		
wildiple bullings were taken, rock refusal consistently encountered at approximately 4 , nowever sons are deally hydric.		Multiple be	oringo woro tol	kan raak rafuaal	oonoiotontl	v anacuntared a	t approximately 4	l" however soils are o	oorly bydrio
		Multiple bo	onings were tai	ken, rock reiusai	consistenti	y encountered a	т арргохіпіатету 4	, nowever soils are ci	earry riyuric.

Project/Site:	Route 15/Ro	ute 7 Interchang	је	County:	Fairfield		Sampling Dat	te:	9/27/2016
Applicant/Owner:		СТІ	OOT		State:	СТ	Sample P	oint:	Upl 10
Investigator(s):	KB	and	RMH	Section, Tov	vnship, Range: _			N/A	
Landform (hillslope, terrace,	etc.):	Toe slor	ne e	Local relief (concave, convex,	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat:	41.14522	Long:	-73.43298	Datum:	#N/A
Soil Map Unit Name:		Udor	thents-Pits compl	lex (305)		NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the s	site typical for th	is time of year?	(Yes / No)	NO	(if no,	explain in Ren	narks.)	
		or Hydrology,		ficantly disturbe	ed? Are "Norm	al Circums	stances" preser	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology,	No natur	rally problemati	c? (If needed,	explain any an	swers in Rem	arks.)
CHMMADY OF FINE		—	on obowing	compling	naint lagatia	no 4ror	saata imr	ortant fa	-turas ata
SUMMARY OF FIND	/INGS - All	acii sile iii	ap snowing	Sampling	point locatio	iis, ii ai	isecis, iiiip	Jortani ie	atures, etc.
Hydrophytic Vegetation Pre	esent? Ye	es	No X						
Hydric Soil Present?	Υє	es	No X	Is the S	ampled Area				
Wetland Hydrology Presen	t? Ye	es	No X	within a	Wetland?	•	res .	No	X
				lf vo	a antional Watlan	d Cita ID:			
Remarks:				ıı ye	s, optional Wetlan	u Sile iD			
Kelliai KS.	This po	oint was determ	ined not to be with	hin a wetland d	ue to the lack of a	Il three we	tland criteria.		
		, acto			ng a mild drought.		aara ortona.		
Unland	d 2 is the unlar	nd point for Wet	=	•	smission ROW al		outeron and is	maintained	
Оріан	J Z IS the uplan	a point for vveti	and 10, it is locate	ea within a trai	isinission NOVV ar	orig a rock	dutcrop and is	maintaineu.	
HYDROLOGY									
Wetland hydrology Inc	dicators:					Cooor	adanı İndicator	/minimum of	f two required)
		roquired: chec	(all that apply)			36001	-	`	(wo required)
Primary Indicators (min Surface Water (A		required, check		d Leaves (PO)			Surface Soil C		
	,		Aquatic Fauna	d Leaves (B9)			Drainage Patte		
High Water Table	€ (AZ)						Moss Trim Lin		2)
Saturation (A3)	1.		Marl Deposits				Dry-Season W	· ·	2)
Water Marks (B1	*	_	_	fide Odor (C1)	iving Doots (C2)		Crayfish Burro		Imagan, (CO)
Sediment Depos		_		-	iving Roots (C3)		Saturation Vis		
Drift Deposits (B	-	_		Reduced Iron (C	· ·		Stunted or Str		(ו'ט')
Algal Mat or Crus		_		leduction in Till	ed Soils (C6)		Geomorphic P		
Iron Deposits (B	-		Thin Muck Su				Shallow Aquita		
Inundation Visible			_ Other (Explain	n in Remarks)			Microtopograp		•)
Sparsely Vegeta	ted Concave S	urface (B8)					FAC-Neutral T	est (D5)	
Field Observations:									
	Voo	No. V	Donth (inch	00):					
Surface Water Present?	Yes	NoX_ NoX	Depth (inch		•				
Water Table Present?	Yes		Depth (inch	· 	Wattan di	le calaca Lacaca	. D	V	N- V
Saturation Present? (includes capillary fringe)	Yes	NoX	Depth (inch	es):	. wetland i	hyarology	Present?	Yes	_ No <u>X</u>
Describe Recorded Data (s	stream gauge, r	monitoring well,	aerial photos, pre	evious inspection	ons), if available:				
D									
Remarks:									
No positivo indication a	of westlend budge	alaguruga ahaar	nuad.						
No positive indication of	r wetland nydro	ology was obser	vea.						

	Absolute	Dominant	Indicator	Dominance Test w	orksheet:			
ree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominan	t Species			
1. None observed				That Are OBL, FAC	W, or FAC:	0	(A)	
2								
3		-	-	Total Number of Do	minant			
4			<u> </u>	Species Across All S	Strata:	4	(B)	
5								
6.				Percent of Dominan	t Species			
7.			·	That Are OBL, FAC	W, or FAC:	0	(A/	B)
	0 =	Total Cover	·					
				Prevalence Index V	Vorksheet:			
Sapling/Shrub Stratum (Plot size: 15 ft)			Total % C	over of:	M	lultiply by:	
1. Pyrus calleryana*		Yes	UPL	OBL species	0	x 1 =	0	-
2.				FACW species	0	x 2 =	0	_
3				FAC species	0	x 3 =	0	-
4.				FACU species	70	x 4 =	280	-
5				UPL species	30	x 5 =	150	-
				Column Totals:	100	(A)	430	(B)
6			-	Column Totals.	100	(^)	430	(0)
7	5 =	Total Cover		Provalence	Index = B/A :	_	4.30	
		Total Covel		Frevalence	IIIUEX - DIA		4.30	-
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegeta	ation Indicate			
	25	Vaa	LIDI		est for Hydror		ation	
1. Artemisia vulgaris	25	Yes	UPL				alion	
2. Ambrosia artemisiifolia	20	Yes_	FACU		nce Test is >5			
3. Lotus corniculatus	20	Yes	FACU		nce Index is ≤			
4. Solidago canadensis	10	<u>No</u>	FACU		-		vide supporting	g
5. Vitis labrusca	10	<u>No</u>	FACU		Remarks or o			
6. Lepidium densiflorum	5	No	FACU	Problemation Problemation	c Hydrophytic	Vegetation	(Explain)	
7. Coronilla varia	5	No	UPL*					
8. Symphyotrichum ericoides	5	<u>No</u>	FACU	¹ Indicators of hydri	c soil and wet	land hydrolo	ogy must	
9				be present, unless d	listurbed or pr	oblematic.		
10				Definitions of Five	Vegetation S	trata:		
1				Tree - Woody plant	s 3 in. (7.6 cm	n) or more ir	n diameter	
12.				at breast height (DE	3H) regardless	s of height.		
	100 =	Total Cover						
				Sapling/Shrub - Wo				
Woody Vine Stratum [Plot size: 30 ft.)				and greater than or	equal to 3.28	ft (1 m) tall.		
1. None Observed								
2.			·	Herb - All herbaceon	us (non-wood	y) plants, re	gardless	
3.			·	of size, and woody p	lants less tha	n 3.28 ft tall	l.	
4.			·					
	0 =	Total Cover		Woody vine - All wo	ody vines gre	ater than 3.	28 ft in height	i.
				Hydrophytic				
				Vegetation				
				=	'es	No X		
						<u></u>		

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point:

Upl 10

SOIL Sampling Point: Upl 10

Depth Matrix		he indicator or co ox Features		•	
nches) Color (moist) %	Color (moist) %	Type ¹	Loc ²	Texture	Remarks
0-3 10YR 3/2 100		. <u></u>		Silt Loam	
		· <u></u>			
					
		· <u> </u>			
		· —			
		· <u> </u>			
		· 			
		. <u> </u>			
Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Mas	ked Sand Grains.	² Location: PL	=Pore Lining, M=Matrix	
lydric Soils Indicators:				Indicators for Pr	oblematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belo	w Surface (S8) (LF	RR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 14	9B)		Coast Prairie	e Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surf	ace (S9) (LRR R, I	MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R
Hydrogen Sulfide (A4)		Mineral (F1) (LRR	•		e (S7) (LRR K, L)
Stratified Layers (A5)	Loamy Gleyed		, = ,		elow Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matri	` '			urface (S9) (LRR K, L)
Thick Dark Surface (A12)					ese Masses (F12) (LRR K, L, I
	Redox Dark St				
Sandy Mucky Mineral (S1)	Depleted Dark				oodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix (S4)	Redox Depres	sions (F8)			c (TA6) (MLRA 144A, 145, 149
Sandy Redox (S5)					Material (F12)
Stripped Matrix (S6)				Very Shallov	Dark Surface (F22)
Dark Surface (S7) (LRR R, MLRA 1498	3)			Other (Expla	in in Remarks)
Indicators of hydrophytic vegetation and we					
Remarks:					
emarks:					
emarks:	No positive inc	dication of hydric so	oils was observed.		
emarks:	·	dication of hydric so			
emarks:	No positive inc Rocky substrate, refu	•			
emarks:	·	•			
emarks:	·	•			
emarks:	·	•			
emarks:	·	•			
emarks:	·	•			
emarks:	·	•			
emarks:	·	•			
emarks:	·	•			
demarks:	·	•			
demarks:	·	•			
lemarks:	·	•			
demarks:	·	•			
Remarks:	·	•			
Remarks:	·	•			
Remarks:	·	•			
Remarks:	·	•			
Remarks:	·	•			
demarks:	·	•			
Remarks:	·	•			
demarks:	·	•			
lemarks:	·	•			
emarks:	·	•			
emarks:	·	•			

Project/Site:	Route 15/Rou	ite 7 Interchang	e Cou	unty:	Fairfield		Sampling Da	te:	9/27/2016
Applicant/Owner:		CTD	OT		State:	CT	Sample P	oint:	Wet 11
Investigator(s):	KB	and	RMH Se	ection, Townshi	p, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Depression	n Lo	ocal relief (conc	ave, convex, n	one):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat: 41.	14223	Long: _	-73.43392	Datum:	N/A
Soil Map Unit Name:	Ridgebuy, Leic	ester, and Whit	man soil (3) and Can	ton and Charlto	n soils (62C)	NWI	Classification:		PUBHx
Are climatic / hydrologic con	ditions on the si	te typical for this	s time of year? (Y	es / No)	NO	(if no,	explain in Ren	narks.)	
Are Vegetation No	,Soil No	or Hydrology	Yes significan	tly disturbed?	Are "Normal	Circums	stances" presei	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology	No naturally	problematic?	(If	needed,	explain any ar	nswers in Rem	arks.)
CHMMADY OF FINE		- aab aita ma	n showing sor	malina nai	at location		saata imi	acriant for	turas ata
SUMMARY OF FIND	INGS - Alla	acii sile illa	ip snowing sai	iipiiiig poii	it iocation	s, li ai	isecis, iiii	Jortani lea	itures, etc.
Hydrophytic Vegetation Pre	esent? Yes	s X	No						
Hydric Soil Present?	Yes	s X	No	Is the Sampl	ed Area				
Wetland Hydrology Presen	t? Yes	s X	No	within a Wet	land?	,	res X	No	
				If you on	ional Wotland	Cita ID:		Votland 11	
Remarks:				ii yes, op	tional Wetland	Site ID.	v	Vetland 11	
Remarks.	This n	oint was determ	ined to be within a w	etland due to th	e presence of:	all 3 wetl	and criteria		
	11110 P		The survey was com		-	an o won	ana omona.		
D	INIT O LIGHT		-	-	=				
Receives flows from	IN I 8, Which hy		ects vvetland 11 to v orth of the road into				ows through a	cuivert under a	paved road and
		Outlets	ortif of the road lifto i	a portueu area.	i otentiai venie	ai pooi.			
HVDDOLOGV									
HYDROLOGY Wetland budgelegy In	diantara								
Wetland hydrology In						Secor			two required)
Primary Indicators (min							Surface Soil C		
Surface Water (A	•	X	_ Water-Stained Lea			<u> X</u>	Drainage Patt		
High Water Table	e (A2)		_ Aquatic Fauna (B1				Moss Trim Lin		
Saturation (A3)			Marl Deposits (B1	5)			Dry-Season W	/ater Table (C	2)
Water Marks (B1	.)		Hydrogen Sulfide	Odor (C1)			Crayfish Burro	ows (C8)	
Sediment Depos	its (B2)		Oxidized Rhizosph	neres on Living	Roots (C3)		Saturation Vis	ible on Aerial I	magery (C9)
Drift Deposits (B	3)		Presence of Redu	ced Iron (C4)			Stunted or Str	essed Plants (D1)
Algal Mat or Crus	st (B4)		Recent Iron Reduc	ction in Tilled S	oils (C6)	X	Geomorphic F	Position (D2)	
Iron Deposits (B	5)		_ Thin Muck Surface	e (C7)			Shallow Aquit	ard (D3)	
X Inundation Visible	e on Aerial Imaç	gery (B7)	Other (Explain in F	Remarks)			Microtopograp	hic Relief (D4)
Sparsely Vegeta	ted Concave Su	ırface (B8)					FAC-Neutral 7	Test (D5)	
Field Observations:									
Surface Water Present?	Yes	_ NoX	Depth (inches):	N/A					
Water Table Present?	Yes	_ No X	_ Depth (inches):	>20					
Saturation Present?	Yes	_ No X	_ Depth (inches):	>20	Wetland Hy	/drology	Present?	Yes X	No
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge, n	nonitoring well, a	aerial photos, previou	is inspections),	if available:				
Remarks:									
A positive indication of	wetland hydrolo	gy was observe	d (primary and secor	ndary indicators	were present).	•			

				Dominance Test worksheet:		
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	<u>Status</u>	Number of Dominant Species		
1. Acer rubrum	40	Yes	FAC	That Are OBL, FACW, or FAC:	5	(A)
2. Ulmus americana	20	Yes	FACW			
3				Total Number of Dominant		
4				Species Across All Strata:	7	(B)
5						
6				Percent of Dominant Species		
7				That Are OBL, FACW, or FAC:	71%	(A/B)
	60 =	Total Cover				
				Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15_ft	<u>. </u>			Total % Cover of:	Multiply	by:
Rosa multiflora	15	Yes	FACU	OBL species 5	x 1 =5	<u> </u>
2. Ulmus americana	10	Yes	FACW	FACW species 60	x 2 = 12	20
3. Hydrangea paniculata	7	No	FAC	FAC species 77	x 3 =23	<u> </u>
4. Acer rubrum	5	No	FAC	FACU species 21	x 4 =8	4
5. Quercus palustris	5	No	FACW	UPL species 7	x 5 = 3	5
6. Berberis thunbergii	3	No	FACU	Column Totals: 170	(A) 47	75 (B)
7						
	45 =	Total Cover		Prevalence Index = B/A	. = 2.79	
	·				·	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indica	tors:	
1. Fraxinus pennsylvanica	25	Yes	FACW	1 - Rapid Test for Hydro	ophytic Vegetation	
2. Smilax rotundifolia	15	Yes	FAC	X 2 - Dominance Test is	>50%	
3. Toxicodendron radicans	10	No	FAC	X 3 - Prevalence Index is	≤ 3.0 ¹	
4. Glyceria striata	5	No	OBL	4 - Morphological Adap	tations ¹ (Provide su	pporting
5. Parthenocissus quinquefolia	3	No	FACU	data in Remarks or	on a separate shee	t)
6.				Problematic Hydrophyti	c Vegetation ¹ (Expl	ain)
7.						
8.				¹ Indicators of hydric soil and w	etland hydrology mu	st
9.				be present, unless disturbed or		
10.				Definitions of Five Vegetation		
11.				Tree - Woody plants 3 in. (7.6 c	m) or more in diam	eter
12.				at breast height (DBH) regardle	•	
	58 =	Total Cover			Ü	
				Sapling/Shrub - Woody plants	ses than 3 in. DBH	
Woody Vine Stratum [Plot size: 30 ft.)				and greater than or equal to 3.28	3 ft (1 m) tall.	
1. Celastrus orbiculatus	7	Yes	UPL			
2.				Herb - All herbaceous (non-woo	dy) plants, regardle:	ss
3.				of size, and woody plants less th	an 3.28 ft tall.	
4						
··	7 =	Total Cover		Woody vine - All woody vines g	reater than 3.28 ft ir	height.
				Hydrophytic		
				Vegetation		
				Present? Yes X	No	
				100 <u>X</u>		
Remarks:						
. Containe.						
			=00.			
A nositive indication of hyd	ronhytic vegetat	ion was observe	an 1>511% at dam	inant species indexed as OBL_FAC	// Or ⊢Δ(:)	

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Sampling Point: Wet 11

SOIL Sampling Point: Wet 11

	ription: (Describe Matrix	to the dep	th needed to docu		indicator or co	nfirm the absen	ce of indicators.)	
Depth (inches)		%	Color (moist)		Type ¹	Loc ²	Toytura	Remarks
(inches)	Color (moist)		Color (moist)	<u>%</u>	rype	LOC	Texture	Remarks
0-4	10YR 2/2	<u>100</u>					Silt Loam	
4-10	10YR 4/1	93	7.5YR 5/8		C	M	Silt Loam	
				<u> </u>	·			
								_
								
1		. 				2		
'Type: C=Co Hydric Soils		pletion, RM	=Reduced Matrix, M	S=Masked	d Sand Grains.	Location: Pl	_=Pore Lining, M=Matr	ix. Problematic Hydric Soils ³ :
-			Debasels	o Dolovi (Curfoso (CO) (LF	D D		·
Histoso					Surface (S8) (LF	RR R,		(A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			.RA 149B	•			irie Redox (A16) (LRR K, L, R)
Black H	istic (A3)				e (S9) (LRR R, I	-	5 cm Muck	ky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy I	Mucky Min	neral (F1) (LRR	K, L)	Dark Surfa	ace (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy (Gleyed Ma	atrix (F2)		Polyvalue	Below Surface (S8) (LRR K, L)
	d Below Dark Surfa	ace (A11)	X Deplete	-			Thin Dark	Surface (S9) (LRR K, L)
	ark Surface (A12)	,) Dark Surfa	-			anese Masses (F12) (LRR K, L, R
	Mucky Mineral (S1)				ırface (F7)			Floodplain Soils (F19) (MLRA 149
	, ,							
	Gleyed Matrix (S4)		Redux L	Depression	ns (Fo)			dic (TA6) (MLRA 144A, 145, 149E
	Redox (S5)							nt Material (F12)
	d Matrix (S6)						Very Shall	ow Dark Surface (F22)
Dark Su	ırface (S7) (LRR R,	, MLRA 149	В)				Other (Exp	olain in Remarks)
Type: Depth (inc	Rock ches):	10				Hydric \$	Soil Present? Yes	X No
Remarks:								
			A posi	tive indica	ation of hydric so	oil was observed.		
				Refu	salat 10" due to	rock.		

Project/Site:	Route 15/Ro	oute 7 Interchang	je C	County:	Fairfield		Sampling Dat	ie:	9/27/2016
Applicant/Owner:		СТІ	OOT		State:	CT	Sample Po	oint:	Upl 11 and 12
Investigator(s):	KB	and	RMH	Section, Town	ship, Range: _			N/A	
Landform (hillslope, terrace,	etc.):	terrace	<u> </u>	Local relief (co	ncave, convex, r	none): _	none	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat:4	11.14185	Long: _	-73.43403	Datum:	#N/A
Soil Map Unit Name:		Canto	on and Charlton soil	l (62C)		NWI (Classification:		N/A
Are climatic / hydrologic con	ditions on the	site typical for th	is time of year?	(Yes / No)	NO	(if no,	explain in Rem	narks.)	
Are Vegetation No	,Soil No	or Hydrology,	No signific	antly disturbed	? Are "Norma	al Circums	tances" preser	it? Yes	X No
Are Vegetation No	,Soil No	or Hydrology,	No natural	ly problematic?	' (I	if needed,	explain any an	swers in Rem	arks.)
SUMMARY OF FIND	INGS - At	tach site m	an showing s	amnling n	oint location	ns tran	sects imr	ortant fea	itures etc
	/II (OO / II	Luon ono m	ap onowing o			io, traii		/Ortaint roc	
Hydrophytic Vegetation Pre	esent? Y	es	No <u>X</u>						
Hydric Soil Present?	Y	es	No <u>X</u>	Is the San	npled Area				
Wetland Hydrology Presen	t? Y	es	No <u>X</u>	within a V	/etland?	Y	'es	No	X
				If yes,	optional Wetland	d Site ID:			
Remarks:				1 37					
	This p	oint was determ	ined not to be withir	n a wetland due	to the lack of all	I three wet	tland criteria.		
			The survey was co	mpleted during	a mild drought.				
		Upland poi	nt for Wetland 11 a	nd Wetland 12	, located in fores	ted habita	t.		
HYDROLOGY									
Wetland hydrology In	dicators:					Secon	ndary Indicators	(minimum of	two required)
Primary Indicators (min	imum of one i	s required: check	(all that apply)				Surface Soil C		o.roquirou)
Surface Water (A			Water-Stained L	eaves (B9)			Drainage Patte		
High Water Table	*		Aquatic Fauna (Moss Trim Lin		
Saturation (A3)	- ()		Marl Deposits (E				Dry-Season W		2)
Water Marks (B1)		Hydrogen Sulfid	-			Crayfish Burro		-,
Sediment Depos	•		Oxidized Rhizos		na Roots (C3)		Saturation Vis		magery (C9)
Drift Deposits (B			Presence of Rec	-			Stunted or Str		
Algal Mat or Crus	-		Recent Iron Rec	•			Geomorphic P		51)
Iron Deposits (B			Thin Muck Surfa		(00)		Shallow Aquita		
Inundation Visible	•		Other (Explain in				Microtopograp		١
Sparsely Vegeta			_ Other (Explain ii	i Remarks)			FAC-Neutral T		,
Sparsery Vegeta	led Concave C	dilace (Bo)					1 AO-Neullai 1	est (D3)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches): N/A					
Water Table Present?	Yes	No X	Depth (inches	· ——					
Saturation Present?	Yes	No X	Depth (inches		Wetland H	lvdrology	Present?	Yes	No X
(includes capillary fringe)		110X	Depti (inches)	Wettand	yarology	i resenti	103	. NO <u>X</u>
Describe Recorded Data (s	troom gougo	monitoring well	agrial photos, provi	oue inepaction	s) if available:				
Describe Necorded Data (s	illeam gauge,	monitoring well,	acriai priotos, previ	ous inspection	s), ii avallable.				
Remarks:									
Nomano.									
No positive indication of	of wetland hydr	ology was obser	ved						
rio positivo maiodioni		ology mad oboo.							

				Dominance Test worksheet:
	Absolute	Dominant	Indicator	
(Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	55	Yes	FAC	That Are OBL, FACW, or FAC: (A)
2. Quercus rubra	15	<u>No</u>	FACU	
3. Pinus strobus	10	<u>No</u>	FACU	Total Number of Dominant
4				Species Across All Strata: 7 (B)
5				
6				Percent of Dominant Species
7		-		That Are OBL, FACW, or FAC: 43% (A/B)
	= 08	Total Cover		
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. Acer saccharum	15	Yes	FACU	OBL species 3 x 1 = 3
2. Quercus rubra	5	Yes	FACU	FACW species 10 x 2 = 20
3. Rosa multiflora	5	Yes	FACU	FAC species 60 x 3 = 180
4.				FACU species 58 x 4 = 232
5.			·	UPL species 0 x 5 = 0
6.				Column Totals: 131 (A) 435 (B)
7				(,
	25 =	Total Cover		Prevalence Index = B/A = 3.32
Herb Stratum (Plot size: 5 ft.)				Hudrophytia Vagatatian Indicators
· · · · · · · · · · · · · · · · · · ·	10	Vaa	EA C\A/	Hydrophytic Vegetation Indicators:
Fraxinus pennsylvanica Parthenocissus quinquefolia	<u>10</u> 5	Yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
		Yes	FACU	2 - Dominance Test is >50% 3 - Prevalence Index is ≤ 3.0 ¹
3. Acer saccharum	3	No	FACU	
4. Boehmeria cylindrica	3	No	OBL	4 - Morphological Adaptations (Provide supporting
5				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	21 =	Total Cover		
				Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. Smilax rotundifolia	5	Yes	FAC	
2				Herb - All herbaceous (non-woody) plants, regardless
3				of size, and woody plants less than 3.28 ft tall.
4.		<u> </u>	·	
	5 =	Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.
				Hydrophytic
				Vegetation
				_
				Present? Yes NoX
Remarks:				
No positive indication of	hvdrophvtic ve	getation was obs	served (≥50% of	dominant species indexed as FAC- or drier).
роз.ш.оа.зацон ог	, , • • •	J		

Sampling Point: Upl 11 and 12

SOIL Sampling Point: Upl 11 and 12

Pepth Matrix		Redox Fea	tures			
	6 Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	00				Silt Loam	
4-7 10YR 5/4 9		5			Silt Loam	
				-		
				-		
				-		
Type: C=Concentration, D=Depletion	n, RM=Reduced Matrix, I	MS=Masked Sa	and Grains.	² Location: PL	=Pore Lining, M=Matrix	ζ.
lydric Soils Indicators:					Indicators for P	roblematic Hydric Soils ³ :
Histosol (A1)	Polyva	lue Below Surf	ace (S8) (LRF	RR,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	N	LRA 149B)			Coast Prair	e Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin D	ark Surface (S	9) (LRR R, M I	LRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R
Hydrogen Sulfide (A4)		Mucky Minera	, .	•		e (S7) (LRR K, L)
Stratified Layers (A5)		Gleyed Matrix		. ,		elow Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A		ed Matrix (F3)	· · -/			Surface (S9) (LRR K, L)
Thick Dark Surface (A12)		Dark Surface	(E6)			nese Masses (F12) (LRR K, L, F
			` '			
Sandy Mucky Mineral (S1)		ed Dark Surfac				loodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix (S4)	Redox	Depressions (⊢ ∀)			ic (TA6) (MLRA 144A, 145, 149
Sandy Redox (S5)						Material (F12)
Stripped Matrix (S6)					Very Shallo	w Dark Surface (F22)
Dark Surface (S7) (LRR R, MLR	A 149B)				Other (Expl	ain in Remarks)
emarks:						
	No po	sitive indicatior	n of hydric soil	s was observed		
	Roc	ky substrate, c	ould not dia d	eener than 7"		
	1100	ny dabourato, o	ould not dig d	ooper alan 7 .		

Project/Site:	Route 15/Rou	ite 7 Interchang	je Co	unty:	Fairfield		Sampling Dat	te:	9/27/2016
Applicant/Owner:		СТІ	OOT		State:	СТ	Sample Po	oint:	Wet 12
Investigator(s):	KB	and	RMH S	ection, Townsh	ip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Terrace	e Lo	ocal relief (con	cave, convex, r	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR R		Lat: 41	.14116	Long: _	-73.43417	Datum:	N/A
Soil Map Unit Name:		Canton	and Charlton (62C) ex	x. Stony		NWI C	Classification:		N/A
Are climatic / hydrologic con-	ditions on the si	te typical for th	is time of year? (Y	/es / No)	NO	(if no,	explain in Rem	narks.)	
Are Vegetation Yes	,Soil Yes	or Hydrology	Yes significar	ntly disturbed?	Are "Norma	I Circumst	tances" preser	nt? Yes)	(No
Are Vegetation No	,Soil No	or Hydrology	No naturally	problematic?	(1)	f needed,	explain any an	swers in Rema	ırks.)
SUMMARY OF FIND	INGS - Att:	ach site m	an showing sa	mnlina noi	int location	ns tran	sects imr	ortant fea	tures etc
	7110	2011 0110 1111	ap onowing ou	pg poi	The roodinor	10, trair		Jortant roa	
Hydrophytic Vegetation Pre	esent? Yes	sX	No						
Hydric Soil Present?	Yes	sX	No	Is the Samp	oled Area				
Wetland Hydrology Present	t? Yes	sX	No	within a We	tland?	Y	es X	No	
				If yes, or	otional Wetland	I Site ID:	٧	Vetland 12	
Remarks:				, , , , ,					
	This p	oint was deterr	nined to be within a w	etland due to t	he presence of	all 3 wetla	and criteria.		
			The survey was com	pleted during a	mild drought.				
Wetland is located a	at the base of a	highway and a	djacent to a transmiss			f from the	surrounding ar	eas. Highly dis	turbed and
		m	anipulated landscape	e. ConnDOT mi	tigation wetlan	d.			
HYDROLOGY									
Wetland hydrology Inc	dicators:					Secon	dary Indicators	s (minimum of t	wo required)
Primary Indicators (min	imum of one is	required: check	(all that apply)				Surface Soil C		.wo required)
Surface Water (A			Water-Stained Le	aves (R9)			Drainage Patte		
High Water Table	•		Aquatic Fauna (B				Moss Trim Lin		
Saturation (A3)	· (· ·=)		Marl Deposits (B1					ater Table (C2)
Water Marks (B1)		Hydrogen Sulfide	•			Crayfish Burro	-	,
Sediment Deposi	•		Oxidized Rhizospl		Roots (C3)		-	ible on Aerial Ir	magery (C9)
Drift Deposits (B3			Presence of Redu	_	(00)			essed Plants ([• • • •
Algal Mat or Crus			Recent Iron Redu		Soils (C6)		Geomorphic P	•	<i>5</i> 1 <i>7</i>
Iron Deposits (B5			Thin Muck Surface		00113 (00)		Shallow Aquita		
Inundation Visible	•		Other (Explain in I					hic Relief (D4)	
Sparsely Vegetat	_		_ Other (Explain in	(Kerriarks)			FAC-Neutral T		
oparacry vegetat	ca concave ca	iriace (Bo)					i //O i veditai i	CSt (DO)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):						
Saturation Present?	Yes	No X	Depth (inches):	>10	Wetland H	lvdrology	Present?	Yes X	No
(includes capillary fringe)		_ 110			Trottana n	ya. o.ogy		<u></u>	
Describe Recorded Data (s	tream gauge in	onitoring well	aerial photos, previou	is inspections)	if available:				
Describe Necorded Data (s	tieaiii gauge, ii	ionitoring well,	aeriai priotos, previot	us irispections),	, ii avallable.				
Remarks:									
Nemarks.									
A positive indication of	wetland hydrolo	av was observ	ed (primary and seco	ndary indicator	s were nresent)			
71 positive indication of	Wetterna Tryanolo	gy was observ	oa (piiinai y ana occor	induity intercent	o word produit	,-			
1									

	A11.1.	D	L. P. de	Dominance Test worksheet:		
T Ol (Dl. /	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species	_	(4)
1. Acer rubrum	10	<u>Yes</u>	FAC	That Are OBL, FACW, or FAC:	8	(A)
2. Salix nigra	5	Yes	OBL			
3. Fraxinus pennsylvanica	2	No	FACW	Total Number of Dominant	_	
4		·		Species Across All Strata:	8	(B)
5						
6				Percent of Dominant Species		
7				That Are OBL, FACW, or FAC:	100%	(A/B)
	<u>17</u> =	Total Cover		Prevalence Index Worksheet:		
0	,				NA 101.1	
Sapling/Shrub Stratum (Plot size: 15 ft.		Vaa	ODI	Total % Cover of:	Multiply	
1. Cephalanthus occidentalis	15	Yes	OBL	OBL species 100	x1= 10	
2. Hydrangea paniculata	10	Yes_	FAC	FACW species 9	x2= 1	
3. Vaccinium corymbosum	2	No	FACW	FAC species 20	x 3 = 6	
4			-	FACU species 0	x 4 =	
5				UPL species0	x5= (
6			-	Column Totals: 129	(A) <u>17</u>	78 (B)
7		T-1-1-0	-	Burnels and BA	4.00	
	=	Total Cover		Prevalence Index = B/A =	= 1.38	
Harb Ctratum (Diet size) 5 ft				Undrambatic Variation Indicate		
Herb Stratum (Plot size: 5 ft.)	0.5	V	ODI	Hydrophytic Vegetation Indicate		
1. Typha angustifolia	25	Yes	OBL	1 - Rapid Test for Hydrop		
2. Iris versicolor	15	Yes	OBL	X 2 - Dominance Test is >5		
3. Hypericum virginicum	10	Yes	OBL	X 3 - Prevalence Index is ≤		nnartina
4. Boehmeria cylindrica	10	Yes	OBL	4 - Morphological Adapta		
5. Galium asprellum	5	No	OBL	data in Remarks or or		•
6. Thelypteris palustris	5	No	FACW	Problematic Hydrophytic	vegetation (Expir	airi)
7. Persicaria sagittata	5	No	OBL	1		
8. Bidens laevis	5	No	OBL	¹ Indicators of hydric soil and wetl		st
9. Glyceria striata	3	No No	OBL	be present, unless disturbed or pro		
10. Juncus effusus	2	No	<u>OBL</u>	Definitions of Five Vegetation S		-1
11				Tree - Woody plants 3 in. (7.6 cm	•	eter
12		Tatal Carra		at breast height (DBH) regardless	or neight.	
	=	Total Cover		Sapling/Shrub - Woody plants Ise	es than 3 in DRH	
Woody Vine Stretum (District)				and greater than or equal to 3.28 f		
Woody Vine Stratum Plot size: 30 ft.)				and groater than or oqual to 0.20 i	t (1 m) tan.	
1. None Observed				Herb - All herbaceous (non-wood)	v) plants regardle	88
2				of size, and woody plants less that	-	50
3			-	or organia moday prame roos man	. 0.20 1. 1	
4		Total Cavar	-	Woody vine - All woody vines gre	ater than 3 28 ft ir	n height
	0 =	Total Cover		Trees, time 7 in need, times give	ato. ta 0.20 .t	g
				Hydrophytic		
				Vegetation		
				Present? Yes X	No	
				riesenti ies X	NO	
Remarks:						
. C. Mario.						
			1 (500		F40)	
A positive indication of hydro	opnytic vegeta	tion was observe	ea (>50% of dom	inant species indexed as OBL, FACW	, or FAC).	

Sampling Point: Wet 12

SOIL Sampling Point: Wet 12

epth	Matrix		oth needed to docu		Features		•	
	lor (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
		100	<u> </u>				Peat	
	10YR 2/2							
	10YR 2/1	100					mucky Silt Loam	
8-10 1	10YR 3/1	95	10YR 5/6	5	C	M	Silt Loam	
					-	-		
[vne: C=Concent	ration D=Der	letion RM	I=Reduced Matrix, M	S=Masko	d Sand Grains	² Location: I	PL=Pore Lining, M=Mat	triv
		DIEUOH, INV	i-Reduced Matrix, M	3-IVIASKE	u Sanu Grains.	LUCATION. I		Problematic Hydric Soils ³ :
ydric Soils Indica	ators:							· ·
Histosol (A1)			Polyvalu	ie Below :	Surface (S8) (L l	RR R,	2 cm Mud	ck (A10) (LRR K, L, MLRA 149B)
X Histic Epipedo	on (A2)		ML	RA 149B	5)		Coast Pra	airie Redox (A16) (LRR K, L, R)
Black Histic (A	\3)		Thin Da	rk Surface	e (S9) (LRR R, I	MLRA 149B)	5 cm Muc	cky Peat or Peat (S3) (LRR K, L, F
Hydrogen Sulf	•				neral (F1) (LRR	=		face (S7) (LRR K, L)
				-		14, =,		
Stratified Laye				Gleyed Ma				Below Surface (S8) (LRR K, L)
Depleted Below		ce (A11)	Deplete	d Matrix (I	F3)			Surface (S9) (LRR K, L)
Thick Dark Su	ırface (A12)		Redox [Oark Surfa	ace (F6)		Iron-Man	ganese Masses (F12) (LRR K, L, I
Sandy Mucky I	Mineral (S1)		Deplete	d Dark Su	ırface (F7)		Piedmont	t Floodplain Soils (F19) (MLRA 14
Sandy Gleyed				Depressio				odic (TA6) (MLRA 144A, 145, 149
_ · ·	. ,			repressio	113 (1 0)			
Sandy Redox	` '							ent Material (F12)
Stripped Matrix	x (S6)						Very Sha	llow Dark Surface (F22)
Dark Surface ((S7) (LRR R,	MLRA 149	9B)				Other (Ex	plain in Remarks)
Type: Roc		10				Hydric	: Soil Present? Yes	X No
Type: Roc Depth (inches):	k					Hydric	: Soil Present? Yes	XNo
Type: Roc Depth (inches):	k		A posi	tive indica	ation of hydric so			XNo
Type: Roc Depth (inches):	k		A posi		ation of hydric so	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		X No
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo
Type: Roc Depth (inches):	k		A posi		•	oil was observed		XNo

Project/Site:	Route 15/Ro	ute 7 Interchan	ge Co	ounty:	Fairfield		Sampling Da	te:	9/28/2016
Applicant/Owner:		СТ	DOT		State:	CT	Sample P	oint:	Wet 13 PEM
Investigator(s):	KB	and	RMH S	Section, Townsh	nip, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Toe slo	pe L	ocal relief (con	cave, convex, n	ione):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-I	₹	_ Lat: 41	.14028	Long: _	-73.43354	Datum:	N/A
Soil Map Unit Name:		Ridgebury,	Leicester, and Whitn	nan soils (3)		NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the	site typical for tl	nis time of year? (Yes / No)	NO	(if no,	explain in Rer	narks.)	
Are Vegetation No	,Soil_ No	or Hydrolog	y No significa	ntly disturbed?	Are "Norma	l Circums	tances" prese	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrolog,	y No naturally	problematic?	(It	i needed,	explain any ar	nswers in Rem	arks.)
CLIMMADY OF FINE		—	on chowing or	malina na	int location	o tron	oceto imi	oortont for	aturas ata
SUMMARY OF FIND	INGS - ALI	acii sile iii	ap snowing sa	inping po	ini iocatioi	is, ii aii	isecis, iiii	Jortani lea	itures, etc.
Hydrophytic Vegetation Pre	esent? Ye	es X	No						
Hydric Soil Present?	Ye	es X	No	Is the Samp	oled Area				
Wetland Hydrology Presen	t? Ye	es X	No	within a We		Υ	res X	No	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
Damania.				If yes, or	otional Wetland	Site ID: _	V	Vetland 13	
Remarks:	Thie	noint was dator	mined to be within a	wotland due to t	ho proconce of	all 3 woth	and critoria		
	11115	point was deter	mined to be within a v		-	an 3 wend	and chiena.		
			The survey was con	-	=				
	VV	etland is locate	d at the base of a ripi	rap embankmer	nt for the Route	/ South c	on-ramp.		
LIVER OL O OV									
HYDROLOGY									
Wetland hydrology In-	dicators:					Secon	ndary Indicator	s (minimum of	two required)
Primary Indicators (min	imum of one is	required; chec	k all that apply)			X	Surface Soil C	Cracks (B6)	
Surface Water (A	A1)		Water-Stained Le	, ,			Drainage Patt	erns (B10)	
High Water Table	e (A2)		Aquatic Fauna (E	313)			Moss Trim Lir	ies (B16)	
Saturation (A3)			Marl Deposits (B	15)			Dry-Season V	/ater Table (C	2)
Water Marks (B1)		Hydrogen Sulfide	Odor (C1)			Crayfish Burro	ows (C8)	
Sediment Depos	its (B2)		Oxidized Rhizosp	heres on Living	Roots (C3)		Saturation Vis	ible on Aerial	imagery (C9)
Drift Deposits (B	3)		Presence of Red	uced Iron (C4)			Stunted or Str	essed Plants (D1)
X Algal Mat or Crus	-		Recent Iron Redu		Soils (C6)		Geomorphic F		,
Iron Deposits (B			Thin Muck Surface		300 (30)		Shallow Aquit		
Inundation Visible	•	many (B7)	Other (Explain in	-			-	ohic Relief (D4)
Sparsely Vegeta			Other (Explain in	rtemants)			FAC-Neutral		,
Oparacry Vegeta	led Concave S	unace (Do)					i Ao-Neuliai	(D3)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches)	: N/A					
Water Table Present?	Yes	No X	Depth (inches)						
Saturation Present?	Yes	No X	Depth (inches)		Wetland H	vdrology	Present?	Yes X	No
(includes capillary fringe)	165	NOX_	Deptil (illicites)		Welland n	yurology	riesenti	les X	_ NO
	troom souss	manitaring wall	acrial photos provid	us inanastiana)	if available:				
Describe Recorded Data (s	illeam gauge,	monitoring weil	, aeriai priotos, previo	ius irispections)	, ii avaliable.				
Damarka	-								
Remarks:									
Aiti iditif			/						
A positive indication of	welland nydrol	ogy was observ	red (primary and seco	ondary indicator	s were present,				

	A la a a la da	Daminant	I	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	Absolute	Dominant	Indicator	
	% cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)
1				That Are OBL, FACW, OF FAC4 (A)
2				Total Number of Demisers
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Species Across All Strata: (B)
5				Description of Description of Control
6				Percent of Dominant Species That Are ORL FACW or FAC: 2007
7				That Are OBL, FACW, or FAC: 80% (A/B)
	=	= Total Cover		Prevalence Index Worksheet:
Capling/Chrub Stratum (Diet size) 45 ft	`			
Sapling/Shrub Stratum (Plot size: 15 ft. 1. Clethra alnifolia	_) 5	Yes	FAC	
	5			
2. <u>Ulmus rubra</u>		Yes	<u>FAC</u>	
3		-	-	FAC species 16 x 3 = 48
4				FACU species 10 x 4 = 40
5				UPL species $0 \times 5 = 0$
6				Column Totals: (A) (B)
7		Tatal Carra		Description of Index - D/A - 4 CO
	10=	= Total Cover		Prevalence Index = B/A = 1.63
Harb Stratum (Diet size) E ft				Undrank, die Verstetien Indicatore.
Herb Stratum (Plot size: 5 ft.)	EE	Vaa	OBL	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
1. Carex stricta	55	Yes Yes		X 2 - Dominance Test is >50%
2. <u>Leersia oryzoides</u>		Yes	OBL	
3. Persicaria pensylvanica	5	No No	FACU	X 3 - Prevalence Index is ≤ 3.0¹
4. Festuca rubra	5	No	FACU	4 - Morphological Adaptations (Provide supporting
5. <u>Solidago rugosa</u>	3	No No	<u>FAC</u>	data in Remarks or on a separate sheet)
6. Smilax rotundifolia	3	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
7				1
8				¹ Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
	91 =	= Total Cover		Sapling/Shrub - Woody plants Ises than 3 in. DBH
West Viscolist as (B) (1)				and greater than or equal to 3.28 ft (1 m) tall.
Woody Vine Stratum Plot size: 30 ft.)	_	.,	54011	and greater than or equal to 5.25 it (1 iii) tail.
	5	<u>Yes</u>	<u>FACU</u>	Herb - All herbaceous (non-woody) plants, regardless
2				of size, and woody plants less than 3.28 ft tall.
3				of size, and woody plants less than 5.20 it tall.
4		T. 1.1.0	-	Woody vine - All woody vines greater than 3.28 ft in height.
	5_=	= Total Cover		Troody Villo 7 in Woody Villoo groater than 0.20 it in Holgric.
				Hydrophytic
				Vegetation
				Present? Yes <u>X</u> No
Remarks:				_1
romano.				
A positive indication of hydrop	onytic vegeta	ation was observe	ea (>50% of dom	inant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

US Army Corps of Engineers

Sampling Point: Wet 13 PEM

SOIL Sampling Point: Wet 13 PEM

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator or co	nfirm the abse	nce of indicators.)	
Depth	Matrix		-	Redox I	Features			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 3/2	100					Silt Loam	
2-10	10YR 4/2	80	5YR 4/6	20	C	M, PL	Silty Clay Loam	
10-16+	10YR 2/1	95	5YR 3/4	5	C	M	Mucky Silty Clay Loar	<u>n</u>
<u> </u>								
								
					-			
¹ Type: C=Co	oncentration, D=De	nletion RM=	:Reduced Matrix M	S=Masker	d Sand Grains	² Location: F	PL=Pore Lining, M=Matrix	·
Hydric Soils		piodori, ravi	Ttoddood Wath, W	io maono.	a cana craino.	Eddation: 1		roblematic Hydric Soils ³ :
Histoso			Polyval	ue Below S	Surface (S8) (LF	RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
	pipedon (A2)			RA 149B				ie Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Da	rk Surface	e (S9) (LRR R, I	VILRA 149B)	5 cm Muck	y Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy	Mucky Min	eral (F1) (LRR	K, L)	Dark Surface	ce (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy	Gleyed Ma	atrix (F2)		Polyvalue E	Below Surface (S8) (LRR K, L)
	d Below Dark Surfa	ace (A11)	X Deplete		-			Surface (S9) (LRR K, L)
	ark Surface (A12)			Dark Surfa				nese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)			d Dark Su	` ,			floodplain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)		Redox I	Depression	ns (F8)			dic (TA6) (MLRA 144A, 145, 149B)
	Redox (S5)							Material (F12)
	d Matrix (S6) urface (S7) (LRR R ,	MI DA 140	- N				 -	w Dark Surface (F22)
Dark St	illace (37) (LKK K	, WILKA 149	-)				Other (Expi	ain in Remarks)
Type: Depth (in-	-1		A pos	itive indica	ition of hydric so	Hydric	_	X No

Project/Site:	Route 15/Rou	ute 7 Interchange	Cou	ınty:	Fairfield		Sampling Date:		9/28/2016
-				-	State:	CT	Sample Poi		Wet 13 PFO
Investigator(s):	KB	and	RMH Se	ection, Township	_			N/A	
Landform (hillslope, terrace,				ocal relief (conca	_	one).	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		Lat: 41.1			-73.43354		
Soil Map Unit Name:			eicester, and Whitma				lassification:		N/A
Are climatic / hydrologic con-	ditions on the s			es / No)	NO		explain in Rema		IN/A
		or Hydrology	, ,	,			ances" present?	•	/ No
		_	_	-					
	_	or Hydrology			•		explain any ans		•
SUMMARY OF FIND	INGS - Atta	ach site ma	p showing sar	npling poir	ıt locatior	ns, trans	sects, impo	ortant fea	tures, etc.
				I					
Hydrophytic Vegetation Pre			No						
Hydric Soil Present?	Ye		No	Is the Sample	∍d Area				
Wetland Hydrology Presen	t? Ye	sX	No	within a Wetl	and?	Ye	es X	No	
				If yes, opt	ional Wetland	Site ID:	We	tland 13	
Remarks:				<u>, , , , , , , , , , , , , , , , , , , </u>					
	This p	oint was determi	ned to be within a we	etland due to the	e presence of	all 3 wetla	nd criteria.		
		Т	he survey was comp	pleted during a	mild drought.				
	We		at the base of a ripra		_	7 South or	n-ramp.		
		J 10 10 00 00 00 0		on of wetland 1					
			110 porti	on or wettand is	<i>)</i> .				
HYDROLOGY									_
Wetland hydrology Inc	dicatore:								
							dary Indicators (wo required)
Primary Indicators (min							Surface Soil Cra	` '	
Surface Water (A	\1)	X_	Water-Stained Lea	aves (B9)			Drainage Patter	ns (B10)	
High Water Table	e (A2)		Aquatic Fauna (B1	3)		^	Moss Trim Lines	s (B16)	
Saturation (A3)			Marl Deposits (B1	5)		[Dry-Season Wa	ter Table (C2)
Water Marks (B1)		Hydrogen Sulfide (Odor (C1)		(Crayfish Burrow	s (C8)	
Sediment Depos	its (B2)		Oxidized Rhizosph	neres on Living I	Roots (C3)	8	Saturation Visib	e on Aerial Ir	nagery (C9)
Drift Deposits (B	3)		Presence of Redu	ced Iron (C4)			Stunted or Stres	sed Plants (E	01)
Algal Mat or Crus	st (B4)		Recent Iron Reduc	ction in Tilled Sc	oils (C6)	<u>X</u> (Geomorphic Pos	sition (D2)	
Iron Deposits (B5			Thin Muck Surface	e (C7)	, ,		Shallow Aquitar		
Inundation Visible	•	gery (B7)	Other (Explain in F				Microtopographi		
X Sparsely Vegetat			(— · - · - · · · · · · · · · · · · · · ·	,			FAC-Neutral Te		
<u> </u>		(= 0)						()	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):	>16					
	-		. , ,		Wetlend U	luduala mul	Dragam42 V	. v	Na
Saturation Present? (includes capillary fringe)	Yes	NoX	Depth (inches):	>16	Wetland H	iyarology i	Present? Ye	es X	No
Describe Recorded Data (s	tream gauge, n	nonitoring well, a	erial photos, previou	s inspections), i	f available:				
Remarks:									
A positive indication of	wetland hydrolo	ogy was observed	d (primary and secon	ndary indicators	were present).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1 1000 000	20	Yes	FAC	That Are OBL, FACW, or FAC:6 (A)
2. Ulmus americana	10	Yes	FACW	That rice obe, thow, of the
		103	171011	Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				Openies / Nicoss / Ni
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 86% (A/B)
7	30 =	Total Cover		That Are OBE, I AGW, OF I AG.
		Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft	١			Total % Cover of: Multiply by:
1. Clethra alnifolia	<u></u> / 15	Yes	FAC	OBL species 0 x 1 = 0
Vaccinium corymbosum	15	Yes	FACW	FACW species 40 x 2 = 80
0 For the control of the control	15	Yes	FACW	FAC species 60 x 3 = 180
		165	TACW	FACU species 5 x 4 = 20
4				UPL species 0 x 5 = 0
5.				
6.			·	Column Totals: <u>105</u> (A) <u>280</u> (B
7	45 =	Total Cover	-	Prevalence Index = B/A = 2.67
		Total Cover		Trevalence index – B/A – 2.07
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. Smilax rotundifolia	25	Yes	FAC	1 - Rapid Test for Hydrophytic Vegetation
2				X 2 - Dominance Test is >50%
				X 3 - Prevalence Index is $\leq 3.0^{1}$
3				4 - Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6.			-	Troblematic Hydrophytic Vegetation (Explain)
7				Tradicators of burden cell and continued burden account
8				¹Indicators of hydric soil and wetland hydrology must
9				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12		T-1-1-0		at breast height (DBH) regardless of height.
	=	Total Cover		Sapling/Shrub - Woody plants Ises than 3 in. DBH
March March March 1971				and greater than or equal to 3.28 ft (1 m) tall.
Woody Vine Stratum [Plot size: 30 ft.]	_	.,	540 11	and grouter than or equal to 0.20 it (1 m) tail.
1. Vitis labrusca	5	Yes	<u>FACU</u>	Herb - All herbaceous (non-woody) plants, regardless
2				of size, and woody plants less than 3.28 ft tall.
3			-	of size, and woody plants less than 5.20 it tall.
4		- 		Woody vine - All woody vines greater than 3.28 ft in height.
	5=	Total Cover		Woody vine - All woody vines greater than 5.20 it in height.
				Undrankotia
				Hydrophytic
				Vegetation
				Present? Yes <u>X</u> No
Remarks:				<u> </u>
nemans.				
A positive indication of hyd	rophytic vegeta	ition was observe	ed (>50% of dom	ninant species indexed as OBL, FACW, or FAC).
A positive	indication of hy	drophytic vegeta	tion was observe	ed (Prevalence Index is ≤ 3.00).

Sampling Point: Wet 13 PFO

SOIL Sampling Point: Wet 13 PFO

Pepth	Matrix	e ue	pth needed to docu		Features	uie ause	or mulcators.)	
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 3/2	100					Silt Loam	
2-10	10YR 4/2	80	5YR 4/6	20	С	M, PL	Silty Clay Loam	
10-16+	10YR 2/1	95	5YR 3/4	5		M	Mucky Silty Clay Loar	n
0-10+	1011 2/1	95	<u> </u>			IVI	Wucky Silly Clay Loai	<u> </u>
								
								_
			. <u></u>					
Гуре: С=С	oncentration, D=De	pletion, RM	1=Reduced Matrix, M	IS=Maske	d Sand Grains.	² Location: I	PL=Pore Lining, M=Matrix	ζ.
	s Indicators:							roblematic Hydric Soils ³ :
Histoso	ol (A1)		Polyval	ue Below S	Surface (S8) (LR	RR,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)			LRA 149B		,		ie Redox (A16) (LRR K, L, R)
	Histic (A3)				, e (S9) (LRR R, N	/II PA 1/19R\		y Peat or Peat (S3) (LRR K, L, R
						=		
	en Sulfide (A4)			-	eral (F1) (LRR I	N, L)		ce (S7) (LRR K, L)
	ed Layers (A5)			Gleyed Ma				Below Surface (S8) (LRR K, L)
	ed Below Dark Surfa	ace (A11)	X Deplete		•			Surface (S9) (LRR K, L)
	Dark Surface (A12)			Dark Surfa				nese Masses (F12) (LRR K, L, F
Sandy	Mucky Mineral (S1)		Deplete	ed Dark Su	rface (F7)		Piedmont F	loodplain Soils (F19) (MLRA 14
Sandy	Gleyed Matrix (S4)		Redox	Depression	ns (F8)		Mesic Spoo	lic (TA6) (MLRA 144A, 145, 149
Sandy	Redox (S5)						Red Parent	: Material (F12)
Strippe	ed Matrix (S6)						Very Shallo	w Dark Surface (F22)
Dark S	urface (S7) (LRR R	, MLRA 149	9B)				Other (Expl	ain in Remarks)
Depth (ir	nches):					Hydric	Soil Present? Yes_	X No
			A pos	itive indica	ition of hydric so	il was observed	d.	

Project/Site:	Route 15/Ro	ute 7 Interchan	ge (County:	Fairfield		Sampling Da	te:	11/16/2016
Applicant/Owner:		СТ	DOT		State:	СТ	Sample P	oint:	Upl 13
Investigator(s):	KB	and	RMH	Section, Towns	ship, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Hillslop	е	Local relief (co	ncave, convex, r	none):	Convex	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-F	₹	Lat: 4	1.14018	Long: _	-73.43397	Datum:	N/A
Soil Map Unit Name:		Ridgebury,	Leicester, and Whit	tman soils (3)		NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the	site typical for th	nis time of year?	(Yes / No)	NO	(if no,	explain in Rer	narks.)	
Are Vegetation No	,Soil No	or Hydrolog	y <u>No</u> signific	cantly disturbed?	Are "Norma	al Circums	stances" prese	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrolog,	y <u>No</u> natura	lly problematic?	(li	f needed,	explain any ar	nswers in Rem	arks.)
SUMMARY OF FIND	INGS - Att	tach site m	an showing s	ampling po	oint location	ns trar	sects im	ortant fea	atures etc
	711100 7111	aon ono m	ap onowing o	umpining po	Jiiit loodiloi		100010, 1111	Jortani 100	
Hydrophytic Vegetation Pre	sent? Ye	es	No X						
Hydric Soil Present?	Ye	es	No X	Is the Sam	pled Area				
Wetland Hydrology Presen	t? Ye	es	No X	within a W	etland?)	Yes	No	X
				If yes, o	optional Wetland	Site ID:			
Remarks:					•				
	This p	oint was determ	ined not to be within	n a wetland due	to the lack of all	three we	tland criteria.		
			The survey was co	ompleted during	a mild drought.				
		Upla	nd point for Wetlan	d 13, located ad	jacent to Perry F	₹oad.			
HYDROLOGY									
Wetland hydrology Inc	dicators:					Secor	ndary Indicator	s (minimum of	two required)
Primary Indicators (min	imum of one is	required; chec	k all that apply)				Surface Soil C		
Surface Water (A			Water-Stained	Leaves (B9)			Drainage Patt		
High Water Table	e (A2)	·	Aquatic Fauna	(B13)			Moss Trim Lir		
Saturation (A3)			Marl Deposits (Dry-Season V	/ater Table (C	2)
Water Marks (B1	1)	·	Hydrogen Sulfic				Crayfish Burro	•	•
Sediment Depos	its (B2)		_	spheres on Livir	ng Roots (C3)		Saturation Vis		Imagery (C9)
Drift Deposits (B:				duced Iron (C4)				essed Plants (
Algal Mat or Crus	•			duction in Tilled			Geomorphic F		•
Iron Deposits (B			Thin Muck Surfa		(,		Shallow Aquit		
Inundation Visible	•	agery (B7)	Other (Explain i				-	hic Relief (D4)
Sparsely Vegeta				,			FAC-Neutral		,
opinion, region		(= 1)						(= 0)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches	s): N/A					
Water Table Present?	Yes	No X	Depth (inches	s): >16					
Saturation Present?	Yes	No X	Depth (inches		Wetland H	lydrology	Present?	Yes	No X
(includes capillary fringe)				, <u> </u>					<u> </u>
Describe Recorded Data (s	stream gauge,	monitoring well.	aerial photos, prev	ious inspections	s), if available:				
(-	33-,	3 .	, , , , , , , , , , , , , , , , , , , ,		,,				
Remarks:									
No positive indication of	of wetland hydro	ology was obse	rved.						

	Absoluto	Dominant	Indicator	Dominance Test worksheet:		
ree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status	Number of Dominant Species		
. Quercus alba	30	Yes	FACU	That Are OBL, FACW, or FAC:	4	(A)
2. Betula lenta	15	Yes	FACU	That Are OBE, I AGW, OF I AG.		(//)
2. <u>Betula lerita</u> 3. Robinia pseudoacacia	15	Yes	FACU	Total Number of Dominant		
4.		163	TACO	Species Across All Strata:	10	(B)
				Species Acioss Ail Oliala.		(D)
5				Paraent of Daminant Species		
6				Percent of Dominant Species That Are OBL EACW or EAC:	400/	(A/D)
7		T: 4-1 On tor		That Are OBL, FACW, or FAC:	40%	(A/B)
	= 60=	Total Cover		Prevalence Index Worksheet:		
apling/Shrub Stratum (Plot size: 15	ft)			Total % Cover of:	Multiply	bv:
. Acer saccharum	15	Yes	FACU	OBL species 0	x 1 = 0	
2. Betula lenta	10	Yes	FACU	FACW species 30	x 2 = 60	0
Fraxinus pennsylvanica	10	Yes	FACW	FAC species 15	x3 = 4	
Vaccinium corymbosum	10	Yes	FACW	FACU species 95	x 4 = 38	
5. Prunus serotina	5	No	FACU	UPL species 10	x5= 50	
S. Juniperus virginiana	5	No	FACU	Column Totals: 150	(A) 53	
. damperae vingilinaria			17100	Coldini Fotals.	(1)	(2
	55 =	Total Cover		Prevalence Index = B/A :	= 3.57	
Jorb Stratum (Diot aize: 5 ft)				Hydrophysic Vogestation Indicate	250	
Herb Stratum_ (Plot size: <u>5 ft.</u>) I. Solidago rugosa	15	Vos	EAC	Hydrophytic Vegetation Indicate		
	<u>15</u>	Yes Yes	FAC	1 - Rapid Test for Hydron		
. Dichanthelium clandestinum	10	Yes	FACW	2 - Dominance Test is >5		
•				3 - Prevalence Index is ≤		
·				4 - Morphological Adapta		
i				data in Remarks or o		
i				Problematic Hydrophytic	Vegetation' (Expla	ain)
7						
3				¹ Indicators of hydric soil and wet	land hydrology mu	st
9				be present, unless disturbed or pr	oblematic.	
)		-		Definitions of Five Vegetation S	trata:	
1		-		Tree - Woody plants 3 in. (7.6 cm	n) or more in diame	eter
2.				at breast height (DBH) regardless	s of height.	
	25 =	Total Cover				
	· · · · · · · · · · · · · · · · · · ·			Sapling/Shrub - Woody plants Is	es than 3 in. DBH	
Voody Vine Stratum Plot size: 30 ft.)			and greater than or equal to 3.28	ft (1 m) tall.	
Celastrus orbiculatus	10	Yes	UPL			
				Herb - All herbaceous (non-wood	y) plants, regardles	SS
				of size, and woody plants less tha	n 3.28 ft tall.	
·						
	10 =	Total Cover		Woody vine - All woody vines gre	eater than 3.28 ft in	height.
				Hydrophytic		
				Vegetation		
				=	No X	
					<u></u>	
Remarks:						
No positive indication of	of hydrophytic vec	getation was obs	served (≥50% of	dominant species indexed as FAC- or	r drier).	

Sampling Point: Upl 13

SOIL Sampling Point: Upl 13

Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 Histic Epipedon (A2) MLRA 149B) CC Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) D Stratified Layers (A5) Loamy Gleyed Matrix (F2) P Depleted Below Dark Surface (A11) Depleted Matrix (F3) T Thick Dark Surface (A12) Redox Dark Surface (F6) Irr Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) P Sandy Gleyed Matrix (S4) Redox Depressions (F8) M Sandy Redox (S5) Stripped Matrix (S6)	M=Matrix. ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, F) livyalue Below Surface (S8) (LRR K, L) in Dark Surface (S9) (LRR K, L) n-Manganese Masses (F12) (LRR K, L, L) edmont Floodplain Soils (F19) (MLRA 144 esic Spodic (TA6) (MLRA 144A, 145, 145 ed Parent Material (F12) ery Shallow Dark Surface (F22) her (Explain in Remarks)
0-16 10YR 3/3 85 10YR 6/4 15 C M Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining Hydric Soils Indicators: Indi	M=Matrix. ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, F) cm Mucky Peat or Peat (S3) (LRR K, L, F) cm Mucky Peat or Peat (S3) (LRR K, L, F) cm Mucky Peat or Peat (S3) (LRR K, L, F) cm Mucky Peat or Peat (S4) (LRR K, L, L, F) cm Mucky Peat or Peat (S4) (LRR K, L, L, F) cm Mucky Peat or Peat (S4) (LRR K, L,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, 2 MLRA 149B)	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, F) park Surface (S7) (LRR K, L) plyvalue Below Surface (S8) (LRR K, L) pin Dark Surface (S9) (LRR K, L) pn-Manganese Masses (F12) (LRR K, L, L) park Surface (TA6) (MLRA 144A, 145, 145 park Parent Material (F12) pary Shallow Dark Surface (F22)
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, F) park Surface (S7) (LRR K, L) plyvalue Below Surface (S8) (LRR K, L) pin Dark Surface (S9) (LRR K, L) pn-Manganese Masses (F12) (LRR K, L, park Surface (T46) (MLRA 144A, 145, 145) park Surface (T46) (MLRA 144A, 145, 145) park Shallow Dark Surface (F22)
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Planticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks:	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Planticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks:	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Planticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks:	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Planticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks:	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Pepleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Problematics Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, F) park Surface (S7) (LRR K, L) plyvalue Below Surface (S8) (LRR K, L) pin Dark Surface (S9) (LRR K, L) pn-Manganese Masses (F12) (LRR K, L, park Surface (T46) (MLRA 144A, 145, 145) park Surface (T46) (MLRA 144A, 145, 145) park Shallow Dark Surface (F22)
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Planticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks:	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Histosol (A2) MIRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Planticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks:	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Pepleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Problematics Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Hydric Soils Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Pepleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Problematics Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ors for Problematic Hydric Soils ³ : cm Muck (A10) (LRR K, L, MLRA 149B) past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, B) park Surface (S7) (LRR K, L) park Surface (S8) (LRR K, L) park Surface (S9) (MLRA 141, LRR K, L, L
Histosol (A1)	past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, I cm Mucky Peat or Peat (S3) (LRR K, L, I cm Mucky Peat or Peat (S8) (LRR K, L) cm Dark Surface (S9) (LRR K, L) cm Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 cm Spodie (TA6) (MLRA 144A, 145, 148 cm Parent Material (F12) cm Shallow Dark Surface (F22)
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Platicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Temporal Matrix (S6) But Dark Surface (S7) Hydric Soil Present?	past Prairie Redox (A16) (LRR K, L, R) cm Mucky Peat or Peat (S3) (LRR K, L, I cm Mucky Peat or Peat (S3) (LRR K, L, I cm Mucky Peat or Peat (S8) (LRR K, L) cm Dark Surface (S9) (LRR K, L) cm Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 cm Spodie (TA6) (MLRA 144A, 145, 148 cm Parent Material (F12) cm Shallow Dark Surface (F22)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) D Stratified Layers (A5) Loamy Gleyed Matrix (F2) P Depleted Below Dark Surface (A11) Depleted Matrix (F3) T Thick Dark Surface (A12) Redox Dark Surface (F6) In Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) P Sandy Gleyed Matrix (S4) Redox Depressions (F8) M Sandy Redox (S5) R Stripped Matrix (S6) V Dark Surface (S7) (LRR R, MLRA 149B) C Prindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	cm Mucky Peat or Peat (S3) (LRR K, L, I ark Surface (S7) (LRR K, L) ilyvalue Below Surface (S8) (LRR K, L) in Dark Surface (S9) (LRR K, L) n-Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 esic Spodic (TA6) (MLRA 144A, 145, 148 ed Parent Material (F12) ry Shallow Dark Surface (F22)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Depleted Dark Surface (F8) Stripped Matrix (S6) Dark Surface (S7) Control Cont	ark Surface (S7) (LRR K, L) Allyvalue Below Surface (S8) (LRR K, L) In Dark Surface (S9) (LRR K, L) In-Manganese Masses (F12) (LRR K, L, In-Manganese Masses (F19) (MLRA 14 In-Manganese (F19) In-Ma
Stratified Layers (A5)	olyvalue Below Surface (S8) (LRR K, L) in Dark Surface (S9) (LRR K, L) n-Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 esic Spodic (TA6) (MLRA 144A, 145, 148 ed Parent Material (F12) ery Shallow Dark Surface (F22)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) In Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Pandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Chalcators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	in Dark Surface (S9) (LRR K, L) n-Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 esic Spodic (TA6) (MLRA 144A, 145, 149 ed Parent Material (F12) ery Shallow Dark Surface (F22)
Thick Dark Surface (A12) Redox Dark Surface (F6) In Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) P Sandy Gleyed Matrix (S4) Redox Depressions (F8) M Sandy Redox (S5) R Stripped Matrix (S6) V Dark Surface (S7) (LRR R, MLRA 149B) O C C C C C C C C C C C C C C C C C C	n-Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 esic Spodic (TA6) (MLRA 144A, 145, 149 ed Parent Material (F12) rry Shallow Dark Surface (F22)
Thick Dark Surface (A12) Redox Dark Surface (F6) In Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) P Sandy Gleyed Matrix (S4) Redox Depressions (F8) M Sandy Redox (S5) R Stripped Matrix (S6) V Dark Surface (S7) (LRR R, MLRA 149B) O C C C C C C C C C C C C C C C C C C	n-Manganese Masses (F12) (LRR K, L, edmont Floodplain Soils (F19) (MLRA 14 esic Spodic (TA6) (MLRA 144A, 145, 149 ed Parent Material (F12) rry Shallow Dark Surface (F22)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Clindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	edmont Floodplain Soils (F19) (MLRA 14 esic Spodic (TA6) (MLRA 144A, 145, 14 ed Parent Material (F12) ery Shallow Dark Surface (F22)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) M Sandy Redox (S5) R Stripped Matrix (S6) V Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	esic Spodic (TA6) (MLRA 144A, 145, 14 5 d Parent Material (F12) ry Shallow Dark Surface (F22)
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Remarks:	ed Parent Material (F12) ery Shallow Dark Surface (F22)
Stripped Matrix (S6) V Dark Surface (S7) (LRR R, MLRA 149B) O Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	ry Shallow Dark Surface (F22)
Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	
Pindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	her (Explain in Remarks)
Pindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present?	, ,
Restrictive Layer (if observed): Type: Depth (inches): Remarks: Type: Hydric Soil Present?	
No positive indication of hydric soils was observed.	

Project/Site:	Route 15/Rou	ute 7 Interchange	Cou	inty:	Fairfield		Sampling Date:		9/27/2016
			_		State:	CT	Sample Point		Wet 14
Investigator(s):	KB	and	RMH Se	ction, Township	n, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Toe slope		cal relief (conc	_	none):	Concave S	Slope (%):	0-3
Subregion (LRR or MLRA):	-	LRR-R		-		_	-73.43561		
Soil Map Unit Name:			Vhitman (3), and Ca				lassification:		N/A
Are climatic / hydrologic con				es / No)	NO		explain in Remar		
· · ·		or Hydrology	- ·			`	ances" present?	,	No
		or Hydrology	_	=			explain any answ		
		_			·				
SUMMARY OF FINE	INGS - Att	ach site ma	p showing san	npling poli	it locatioi	ns, trans	sects, impo	rtant feat	ures, etc.
Hydrophytic Vegetation Pre	esent? Ye	s X	No						
Hydric Soil Present?	Ye		No	Is the Sampl	ed Area				
Wetland Hydrology Presen			No	within a Wet		Υe	es X	No	
D 1				If yes, opt	ional Wetland	d Site ID:	Wet	land 14	
Remarks:	Thion	oint was datarmi	nad ta ha within a w	atland due to th	o procence of	f all 2 watla	nd critoria		
	i nis p		ned to be within a we		•	i ali 3 wellai	na criteria.		
			he survey was comp	_	_				
		Located a	t the base of Route	7 on-ramp adja	cent to a ripra	ap siope.			
HYDROLOGY									
Wetland hydrology In	dicators:					0			
			-11 414 1: -)				dary Indicators (n		<i>i</i> o requirea)
Primary Indicators (min				(DO)			Surface Soil Crac		
Surface Water (A	•	X_	Water-Stained Lea	. ,			Orainage Pattern		
High Water Tabl	e (A2)		Aquatic Fauna (B1				Moss Trim Lines		
Saturation (A3)			Marl Deposits (B15	-			Ory-Season Wate		
Water Marks (B1			Hydrogen Sulfide (Crayfish Burrows		
Sediment Depos			Oxidized Rhizosph	_	Roots (C3)		Saturation Visible		
Drift Deposits (B	3)		Presence of Reduc	ced Iron (C4)		8	Stunted or Stress	sed Plants (D	1)
Algal Mat or Cru	st (B4)		Recent Iron Reduc	tion in Tilled So	oils (C6)	<u>X</u> (Geomorphic Posi	ition (D2)	
Iron Deposits (B	5)		Thin Muck Surface	e (C7)		s	Shallow Aquitard	(D3)	
Inundation Visible	e on Aerial Ima	gery (B7)	Other (Explain in F	Remarks)		N	/licrotopographic	Relief (D4)	
Sparsely Vegeta	ted Concave Su	urface (B8)				F	AC-Neutral Tes	t (D5)	
					1				
Field Observations:	.,		5 " "						
Surface Water Present?	Yes	_ No <u>X</u>	Depth (inches):	N/A					
Water Table Present?	Yes	NoX	Depth (inches):	>14					
Saturation Present?	Yes	NoX	Depth (inches):	>14	Wetland H	lydrology F	Present? Yes	s <u>X</u> I	No
(includes capillary fringe)									
Describe Recorded Data (s	stream gauge, r	nonitoring well, a	erial photos, previou	s inspections),	if available:				
Remarks:									
A				de la Cardination					
A positive indication of	wetiand nydroid	ogy was observed	(primary and secon	dary indicators	were present	:).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	25	Yes	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Ulmus americana	20	Yes	FACW	(,
3				Total Number of Dominant
4.				Species Across All Strata: 7 (B)
5.				(-/
6.				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: <u>86%</u> (A/B)
	45 =	Total Cover		(, , , , , , , , , , , , , , , ,
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.)			Total % Cover of: Multiply by:
1. Lindera benzoin	30	Yes	FACW	OBL species 0 x 1 = 0
2. Cornus amomum	20	Yes	FACW	FACW species 86 x 2 = 172
3. Clethra alnifolia	10	No	FAC	FAC species 80 x 3 = 240
4. Rosa multiflora	5	No	FACU	FACU species 20 x 4 = 80
5.				UPL species 0 x 5 = 0
6.				Column Totals: 186 (A) 492 (B)
7.				(-)
··	65 =	Total Cover		Prevalence Index = B/A = 2.65
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. Toxicodendron radicans	30	Yes	FAC	1 - Rapid Test for Hydrophytic Vegetation
2. Rubus hispidus	10	No	FACW	X 2 - Dominance Test is >50%
3. Solidago rugosa	5	No	FAC	X 3 - Prevalence Index is ≤ 3.0 ¹
4. Ulmus americana	3	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting
5. Onoclea sensibilis	3	No	FACW	data in Remarks or on a separate sheet)
_			171011	Problematic Hydrophytic Vegetation (Explain)
				(2.1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.
7 8				¹ Indicators of hydric soil and wetland hydrology must
^				be present, unless disturbed or problematic.
10				Definitions of Five Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH) regardless of height.
12	51 =	Total Cover		at breast height (DDH) regardless of height.
		- Total Covel		Sapling/Shrub - Woody plants Ises than 3 in. DBH
Woody Vine Stratum 'Plot size: 30 ft.)				and greater than or equal to 3.28 ft (1 m) tall.
1. Vitis labrusca	15	Voo	FACU	
2. Toxicodendron radicans	10	<u>Yes</u> Yes	FACO	Herb - All herbaceous (non-woody) plants, regardless
3.		165	FAC	of size, and woody plants less than 3.28 ft tall.
				, , , , , , , , , , , , , , , , , , ,
4	25 =	Total Cavar		Woody vine - All woody vines greater than 3.28 ft in height.
		Total Cover		g. c
				Lludranhutia
				Hydrophytic
				Vegetation Vegetation
				Present? Yes <u>X</u> No
P I .				
Remarks:				

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Sampling Point:

Wet 14

SOIL Sampling Point: Wet 14

Type: C=Concer lydric Soils Indi Histosol (A1 Histic Epiped	cators:	% 100 90 ————————————————————————————————	Color (moist) 5YR 4/6	10	Features C	Loc ² M	Texture Mucky Silt Loam Gravelly Silt Loam	Remarks
Type: C=Concer lydric Soils Indi Histosol (A1 Histic Epiped	ntration, D=Dep	90	5YR 4/6	10		M	<u> </u>	
Type: C=Concer lydric Soils Indi Histosol (A1 Histic Epiped	ntration, D=Dep		5YR 4/6	10	C	M	<u> </u>	
Type: C=Concer lydric Soils Indi Histosol (A1 Histic Epiped	cators:							
Histosol (A1 Histosol (A1 Histic Epiped	cators:	oletion, RM=						
Histosol (A1 Histosol (A1 Histic Epiped	cators:	oletion, RM=						
Histosol (A1 Histosol (A1 Histic Epiped	cators:	bletion, RM=		_ _ _				
Histosol (A1 Histosol (A1 Histic Epiped	cators:	bletion, RM=		_				
Histosol (A1 Histosol (A1 Histic Epiped	cators:	bletion, RM=						
Histosol (A1 Histosol (A1 Histic Epiped	cators:	bletion, RM=						
ydric Soils Indi Histosol (A1 Histic Epiped	cators:	oletion, RM=						
Histosol (A1 Histosol (A1 Histic Epiped	cators:	oletion, RM=						
Histosol (A1 Histosol (A1 Histic Epiped	cators:	oletion, RM=						
Histosol (A1			Reduced Matrix,	MS=Masked	d Sand Grains.	² Location: F	PL=Pore Lining, M=Matrix.	
Histic Epiped)							roblematic Hydric Soils ³ :
Histic Epiped			Polvv	alue Below S	Surface (S8) (LF	RR R.	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
				MLRA 149B		,		e Redox (A16) (LRR K, L, R)
Black Histic					, e (S9) (LRR R, I	MI PA 1/0R)		Peat or Peat (S3) (LRR K, L, R
Black Histic								, , ,
Hydrogen Su	` ,			-	neral (F1) (LRR	N, L)		e (S7) (LRR K, L)
Stratified Lay				y Gleyed Ma			 -	elow Surface (S8) (LRR K, L)
	low Dark Surfa	ce (A11)		eted Matrix (F	•			urface (S9) (LRR K, L)
	Surface (A12)			x Dark Surfa				nese Masses (F12) (LRR K, L, F
Sandy Muck	y Mineral (S1)			eted Dark Su			Piedmont Flo	oodplain Soils (F19) (MLRA 149
Sandy Gleye	ed Matrix (S4)		Redo	x Depressio	ns (F8)		Mesic Spodi	ic (TA6) (MLRA 144A, 145, 149
Sandy Redo	x (S5)						Red Parent I	Material (F12)
Stripped Mat	trix (S6)						Very Shallov	w Dark Surface (F22)
Dark Surface	e (S7) (LRR R,	MLRA 149	3)				Other (Expla	ain in Remarks)
	. ,		•				` ` '	,
lemarks:						l l		
			Ар	ositive indica	ation of hydric so	il was observed		

Project/Site:	Route 15/Ro	oute 7 Interchan	ge (County:	Fairfield		Sampling Da	ite:	11/16/2016
Applicant/Owner:		CT	DOT		State:	CT	Sample P	oint:	Upl 14 & 15
Investigator(s):	KB	and	RMH	Section, Towns	hip, Range: _			N/A	
Landform (hillslope, terrace,	etc.):	Terrac	е	Local relief (cor	ncave, convex,	none):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):	-	LRR-F	?	Lat: 4	1.14064	Long:	-73.43601	Datum:	#N/A
Soil Map Unit Name:		Canto	on and Charlton soi	ls (62D)		NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the	site typical for th	is time of year?	(Yes / No)	NO	(if no	, explain in Rer	narks.)	
Are Vegetation Yes	,Soil No	or Hydrology	/ No signific	cantly disturbed?	Are "Norm	al Circum	stances" prese	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology	/ No natura	Ily problematic?	(If needed	, explain any ar	nswers in Rem	arks.)
SUMMARY OF FINE	INGS - At	tach site m	an showing s	sampling po	int locatio	ns. trai	nsects. imi	portant fe	atures, etc.
			ap 0			,			
Hydrophytic Vegetation Pre	esent? Y	'es	No <u>X</u>						
Hydric Soil Present?	Y	'es	No <u>X</u>	Is the Sam	pled Area				
Wetland Hydrology Presen	t? Y	'es	No <u>X</u>	within a W	etland?		Yes	No	X
				If yes, o	ptional Wetlan	d Site ID:			
Remarks:									
	This p	oint was determ	ined not to be withi	n a wetland due	to the lack of a	II three we	etland criteria.		
			The survey was co	ompleted during	a mild drought.				
	U	pland point for V	etlands 14 and 15	in a forested are	a. Evidence of	recent tre	e cutting.		
HYDROLOGY									
Wetland hydrology In	dicators:					Seco	ndary Indicator	s (minimum of	f two required)
Primary Indicators (mir	imum of one i	s required; chec	k all that apply)				Surface Soil C	Cracks (B6)	
Surface Water (/			Water-Stained	Leaves (B9)			Drainage Patt		
High Water Tabl	e (A2)		Aquatic Fauna	(B13)			Moss Trim Lir		
Saturation (A3)	, ,		Marl Deposits (Vater Table (C	2)
Water Marks (B	1)		Hydrogen Sulfic	•			Crayfish Burro	•	,
Sediment Depos	•			spheres on Livin	g Roots (C3)		=	sible on Aerial	Imagery (C9)
Drift Deposits (B				educed Iron (C4)	,			ressed Plants (
Algal Mat or Cru	•		_	duction in Tilled	Soils (C6)		Geomorphic F		. ,
Iron Deposits (B		-	Thin Muck Surf		000 (00)		Shallow Aquit		
Inundation Visible	•	agery (B7)	Other (Explain				-	ohic Relief (D4	.)
Sparsely Vegeta			Other (Explain)	iii (Cinano)			FAC-Neutral		,
oparody vogeta	tou conouvo c	7411400 (B0)					17to Hodia	(50)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches	s):					
Water Table Present?	Yes	No X	Depth (inches						
Saturation Present?	Yes	No X	Depth (inches	· ——	Wetland I	Hvdrology	/ Present?	Yes	No X
(includes capillary fringe)		110	Bopai (mono	<u> </u>	Wotana .	.yu.o.og	, , , , , , , , , , , , , , , , , , , ,		
Describe Recorded Data (s	stream gauge	monitoring well	aerial photos, prev	vious inspections) if available				
Dodding Noodiada Data (Aroum gaago,	morntoring won,	denai priotoc, prov	nodo inopoditorio), ii avallabic.				
Remarks:									
No positive indication of	of wetland hvd	rology was obse	ved.						
	,,,	3,							

				Dominance Test worksheet:		
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species		(4)
1. Acer rubrum	50	<u>Yes</u>	FAC	That Are OBL, FACW, or FAC:	4	(A)
2. Quercus bicolor	20	Yes	FACW	Tatal North and Developed		
3. Quercus palustris	20	Yes	FACU	Total Number of Dominant	•	(D)
4. <u>Liriodendron tulipifera</u>	<u>15</u>	No No	FACU	Species Across All Strata:	8	(B)
5. Carya ovata	10	<u>No</u>	FACU	Barrell (Barrier 10)		
6				Percent of Dominant Species	E00/	(A /D)
7	115 -	Total Cover		That Are OBL, FACW, or FAC:	50%	(A/B)
	=	Total Cover		Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 f	• \			Total % Cover of:	Multiply	hv:
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15_f</u> 1. <i>Berberis thunbergii</i>	<u>ı. </u>	Yes	FACU	OBL species 0		Dy. D
2. Euonymus alatus*	15	Yes	UPL	FACW species 40	-	80
3. Acer rubrum	10	No	FAC	FAC species 70	-	10
4. Rosa multiflora	10	No	FACU	FACU species 70	-	80
5		140	17100	UPL species 20	-	00
6.				Column Totals: 200		70 (B)
7				200	(,,)	(5)
	65 =	Total Cover		Prevalence Index = B/A =	3.35	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicator	rs:	
1. Solidago rugosa	10	Yes	FAC	1 - Rapid Test for Hydroph		
2. Alliaria petiolata	5	Yes	FACU	2 - Dominance Test is >50	-	
3. Celastrus orbiculatus	5	Yes	UPL	3 - Prevalence Index is ≤ 3		
4.				4 - Morphological Adaptati	ions ¹ (Provide su	pporting
5.				data in Remarks or on		
6.				Problematic Hydrophytic \		•
7.						,
8.				¹ Indicators of hydric soil and wetla	and hydrology mi	ıst
9.				be present, unless disturbed or pro		
0.				Definitions of Five Vegetation St		
1.				Tree - Woody plants 3 in. (7.6 cm)		eter
2.				at breast height (DBH) regardless		
	20 =	Total Cover				
				Sapling/Shrub - Woody plants Ises	s than 3 in. DBH	
Woody Vine Stratum [Plot size: 30 ft.)				and greater than or equal to 3.28 ft	(1 m) tall.	
1. None Observed						
2.				Herb - All herbaceous (non-woody)) plants, regardle	SS
3.				of size, and woody plants less than	3.28 ft tall.	
4						
	0 =	Total Cover		Woody vine - All woody vines grea	iter than 3.28 ft ir	n height.
		Total Cover				
				Hydrophytic		
				Hydrophytic Vegetation		
				Vegetation	No X	

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Evidence of recent tree cutting.

Sampling Point: Upl 14 & 15

SOIL Sampling Point: Upl 14 & 15

	Depth	Matrix		th needed to docu		Features			
Company Comp	inches)		%	Color (moist)			Loc ²	Texture	Remarks
Silt Loam		10YR 2/2							Roots
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils Hydric Soils Hydric Soil Present? Yes No X Remarks: No positive indication of hydric soils was observed.									
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R,									Nooto
Notice Soils Indicators: Indicators for Problematic Hydric Soils	1 -0	10111 2/1	100					Olit Loam	
Notice Soils Indicators: Indicators for Problematic Hydric Soils									
Histosol (A1)									-
ydric Soils Indicators: Histosol (A1)									
Notice Soils Indicators: Indicators for Problematic Hydric Soils									
Notice Soils Indicators: Indicators for Problematic Hydric Soils									-
ydric Soils Indicators: Histosol (A1)									
Histosol (A1)									
Histosol (A1)	Гуре: С=С	oncentration, D=De	pletion, RM	=Reduced Matrix, M	S=Masked	d Sand Grains.	² Location: PL	=Pore Lining, M=N	Matrix.
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Surface (S7) Stripped Matrix (S4) Sandy Redox (S5) Surface (S7) Stripped Matrix (S6) Dark									
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Surface (S7) Stripped Matrix (S4) Sandy Redox (S5) Surface (S7) Stripped Matrix (S6) Dark	Histoso	I (A1)		Polyvali	ue Below S	Surface (S8) (LI	RR R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145, 145, 145, 145, 145							,	·	
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Sandy Gleyed Matrix (S4) Sandy Redox Dark Surface (F7) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Additional or problematic. Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Additional or problematic. Stripped Matrix (S6) Depth (inches): Type: Book Depth (inches): No positive indication of hydric soils was observed.						•	MI DA 1/0B)		
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145, 145, 145, 145, 145		, ,							
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Addicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Rock Depth (inches): 6 No positive indication of hydric soils was observed.					-		r., L <i>)</i>	·	
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, I Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145, 145, 145, 145, 145					-				
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145, 145, 145, 145, 145			ace (A11)			•		·	
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1 Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Rock Depth (inches): 6 Hydric Soil Present? Yes No X No positive indication of hydric soils was observed.	Thick D	ark Surface (A12)		Redox I	Dark Surfa	ice (F6)			= : : : : :
Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remarks)	Sandy I	Mucky Mineral (S1)		Deplete	d Dark Su	ırface (F7)		Piedm	ont Floodplain Soils (F19) (MLRA 1 4
Sandy Redox (S5) Red Parent Material (F12) Very Shallow Dark Surface (F22) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)	Sandy (Gleyed Matrix (S4)		Redox I	Depressio	ns (F8)		Mesic	Spodic (TA6) (MLRA 144A, 145, 14
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Itestrictive Layer (if observed): Type: Rock Depth (inches): 6 Hydric Soil Present? Yes No X Itemarks: No positive indication of hydric soils was observed.	Sandy F	Redox (S5)		<u> </u>				Red Pa	arent Material (F12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Itestrictive Layer (if observed): Type: Rock Depth (inches): 6 Hydric Soil Present? Yes No X Itemarks: No positive indication of hydric soils was observed.								Verv S	hallow Dark Surface (F22)
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Cestrictive Layer (if observed): Type: Rock		. ,	MLRA 149	B)					
No positive indication of hydric soils was observed.									
	lemarks:								
Refusal at 6° due to rock.				No pos		-		-	
					Refu	isal at 6" due to	rock.		

Project/Site:	Route	15/Route 7 Inte	erchange	County:	Fairfield		Sampling Date	te:	9/27/2016
Applicant/Owner:			CTDOT		State:	СТ	Sample P	oint:	Wet 15
Investigator(s):	KB	and	d RMH	Section, To	wnship, Range:			N/A	
Landform (hillslope, terra	ce, etc.):	De	epression	Local relief	(concave, convex,	none):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA	A):		LRR-R	 Lat:	41.14057	Long:	-73.43619	Datum:	N/A
Soil Map Unit Name:	,		Canton and Charlto	on soils (62D)			Classification:		N/A
Are climatic / hydrologic	conditions o	on the site typica	al for this time of yea	r? (Yes / No)	NO	(if no,	explain in Ren	narks.)	
Are Vegetation N	lo ,Soil	No ,or Hy	drology Yes s	ignificantly disturb	ed? Are "Norm	nal Circums	stances" preser	nt? Yes	X No
Are Vegetation N	lo ,Soil	No ,or Hy	drology No r	aturally problema	tic?	(If needed,	explain any an	swers in Rema	arks.)
CUMMARY OF FU		Attach ci	to man about	na complina	naint lacatio	no tro	saata imr	ortant for	
SUMMARY OF FI	NDINGS	- Allacii Si	te map snown	ng samping	point locatio	nis, li ai	isecis, iiiip	Jortani iea	itures, etc.
Hydrophytic Vegetation	Present?	Yes X	No						
Hydric Soil Present?		Yes X	No No	Is the S	Sampled Area				
Wetland Hydrology Pres	sent?	Yes X	No No	within	a Wetland?	,	Yes X	No	
				If v	on antional Watlan	d Cita ID:		Vetland 15	
Remarks:				l li ye	es, optional Wetlan	id Site ID.	v	velianu 15	
Remarks.		This point was	determined to be w	ithin a wetland du	e to the presence o	of all 3 wet	and criteria		
		Tillo politi waa			ring a mild drought		ana omona.		
	10/	lotland 5 is loca	ted adjacent to Rout	=	-		outfall (INIT 13)		
	VV	eliana 5 is ioca	ted adjacent to Noui	e 15 on-tamp, rec	cives nows nom a	urainage (outiali (IIVI-13).		
HADBOLOCA									
HYDROLOGY Wetland budgeless	Indicators								
Wetland hydrology						Seco	ndary Indicators	`	two required)
		one is required	l; check all that apply				Surface Soil C		
Surface Wate	` '			ained Leaves (B9)			Drainage Patte		
X High Water T				auna (B13)			Moss Trim Lin		
X Saturation (A	3)		Marl Depo	osits (B15)			Dry-Season W	ater Table (C2	2)
Water Marks	(B1)		Hydrogen	Sulfide Odor (C1)		Crayfish Burro	ws (C8)	
Sediment De	posits (B2)		Oxidized I	Rhizospheres on I	iving Roots (C3)		Saturation Vis	ible on Aerial I	magery (C9)
Drift Deposits	(B3)		Presence	of Reduced Iron (C4)		Stunted or Str	essed Plants (I	D1)
Algal Mat or 0	Crust (B4)		Recent Iro	on Reduction in Ti	lled Soils (C6)	X	Geomorphic F	osition (D2)	
Iron Deposits			Thin Mucl	k Surface (C7)	, ,		Shallow Aquita		
		rial Imagery (B7		plain in Remarks)			-	hic Relief (D4)	
		cave Surface (B	· —	,			FAC-Neutral T		
		(=	,					()	
Field Observations:									
Surface Water Present?	? Yes	No	X Depth (inches): N/A					
Water Table Present?	Yes	X No	Depth (i	· —	_				
Saturation Present?	Yes	X No	Depth (i		- Wetland	Hydrology	Present?	Yes X	No
(includes capillary fringe		<u> </u>	Depui (. <u> </u>	- Welland	r iyar ology	i resent.	103 <u>X</u>	
Describe Recorded Dat	•	augo monitorin	a well periol photos	provious inspect	ione) if available:				
Describe Necorded Dat	a (Stream g	auge, monitorin	ig weii, aeriai priotos	, previous irispect	ions), ii avallable.				
Remarks:									
Remarks.									
A positive indication	of wotland	hydrology was	observed (primary a	nd socondan/indi	catore wore presen	n+\			
A positive indication	or wettand	Trydrology was	observed (primary a	na secondary indi	cators were presen	π).			

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
ree Stratum (Plot size: 30 ft.)	% cover	Species?	Status	Number of Dominant Species	
1. Salix discolor	5	Yes	FACW	That Are OBL, FACW, or FAC: 5	(A)
2					
3				Total Number of Dominant	
4			<u> </u>	Species Across All Strata: 8	(B)
5			<u> </u>		
6				Percent of Dominant Species	
7				That Are OBL, FACW, or FAC: 63%	(A/B)
		Total Cover	·		
				Prevalence Index Worksheet:	
Sapling/Shrub Stratum (Plot size: 15	ft.)			Total % Cover of: Multiply by:	
1. Salix discolor	35	Yes	FACW	OBL species 19 x 1 = 19	
2. Rosa multiflora	10	Yes	FACU	FACW species 45 x 2 = 90	
3. Rubus phoenicolasius	5	No	FACU	FAC species 30 x 3 = 90	
4.				FACU species 35 x 4 = 140	
5.				UPL species 15 x 5 = 75	
6.				Column Totals: 144 (A) 414	(B)
7				(1) <u>111</u>	(D)
·	50 =	Total Cover		Prevalence Index = B/A = 2.88	
		Total Cover		1 revalence index - D/A - 2.00	
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:	
· · · · · · · · · · · · · · · · · · ·	15	Voo	OBL		
Persicaria sagittata Symphystriahum lateriflerum	<u>15</u> 15	Yes Yes		1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%	
Symphyotrichum lateriflorum		Yes Yes	<u>FAC</u>		
3. Solidago rugosa	10	Yes Yes	FAC	X 3 - Prevalence Index is ≤ 3.0¹	untin m
4. Reynoutria japonica	10	<u>Yes</u>	FACU	4 - Morphological Adaptations ¹ (Provide suppo	orung
5. Thelypteris palustris	3	No	<u>FACW</u>	data in Remarks or on a separate sheet)	
6. Toxicodendron radicans	3	No No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. Onoclea sensibilis	2	<u>No</u>	FACW		
8. Typha latifolia	2	No	OBL	¹ Indicators of hydric soil and wetland hydrology must	
9. Rumex crispus	2	No	FAC	be present, unless disturbed or problematic.	
10. Carex stipata	2	<u>No</u>	OBL	Definitions of Five Vegetation Strata:	
l1				Tree - Woody plants 3 in. (7.6 cm) or more in diameter	=
12				at breast height (DBH) regardless of height.	
	64 =	Total Cover			
				Sapling/Shrub - Woody plants Ises than 3 in. DBH	
Woody Vine Stratum Plot size: 30 ft.)			and greater than or equal to 3.28 ft (1 m) tall.	
1. Celastrus orbiculatus	15	Yes	UPL		
2. Vitis labrusca	10	Yes	FACU	Herb - All herbaceous (non-woody) plants, regardless	
3.				of size, and woody plants less than 3.28 ft tall.	
4.			·		
	25 =	Total Cover		Woody vine - All woody vines greater than 3.28 ft in he	eight.
				Hydrophytic	
				Vegetation	
				_	
				Present? Yes X No No	

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is \leq 3.00).

Sampling Point:

Wet 15

SOIL Sampling Point: Wet 15

	Matrix	o to the dep	om needed to doct		indicator or co Features	mirm the abse	nce of indicators.)	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100	COIOI (IIIOIOI)		. 100		Mucky Silt Loam	Romano
4-10		80	7 5VD 5/0	20				
	7.5YR 3/1		7.5YR 5/8	20		M	Silt Loam	
10-18+	10YR 4/1	<u>75</u>	5YR 4/6	25	C	M, PL	Gravelly Silt Loam	
	· · · · · · · · · · · · · · · · · · ·							<u> </u>
Type: C=C	oncentration, D=De	pletion. RM	I=Reduced Matrix. N	MS=Masked	d Sand Grains.	² Location: I	PL=Pore Lining, M=Matr	ix.
	s Indicators:	proteori, r tivi	. Troudoud Matin, I	no maonor				Problematic Hydric Soils ³ :
Histoso			Polyva	lue Relow 9	Surface (S8) (LF	PRR		(A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)			LRA 149B		iii ii,		rie Redox (A16) (LRR K, L, R)
					•	AL D.A. 440D)		
	Histic (A3)				e (S9) (LRR R, I	-		ty Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)			-	eral (F1) (LRR	N, L)		ice (S7) (LRR K, L)
	ed Layers (A5)			Gleyed Ma				Below Surface (S8) (LRR K, L)
	ed Below Dark Surfa	ace (A11)		ed Matrix (F	-			Surface (S9) (LRR K, L)
Thick D	Dark Surface (A12)		X Redox	Dark Surfa	ice (F6)			anese Masses (F12) (LRR K, L, R)
Sandy I	Mucky Mineral (S1)		Deplete	ed Dark Su	rface (F7)		Piedmont	Floodplain Soils (F19) (MLRA 149
Sandy (Gleyed Matrix (S4)		Redox	Depression	ns (F8)		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149B
Sandy I	Redox (S5)						Red Parer	t Material (F12)
Strippe	d Matrix (S6)							ow Dark Surface (F22)
	urface (S7) (LRR R,	. MLRA 149	9B)					lain in Remarks)
	, ,,		•				<u> </u>	,
Indicators o	of hydrophytic vegeta	ation and w	etland hydrology mu	ist be prese	ent. unless distu	rbed or problen	natic.	
	Layer (if observed)		onana nyarorogy me	DO p. 00.	o, aooo a.o.a	1200 0. p. 02.0		
		,.						
Type:								
	nches):					Hydric	Soil Present? Yes	X No
Depth (in	nches):					Hydric	: Soil Present? Yes	No
	nches):					Hydric	Soil Present? Yes	X No
Depth (in	nches):					Hydric	Soil Present? Yes	X No
Depth (in	nches):					Hydric	Soil Present? Yes	X No
Depth (in	nches):			sitive indica	tion of hydric so			X No
Depth (in	nches):			sitive indica	tion of hydric sc			X No
Depth (in	nches):			sitive indica	tion of hydric sc			X No
Depth (in	nches):			sitive indica	tion of hydric so			X No
Depth (in	iches):			sitive indica	ition of hydric so			X No
Depth (in	iches):			sitive indica	ition of hydric sc			X No
Depth (in	iches):			sitive indica	ition of hydric sc			X No
Depth (in	iches):			sitive indica	ition of hydric sc			X No
Depth (in	nches):			sitive indica	ition of hydric sc			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric sc			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	tion of hydric sc			X No
Depth (in	nches):			sitive indica	tion of hydric sc			X No
Depth (in	iches):			sitive indica	tion of hydric so			X No
Depth (in	iches):			sitive indica	tion of hydric so			X No
Depth (in	nches):			sitive indica	tion of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric sc			X No
Depth (in	nches):			sitive indica	ition of hydric sc			X No
Depth (in	nches):			sitive indica	ition of hydric sc			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No
Depth (in	nches):			sitive indica	ition of hydric so			X No

Project/Site:	Route 15/Ro	oute 7 Interchang	je Co	ounty:	Fairfield		Sampling Dat	e:	9/27/2016
Applicant/Owner:		CTI	OOT		State:	CT	Sample Po	oint:	SP-1
Investigator(s):	KB	and	RMH S	Section, Towns	hip, Range:			N/A	
Landform (hillslope, terrace,	, etc.):	Depressi	on L	ocal relief (cor	ncave, convex, n	one):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-R		_ Lat:4	1.14440	Long: _	-73.43244	Datum:	#N/A
Soil Map Unit Name:	Ridgebury, L	eicester, and Wh	nitman soil (3), and U	dorthents-Pits	complex (305)	NWI	Classification:		N/A
Are climatic / hydrologic cor	nditions on the	site typical for th	is time of year? (Yes / No)	NO	(if no,	explain in Rem	narks.)	
Are Vegetation No	,Soil No	or Hydrology	No significa	ntly disturbed?	Are "Normal	l Circums	stances" presen	nt? Yes	X No
Are Vegetation No	,Soil No	or Hydrology	No naturally	problematic?	(If	needed,	explain any an	swers in Rema	arks.)
CHMMADY OF FINE		took oito m	n showing so	malina na	int leastion	. 4.0.	acceto imm	ortant for	turas eta
SUMMARY OF FINE	JINGS - AL	tach site in	ap snowing sa	inpling po	int location	is, trai	isecis, iiiip	ortant lea	lures, etc.
Hydrophytic Vegetation Pro	esent? Y	es X	No						
Hydric Soil Present?	Y	es	No X	Is the Sam	pled Area				
Wetland Hydrology Preser	nt? Y	es X	No	within a W	-	,	Yes	No	X
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
Dl				if yes, o	ptional Wetland	Site ID:			
Remarks:		This point was d	etermined not to be	within a wotlan	d due to the lack	of bydri	c soils		
		This point was t				Corriyun	C SOIIS.		
			The survey was con		•				
Located between tran	smission ROV						016 investigatio	ns determined	that it lacked
		hydric	soils and therefore	should not be o	considered a wet	land.			
HYDROLOGY									
Wetland hydrology In	dicators:					Secor	ndary Indicators	(minimum of	two required)
Primary Indicators (mir	nimum of one i	s required; check	all that apply)				Surface Soil C	racks (B6)	
Surface Water (A	A1)	X	_ Water-Stained Le	eaves (B9)			Drainage Patte	erns (B10)	
High Water Tabl	e (A2)		_ Aquatic Fauna (B	13)			Moss Trim Line	es (B16)	
Saturation (A3)			Marl Deposits (B1	15)			Dry-Season W	ater Table (C2	2)
Water Marks (B	1)		Hydrogen Sulfide	Odor (C1)			Crayfish Burro	ws (C8)	
Sediment Depos	sits (B2)		 Oxidized Rhizosp 	heres on Livin	g Roots (C3)		Saturation Visi	ble on Aerial I	magery (C9)
Drift Deposits (B	33)		Presence of Redu	uced Iron (C4)			Stunted or Stre	essed Plants (I	D1)
Algal Mat or Cru	•	-	Recent Iron Redu		Soils (C6)		Geomorphic Po		,
Iron Deposits (B			Thin Muck Surfac		()		Shallow Aquita		
Inundation Visible	-	agery (B7)	Other (Explain in				Microtopograp		1
X Sparsely Vegeta			_ Calci (Explain iii	rtomanto)			FAC-Neutral T		
Operating vegeta	tou concavo c	Sandoc (Bo)					1710 Houlian	001 (20)	
Field Observations:									
Surface Water Present?	Yes	No X	Depth (inches):	N/A					
Water Table Present?	Yes	No X	Depth (inches):						
Saturation Present?	Yes	No X	Depth (inches):		Wetland Hy	vdrology	Procent?	Yes X	No
(includes capillary fringe)	165	NOX_	_ Deptil (iliches).	<u> </u>	welland n	yurology	/ Fresent:	Yes X	. 140
		manitaring wall	acrial phatas, prayis	us inspections) if available:				
Describe Recorded Data (stream gauge,	monitoring well,	aeriai priotos, previo	us inspections), ii avaliable.				
5									
Remarks:									
A			- d (i d						
A positive indication of	wetiand nydro	logy was observe	ed (primary and seco	indary indicato	rs were present).	•			

	Abaaluta	Dominant	Indicator	Dominance Test worksheet:
Troo Stratum (Diot size: 20 ft)	Absolute	Dominant Species?	Indicator	
Tree Stratum (Plot size: 30 ft.) 1. Acer rubrum	<u>% cover</u> 90	Species? Yes	Status FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
	90	<u>res</u>	FAC	That Are OBL, FACW, OF FAC (A)
2.				Total Number of Deminent
3				Total Number of Dominant
4			-	Species Across All Strata: (B)
5				
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 67% (A/B)
	<u>90</u> =	: Total Cover		Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft.				Total % Cover of: Multiply by:
1. Acer rubrum	5	Yes	FAC	OBL species
2				FACW species x 2 =0
3				FAC species <u>95</u> x 3 = <u>285</u>
4				FACU species 0 x 4 = 0
5				UPL species15 x 5 =75
6				Column Totals: (A) (B)
7				
	5=	Total Cover		Prevalence Index = B/A = 3.27
Herb Stratum (Plot size: 5 ft.)				Hydrophytic Vegetation Indicators:
1. None Observed				1 - Rapid Test for Hydrophytic Vegetation
2.				X 2 - Dominance Test is >50%
3.				3 - Prevalence Index is ≤ 3.0 ¹
4.				4 - Morphological Adaptations ¹ (Provide supporting
5.				data in Remarks or on a separate sheet)
6				Problematic Hydrophytic Vegetation ¹ (Explain)
7				
				¹ Indicators of hydric soil and wetland hydrology must
8 9				be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
10 11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH) regardless of height.
12	0 =	Total Caver		at breast neight (DBH) regardless of height.
	=	Total Cover		Sapling/Shrub - Woody plants Ises than 3 in. DBH
March March Charles (District				and greater than or equal to 3.28 ft (1 m) tall.
Woody Vine Stratum Plot size: 30 ft.)		.,		and greater than or equal to 5.20 ft (1 fil) tall.
1. Celastrus orbiculatus	15	Yes	<u>UPL</u>	Herb - All herbaceous (non-woody) plants, regardless
2.				of size, and woody plants less than 3.28 ft tall.
3				of size, and woody plants less than 6.20 it tall.
4	15 -	Total Cavar		Woody vine - All woody vines greater than 3.28 ft in height.
	15=	: Total Cover		g
				Hydrophytic
				Vegetation
				Present? Yes X No
				riesent: ies X NO
Remarks:				
Remarks.				
A positive indication of hydr	ophytic vegeta	ition was observe	ed (>50% of dom	ninant species indexed as OBL, FACW, or FAC).

Sampling Point: SP-1

SOIL Sampling Point: SP-1

rofile Description: (Des	atrix	opai nocaeu to doct		Features	alo absent		
epth Color (mo		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
		Color (moist)		Туре			Remarks
0-10 10YR 4	73 100			-		Silt Loam	
				-			
		 .			2		
ype: C=Concentration,	D=Depletion, R	M=Reduced Matrix, N	/IS=Maske	d Sand Grains.	Location: PL	=Pore Lining, M=Matr	ix. Problematic Hydric Soils ³ :
ydric Soils Indicators:		Dahasa	lus Dalauu	0	DD D		
Histosol (A1)				Surface (S8) (L l	KK K,		(A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)		М	LRA 149B)		Coast Prai	rie Redox (A16) (LRR K, L, R)
Black Histic (A3)		Thin D	ark Surface	e (S9) (LRR R,	MLRA 149B)	5 cm Muck	ty Peat or Peat (S3) (LRR K, L, F
Hydrogen Sulfide (A4)	Loamy	Mucky Mir	neral (F1) (LRR	K, L)	Dark Surfa	ice (S7) (LRR K, L)
Stratified Layers (A5)			Gleyed Ma				Below Surface (S8) (LRR K, L)
Depleted Below Dark			ed Matrix (I				Surface (S9) (LRR K, L)
	. ,			•			
Thick Dark Surface (•		Dark Surfa				anese Masses (F12) (LRR K, L, I
Sandy Mucky Minera	` '		ed Dark Su	` ,			Floodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix	(S4)	Redox	Depression	ns (F8)		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149
Sandy Redox (S5)						Red Paren	t Material (F12)
Stripped Matrix (S6)						Very Shall	ow Dark Surface (F22)
Dark Surface (S7) (L	RR R, MLRA 1	49B)				Other (Exp	lain in Remarks)
ndicators of hydrophytic estrictive Layer (if obserting Type: Rock Depth (inches):			201 20 pi 00	ent, unicos dist			No <u>X</u>
estrictive Layer (if obse Type: Rock	erved):			ent, unicos ulsa			No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):		act so proo	ent, unicoo unit			NoX
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):					oil Present? Yes _	NoX
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):		sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No <u>X</u>
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No <u>X</u>
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	NoX
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	NoX
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	NoX
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X
estrictive Layer (if obse Type: <u>Rock</u> Depth (inches):	erved):	No pos	sitive indica	ation of hydric s	Hydric S	Goil Present? Yes _	No X

Project/Site:	Route 15/Ro	oute 7 Interchan	ge (County:	Fairfield		Sampling Dat	te:	9/29/2016
Applicant/Owner:		СТ	DOT		State:	CT	Sample Po	oint:	SP-2
Investigator(s):	KB	and	RMH	Section, Towns	ship, Range:			N/A	
Landform (hillslope, terrace,	etc.):	Depress	sion	Local relief (co	ncave, convex, r	none):	None	Slope (%):	0-3
Subregion (LRR or MLRA):		LRR-I	₹	Lat: 4	1.13701	Long: _	-73.42939	Datum:	#N/A
Soil Map Unit Name:		Udorthe	ents-Urban land com	plex (306)		NWI	Classification:		N/A
Are climatic / hydrologic con	ditions on the	site typical for t	his time of year?	(Yes / No)	NO	(if no,	explain in Rem	narks.)	
Are Vegetation No	,Soil Yes	or Hydrolog	y <u>No</u> signific	antly disturbed?	? Are "Norma	al Circums	tances" preser	nt? Yes	X No
Are Vegetation No	,Soil_ No	or Hydrolog	y No natural	lly problematic?	(1	If needed,	explain any an	swers in Rema	arks.)
SUMMARY OF FIND	INGS - At	tach site m	an showing s	ampling pe	aint location	ne tran	seacte imr	ortant foa	ituras atc
SOMMAN OF THE	/IIIOO - AL	tacii site ii	iap snowing s	amping po	Jiii locatioi	iis, ti ai	isecis, iiiip	Jortani ica	itures, etc.
Hydrophytic Vegetation Pre	sent? Y	es	No <u>X</u>						
Hydric Soil Present?	Υ	es	No <u>X</u>	Is the Sam	pled Area				
Wetland Hydrology Presen	t? Y	es X	No	within a W	etland?	١	/es	No	X
				If ves	optional Wetland	Site ID			
Remarks:				, ii yoo, i	optional Wolland	Z ONO IB.			
	This point wa	s determined no	ot to be within a wetl	and due to the I	ack of hydrophy	tic vegeta	tion and hydric	soils.	
	•		The survey was co			Ü	,		
		The area recei	ves flows from sever		ū	tion is ver	v hiah		
			viously delineated as	•			,g		
		110	viously demindated at	o a wottana, no	ionger meete en	toria.			
HYDROLOGY									
Wetland hydrology Inc	dicators:					Casar	dam i Indiaatam	/minimum of	tue required)
		a required: chec	ok all that apply)			Secor			two required)
Primary Indicators (min		s required, cried		Logyon (PO)			Surface Soil C		
Surface Water (A	•	-	Water-Stained I Aquatic Fauna (, ,			Drainage Patte		
High Water Table	3 (A2)	-					Moss Trim Lin		2)
Saturation (A3)	`	-	Marl Deposits (I	•			Dry-Season W	-	-)
Water Marks (B1	•	_	Hydrogen Sulfic		na Doots (C2)		Crayfish Burro		magan, (CO)
Sediment Depos		_	Oxidized Rhizos	-			Saturation Vis		
X Drift Deposits (B:	•		Presence of Re				Stunted or Str		(ו'ט
Algal Mat or Crus			Recent Iron Rec		Soils (C6)	<u> X</u>	Geomorphic P		
Iron Deposits (B	•		Thin Muck Surfa				Shallow Aquita		
Inundation Visible			Other (Explain i	in Remarks)			Microtopograp		
Sparsely Vegeta	ed Concave S	Surface (B8)					FAC-Neutral T	est (D5)	
Field Observations:									
	Voo	No. Y	Donth (inches	s): N/A					
Surface Water Present?	Yes	NoX NoX	Depth (inches	<i></i>					
Water Table Present?	Yes		Depth (inches	-	Wetler d U		Dracent2	V V	Na
Saturation Present? (includes capillary fringe)	Yes	NoX	Depth (inches	s): <u>>10</u>	Wetland H	iyarology	Present?	Yes X	No
					N 16 11-1-1				
Describe Recorded Data (s	tream gauge,	monitoring well	, aeriai photos, prev	ious inspections	s), if available:				
Remarks:									
A positive indication of	wetland hydro	logy was obser	ved (at least one prir	mary indicator).					

	Absolute Deminant	Indicator	Dominance Test worksheet:		
ree Stratum (Plot size: 30 ft.)	Absolute Dominant	Indicator	Number of Dominant Species		
1. Populus grandidentata	% cover Species? 25 Yes	Status FACU	That Are OBL, FACW, or FAC: 0 (A)		
Catalpa speciosa	20 Yes	FACU	That Are OBL, I ACW, OI I AC.		
	20 168	1 ACC	Total Number of Dominant		
3			Species Across All Strata: 6 (B)		
4			Species Across Air Strata.		
5			Descript of Dominant Charles		
6			Percent of Dominant Species That Are ORL FACW or FAC: (A/R)		
7	45 - Total Cover		That Are OBL, FACW, or FAC: (A/B)		
	45= Total Cover		Prevalence Index Worksheet:		
Sapling/Shrub Stratum (Plot size: 15 f	* \		Total % Cover of: Multiply by:		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15_f</u> 1. Rosa multiflora	<u>ı.)</u> 30 Yes	FACU	OBL species 3 x 1 = 3		
		1 700	FACW species 0 x 2 = 0		
2			FAC species 0 x 3 = 0		
3					
4			FACU species 120 x 4 = 480		
5			UPL species 50 x 5 = 250		
6			Column Totals:(A)(B)		
7	30 = Total Cover		Prevalence Index = B/A = 4.24		
Herb Stratum (Plot size: 5 ft.)			Hydrophytic Vegetation Indicators:		
1. Artemisia vulgaris	40 Yes	UPL	1 - Rapid Test for Hydrophytic Vegetation		
	40 Yes	FACU	2 - Dominance Test is >50%		
2. Solidago canadensis			3 - Prevalence Index is ≤ 3.0 ¹		
3. Rosa multiflora		FACU			
4. Typha angustifolia	3No	OBL_	4 - Morphological Adaptations ¹ (Provide supporting		
5		-	data in Remarks or on a separate sheet)		
6			Problematic Hydrophytic Vegetation ¹ (Explain)		
7					
8			¹Indicators of hydric soil and wetland hydrology must		
9			be present, unless disturbed or problematic.		
10			Definitions of Five Vegetation Strata:		
11			Tree - Woody plants 3 in. (7.6 cm) or more in diameter		
12			at breast height (DBH) regardless of height.		
	88 = Total Cover				
			Sapling/Shrub - Woody plants Ises than 3 in. DBH		
Woody Vine Stratum Plot size: 30 ft.)			and greater than or equal to 3.28 ft (1 m) tall.		
Celastrus orbiculatus	10Yes	UPL			
2			Herb - All herbaceous (non-woody) plants, regardless		
3			of size, and woody plants less than 3.28 ft tall.		
4					
	= Total Cover		Woody vine - All woody vines greater than 3.28 ft in height.		
			Hydrophytic		
			Vegetation		
			Present? Yes No X		
Remarks:					
No positive indication o	f hydrophytic vegetation was ol	bserved (≥50% of	dominant species indexed as FAC- or drier).		
•	, , , , <u>,</u>	,	,		

Sampling Point: SP-2

SOIL Sampling Point: SP-2

			Redox F			nce of indicators.)	
Depth Matrix Color (moist)	0/_	Color (maist)			Loc ²	Tevturo	Romarko
inches) Color (moist)		Color (moist)	<u> </u>	Type ¹	LOC	<u>Texture</u>	Remarks
0-3 10YR 2/1	100					Mucky Silt Loam	
3-10 10YR 3/2	100					Loam	
						<u> </u>	
							_
Type: C=Concentration, D=De	epletion, RM=R	educed Matrix, M	S=Masked	Sand Grains.	² Location: F	PL=Pore Lining, M=Matri	X.
lydric Soils Indicators:		,					Problematic Hydric Soils ³ :
Histosol (A1)		Polyvali	a Ralow S	Surface (S8) (LF	D D		(A10) (LRR K, L, MLRA 149B)
					an n,		
Histic Epipedon (A2)			RA 149B)				rie Redox (A16) (LRR K, L, R)
Black Histic (A3)		Thin Da	rk Surface	(S9) (LRR R, I	/ILRA 149B)	5 cm Muck	ty Peat or Peat (S3) (LRR K, L, R
Hydrogen Sulfide (A4)		Loamy I	Aucky Mine	eral (F1) (LRR	K, L)	Dark Surfa	ce (S7) (LRR K, L)
Stratified Layers (A5)		Loamy (Sleyed Mat	trix (F2)		Polyvalue	Below Surface (S8) (LRR K, L)
Depleted Below Dark Surf	ace (A11)		d Matrix (F				Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	400 (7111)		ark Surfac	•			anese Masses (F12) (LRR K, L, F
				. ,			
Sandy Mucky Mineral (S1)		Deplete	d Dark Sur	face (F7)			Floodplain Soils (F19) (MLRA 14
Sandy Gleyed Matrix (S4)		Redox [epression	ıs (F8)		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149
Sandy Redox (S5)						Red Paren	t Material (F12)
Stripped Matrix (S6)							ow Dark Surface (F22)
Dark Surface (S7) (LRR R	MI RA 149R)						lain in Remarks)
Depth (inches):	10				riyuric	Soil Present? Yes _	NoX
Remarks:			tive indicat	tion of hydric sc	ila waa ahaan a		
		No posi			ils was observe	ed.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rockys	ubstrate, refusa		d.	
		No posi	Rockys	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	
		No posi	Rocky s	ubstrate, refusa		d.	

APPENDIX E: Resource Mapping

APPENDIX F: Resource ID

Estuarine and Marine Wetland

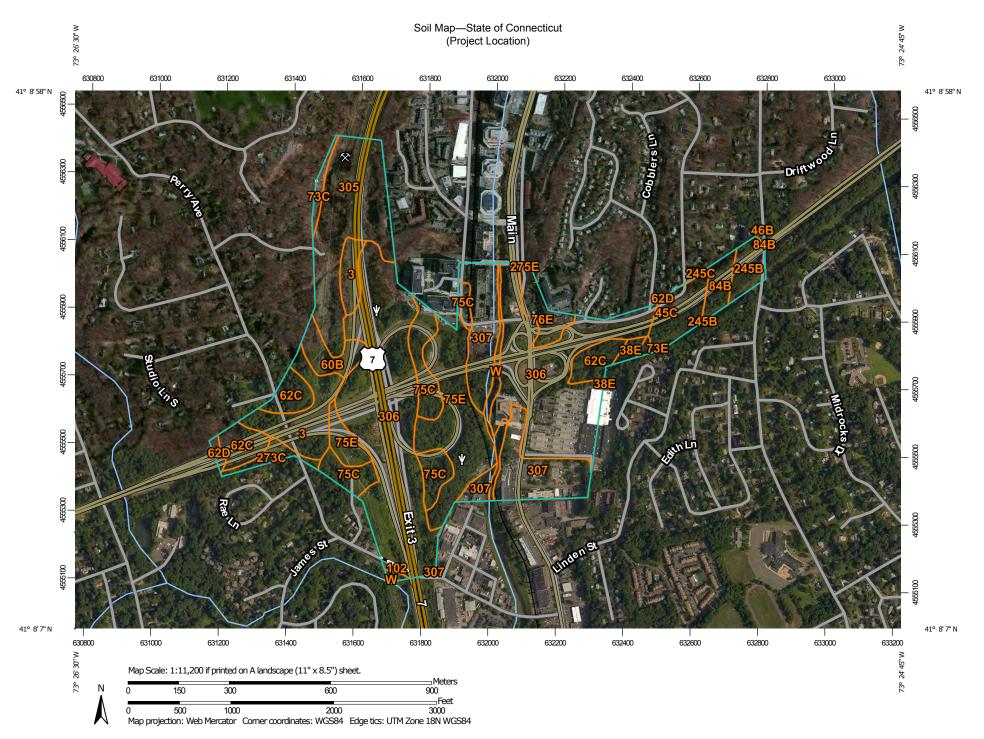
Freshwater Emergent Wetland

Lake

Route 7 and 15 Interchange



Wetlands Mapper web site. Freshwater Pond Riverine



MAP LEGEND

â

0

Δ

Water Features

Transportation

Background

Spoil Area

Stony Spot

Wet Spot

Other

Rails

US Routes

Major Roads

Local Roads

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

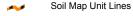
Aerial Photography

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

... Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut Survey Area Data: Version 15, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Aug 27, 2014

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

Soil Map—State of Connecticut Project Location

Map Unit Legend

State of Connecticut (CT600)					
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	12.0	6.1%		
38E	Hinckley loamy sand, 15 to 45 percent slopes	0.9	0.5%		
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	5.8	3.0%		
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	0.1	0.1%		
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	4.0	2.1%		
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	9.9	5.0%		
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	0.6	0.3%		
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	1.2	0.6%		
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	0.3	0.2%		
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	12.0	6.1%		
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	20.7	10.5%		
76E	Rock outcrop-Hollis complex, 3 to 45 percent slopes	4.1	2.1%		
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	2.9	1.5%		
102	Pootatuck fine sandy loam	0.3	0.2%		
245B	Woodbridge-Urban land complex, 0 to 8 percent slopes	3.4	1.7%		
245C	Woodbridge-Urban land complex, 8 to 15 percent slopes	0.1	0.0%		

Soil Map—State of Connecticut Project Location

State of Connecticut (CT600)					
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
273C	Urban land-Charlton-Chatfield complex, rocky, 3 to 15 percent slopes	2.0	1.0%		
275E	Urban land-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	0.1	0.1%		
305	Udorthents-Pits complex, gravelly	21.3	10.8%		
306	Udorthents-Urban land complex	70.9	36.1%		
307	Urban land	20.7	10.6%		
W	Water	2.8	1.4%		
Totals for Area of Interest	'	196.1	100.0%		

Natural Diversity Data Base Areas

NORWALK, CT

December 2016



State and Federal Listed Species & Significant Natural Communities



Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources. Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

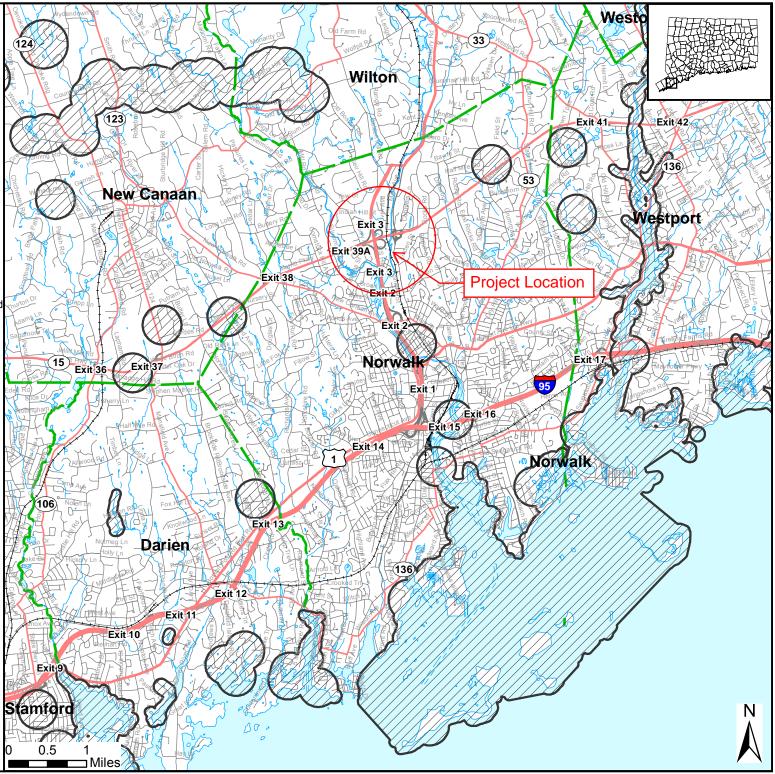
www.ct.gov/deep/nddbrequest

Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP) 79 Elm St., Hartford CT 06106 Phone (860) 424-3011



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



AQUIFER PROTECTION AREAS

Norwalk, CT October 6, 2016

Level A APA (Final Adopted)

Level A APA (Final)

Level B APA (Preliminary)

Town Boundary

NOTE: The Aquifer Protection Areas were delineated through Connecitcut's Level A and Level B Mapping Processes. Aquifer Protection Areas are delineated for active public water supply wells in stratified drift that serve more than 1000 people, in accordance with Sections 22a-354c and 22a-354z of the Connecticut General Statutes. Level B Mapping delineates a preliminary aquifer protection area, providing an estimate of the land area from which the well draws its water. Level A Mapping delineates the final Aquifer Protection Area, which becomes the regulatory boundary for land use controls designed to protect the well from contamination. As Level A Mapping is completed for each well field and approved by DEEP, it replaces the Level B Mapping. Final Adopted Level A Areas are those where towns have land use regulations for them.

Masschusetts and Rhode Island Wellhead Protection Areas may be shown for informational purposes.

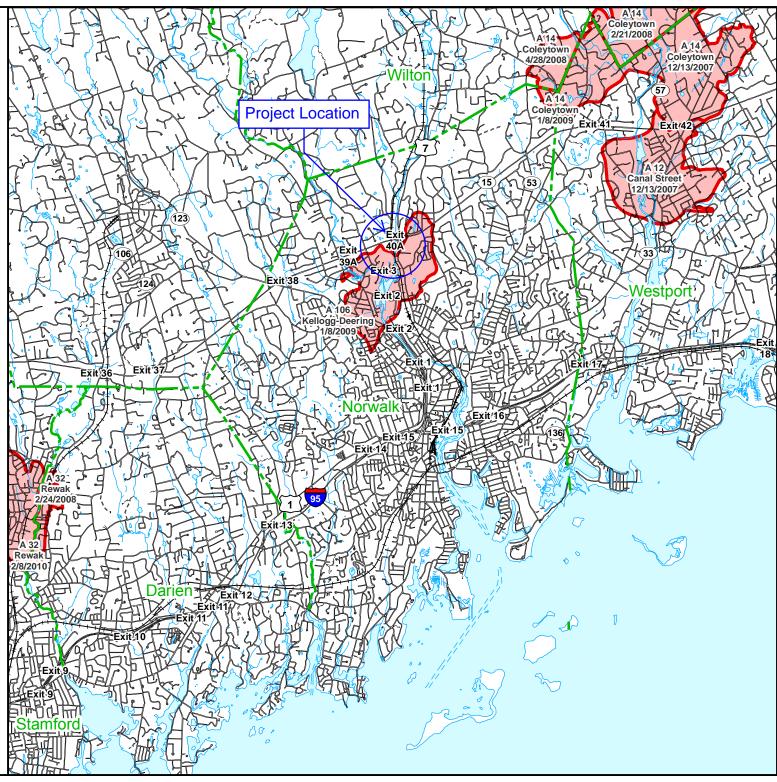
QUESTIONS:

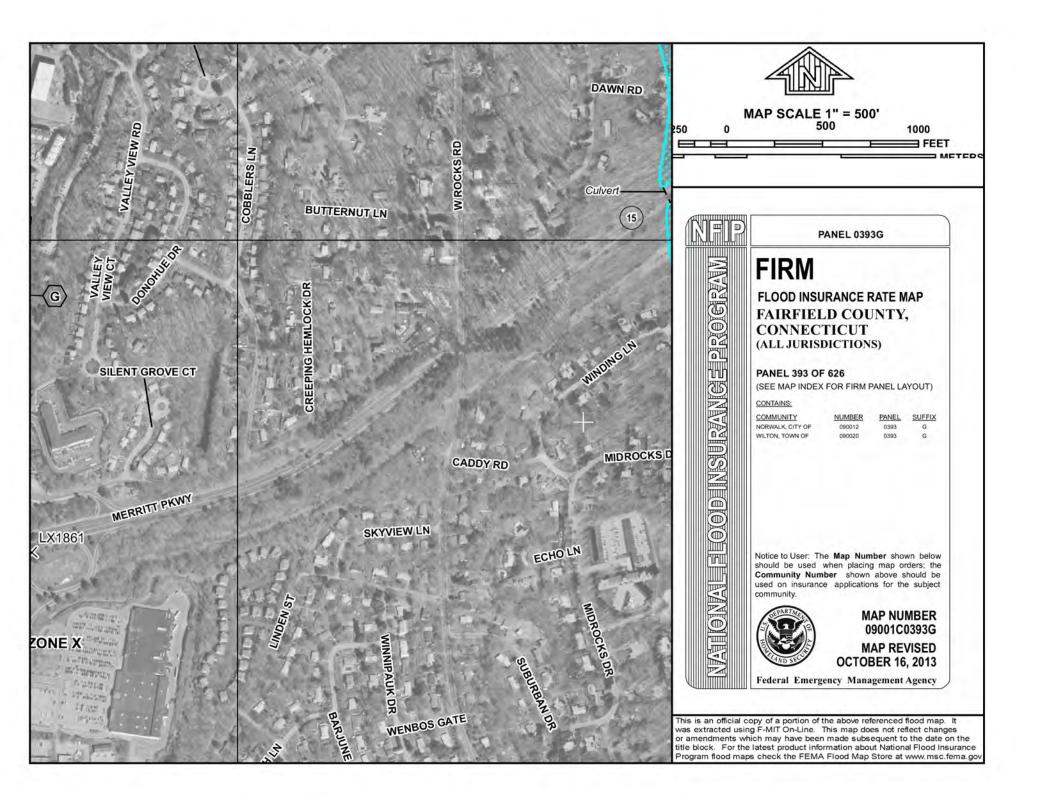
Bureau of Water Protection and Land Reuse Planning and Standards Division Phone: (860) 424-3020

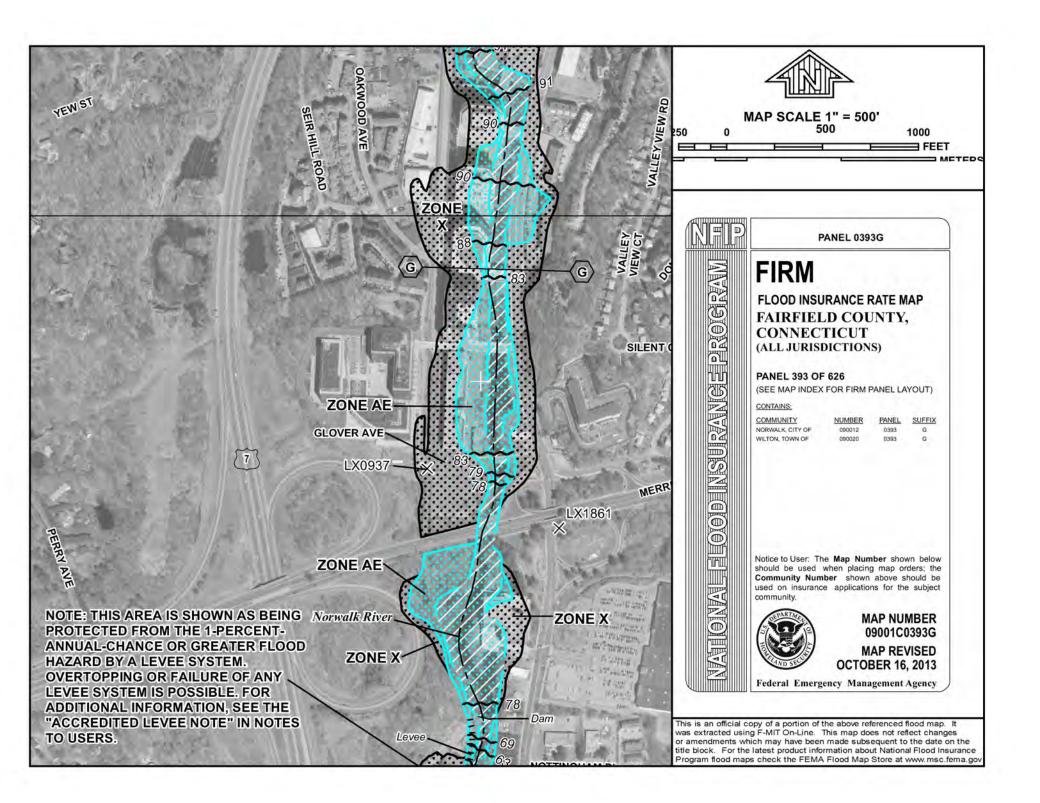
www.ct.gov/deep/aquiferprotection

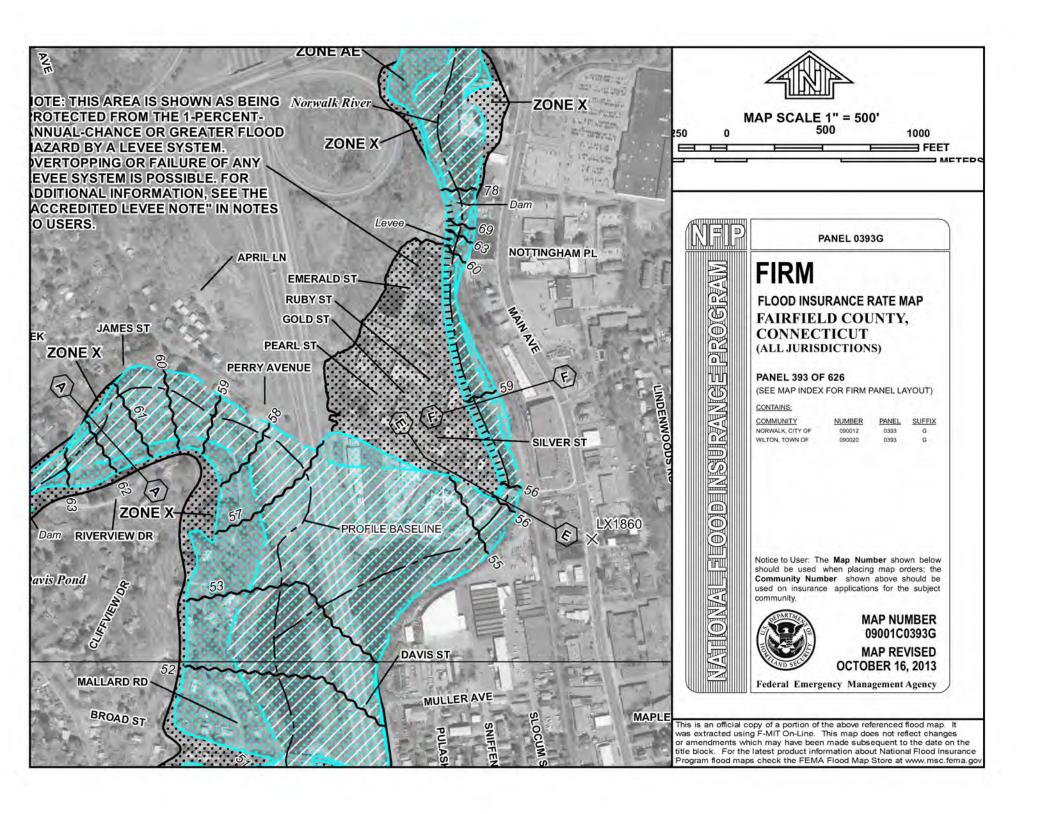


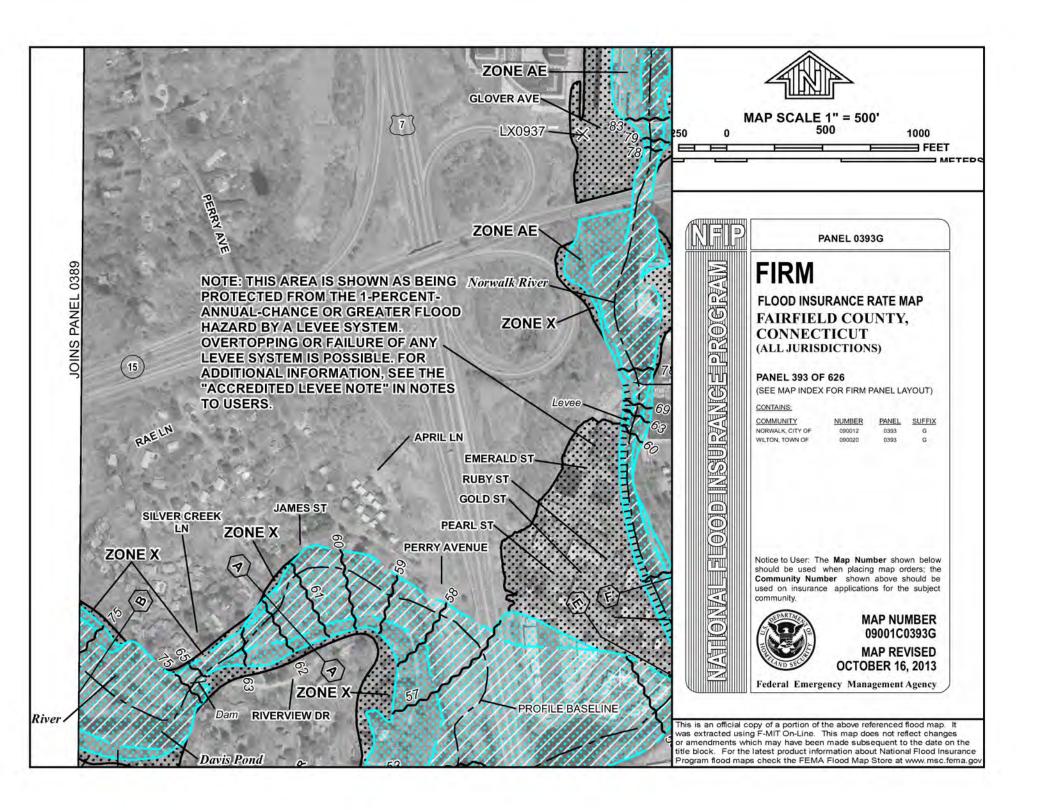












Appendix F: Resource ID

Wetl	ands	Watercourses		
Report ID	Field ID	Report ID	Field ID	
Wet 1 (PEM/PSS)	Wet 9	INT 1	INT 9	
Wet 2 (PEM)	Wet 11	INT 2	INT 11	
Wet 3 (PSS)	Wet 10	INT 3	INT 12	
Wet 4 (PFO)	Wet 12	INT 4	INT13	
Wet 5 (PEM)	Wet 7	INT 5	INT 1	
Wet 6 (PSS)	Wet 13	INT 6	INT 6	
Wet 7 (PSS)	Wet 15	INT 7	INT 7	
Wet 8 (PFO)	Wet 14	INT 8	INT 3	
Wet 9 (PEM, PFO)	Wet 6	INT 9	INT 4	
Wet 10 (PEM, PSS)	Wet 2	INT 10	INT 2	
Wet 11 (PAB, PFO)	Wet 3	PER 1	INT 5	
Wet 12 (PEM)	Wet 1	PER1	INT 8	
Wet 13 (PEM, PFO)	Wet 8	Pond 1	Pond 1	
Wet 14 (PFO)	Wet 4	RIVER	RIVER	
Wet 15 (PSS)	Wet 5			



Routes 7/15 Interchange Norwalk, Connecticut State Project No. 102-358

Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation

Appendix G2 2019 Wetland Delineation Update

August 2022

Prepared for: Connecticut Department of Transportation Federal Highway Administration



Memo

To: John Eberle, Project Manager From: Rodney Kelshaw, Wetland and Soil

Scientist

New Haven, CT Office Topsham, ME Office

File: 192310508 Date: October 28, 2019

Reference: Updated Wetland, Watercourse, and Potential Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

The Connecticut Department of Transportation proposes modifications to the Routes 7/15 interchange in Norwalk, Connecticut (project). In September 2016, BL Companies (BL) conducted an on-site wetland and watercourse delineation of the proposed project area. In 2019, the project area was expanded (project area extension) to include areas beyond those that were initially delineated in 2016 (Attachment A, Figure 1). Stantec Consulting Services Inc. (Stantec) conducted an on-site wetland, watercourse, and potential vernal pool delineation within the project area extension along Route 7, north of the previously delineated area. This memo summarizes the results of the 2019 Stantec delineation.

METHODOLOGY

The revised project area was expanded to the north and south along Route 7 compared with the initial project area that was delineated in 2016. The original project area was centered primarily on the interchange ramps at Route 7 and Route 15, as well as Main Avenue. The project area extension includes an approximate 0.7-mile section extending to the south of the previous project area along Route 7 as well as an approximately 0.26-mile section that extends north along Route 7 beyond the previous project area limits (Attachment A, Figure 1). The expanded project area to the south is restricted to the existing Route 7 roadway and does not intersect undeveloped areas. Further, the proposed project activities within the project area extension to the south are anticipated to be limited to roadway work, such as line painting and signage, and no expansion of the roadway footprint itself. Since the additional section of the project area to the south is restricted to the existing Route 7 paved roadway, there is no potential for direct impacts on wetlands, watercourses, or vernal pools and there will be no work that could cause indirect impacts associated with erosion or sedimentation. Therefore, no additional field surveys were conducted in the southern portion of the project area extension. Proposed work within the project area extension to the north may include minor road widening along Route 7 in areas with the potential for wetlands, watercourses, and vernal pools to occur; therefore, this memo includes the methodology and results of delineating wetlands, watercourses, and potential vernal pools in the northern portion of the project area extension.

Rodney Kelshaw, a Certified Professional Soil Scientist and Professional Wetland Scientist at Stantec conducted a wetland, watercourse, and potential vernal pool survey in the northern portion of the project area extension. The northern portion of the project area extension is approximately 15 acres in size and extends along both sides of Route 7, starting at the northern end of the 2016 wetland delineation limits

¹ BL Companies. 2016. Wetland Report Route 7 and 15 Interchange, Norwalk, CT. CDOT Project 102-358. June 2017

Reference:

Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk. Connecticut

(Attachment A, Figure 1) and extending 1,500 feet to the north and to a width of approximately 450 feet in total width (including Route 7).

Wetland boundaries under the jurisdiction of the US Army Corps of Engineers (Corps) were determined using the technical criteria presented in the *Corps of Engineers Wetlands Delineation Manual*² and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).*³ Inland wetland boundaries under the jurisdiction of the Connecticut Department of Environmental Protection (DEEP) were determined based upon the definition provided in the Connecticut General Statutes (CGS) Section 22a-38. Based on the definition of tidal wetlands provided in the Connecticut Tidal Wetlands Act⁴, tidal wetland areas under the jurisdiction of DEEP were not observed on-site. Data were collected on dominant vegetation, evidence of hydrology, hydric soil criteria, and soil drainage classification. Wetland characteristics observed and reported in this memo also include wetland functions and values, as detailed in Corps Highway Methodology⁵.

Watercourse boundaries were determined based on the definition provided in CGS Section 22a-18 and guidance available from the Corps regarding identification of an Ordinary High Water Mark (Regulatory Guidance Letter No. 05-05, December 7, 2005).

The wetland delineation was performed outside the spring amphibian breeding season so a formal vernal pool survey could not be performed. However, the presence of potential vernal pools was reviewed based on the following definition of vernal pools provided in the Corps Connecticut General Permit⁶:

Vernal pools (VPs): For the purposes of General Permits, VPs are depressional wetland basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In most years, VPs support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish. VP areas are:

- Depression (includes the VP depression up to the spring or fall high water mark, and includes any vegetation growing within the depression),
- Envelope (area within 0-100 feet of the VP depression's edge), and
- Critical terrestrial habitat (area within 100-750 feet of the VP depression's edge).

² Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. January 1987.

³ US Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. ERDC/EL TR-12, Vicksburg, MS: US Army Corps of Engineers, Engineer Research and Development Center. January 2012.

⁴ Connecticut Tidal Wetlands Act, Sections 22a-30-1 through 22a-30-17, defines Tidal Wetlands as those areas at or below 1 foot above extreme high water and upon which certain species of vegetation are capable of growing.

⁵ US Army Corps of Engineers New England District. 1999. The Highway Methodology Workbook Supplement. September 1999.

⁶ Department of the Army General Permits for the State of Connecticut & Lands Located within the Boundaries of an Indian Reservation. 2016.

Reference:

Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

The envelope and critical terrestrial habitat protect the water quality of the breeding site (e.g., providing shade, leaf litter, and coarse woody material) and support the non-larval life-cycle stages of amphibian species. Note: The Corps may determine that a waterbody should not be designated as a VP based on available evidence.

Wetland boundaries and watercourse centerlines were demarcated with prelabeled "Wetland Delineation" flagging. These flags were then labeled with an alphanumeric numbering system. Wetland and watercourse flags were located with a Trimble® mapping grade Global Positioning System (GPS) with a stated accuracy of within 1 meter. Representative photographs were taken as appropriate.

RESULTS

The following summarizes the results of the 2019 wetland and watercourse delineation. The locations of the delineated resources are provided on Figure 2 (Attachment A), summary tables are provided in Attachment B, Wetland Determination Data Forms are provided in Attachment C, and representative photographs are included in Attachment D.

Potential Vernal Pools

No potential vernal pools were observed within the project area extension.

Tidal Wetlands

No tidal wetlands were observed within the project area extension.

Federal Wetlands

Three federally jurisdictional wetlands were delineated within the 2019 project area extension (i.e., Wetlands 16, 17 and 18). Wetland numbering continues from the wetlands as enumerated during the September 2016 wetland delineation (Wetlands 1 through 15 were identified by BL). Further details of these delineated wetlands are provided in Table 1 (Attachment B). Previously delineated Wetland 9 partially extends into the project area extension.

Wetlands 16 and 17 emergent marsh/scrub shrub dominated wetlands are riparian to an intermittent stream (Int 11, discussed further below). The wetlands are separated by a culvert crossing under an existing access road in a maintained transmission line right-of-way. Due to the riparian nature of these wetlands, they exhibit primary functions for groundwater recharge/discharge, floodflow alteration, and sediment/shoreline stabilization. Since these wetlands are located downgradient of municipal roads and a golf course, they also exhibit primary indicators for sediment/toxicant/pathogen retention and nutrient removal/retention/transformation. Secondary indicators are the potential for fish and shellfish habitat and wildlife habitat. Wetland Determination Data Forms completed for these wetlands are included in Attachment C.

Wetland 18 is located in the Route 7 roadside ditch, with a significant source of hydrology contributed from a stormwater culvert outlet that drains to the wetland from the west. This wetland exhibits primary functions for groundwater recharge/discharge, sediment/toxicant/pathogen retention, and nutrient removal/retention/transformation. The functionality of this wetland is diminished for other typical functions

Page 4 of 4

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange,

Norwalk, Connecticut

and values because of its small size, location in a ditch proximate to Route 7, and source of hydrology being stormwater; therefore, a Wetland Determination Data Form was not completed for this wetland.

Inland Wetlands

The three federally jurisdictional delineated wetlands also qualify as wetlands subject to jurisdiction under the state Inland Wetlands and Watercourses Act based on their soil drainage classification. The boundaries of the Inland Wetlands are coincident with the federal wetland boundary. Further details are provided in Table 1 (Attachment B).

Watercourses

Two watercourses were observed within and extending beyond the project area extension: one intermittent (Int 11) and one perennial (Per 2). Stream numbering continues from the streams as enumerated during the September 2016 wetland delineation (intermittent streams 1 through 10 and perennial stream 1 were identified by BL). The locations of the delineated watercourses are illustrated on Figure 2 (Attachment A) and further details of the watercourse characteristics are provided in Table 2 (Attachment B).

Invasive Plant Species

During the delineation, invasive plant species observations were also documented within wetlands and uplands. In general, this site appeared to contain many species observed in similarly disturbed landscapes across Connecticut.

Purple loosestrife (*Lythrum salicaria*) was observed in Wetlands 16, 17 and 18. Common reed (*Phragmites australis*) was present as a dominant plant in sections of in Wetlands 16 and 17. Oriental bittersweet (*Celastrus orbiculatus*) was ubiquitous in many uplands and was observed growing into wetlands. Other upland invasive plant species observed were Russian olive (*Elaeagnus angustifolia*), rugosa rose (*rosa rugosa*), burning bush/winged euonymus (*Euonymos alatus*), and Japanese barberry (*Berberis thunbergii*).

Stantec Consulting Services Inc.

Rodney Kelshaw CPSS, PWS, CWB, CPESC, CSS, LSE

Project Scientist/Project Manager

Phone: 207 406 5485 Fax: 207 729 2715

rodney.kelshaw@stantec.com

Attachments: Attachment A – Figures

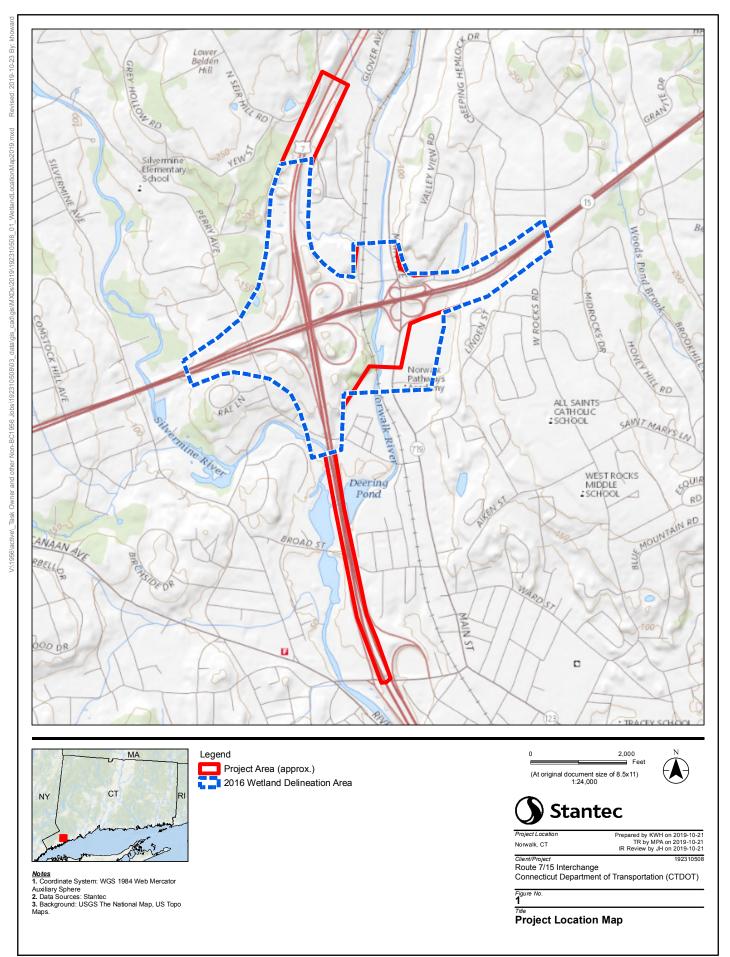
Attachment B – Tables

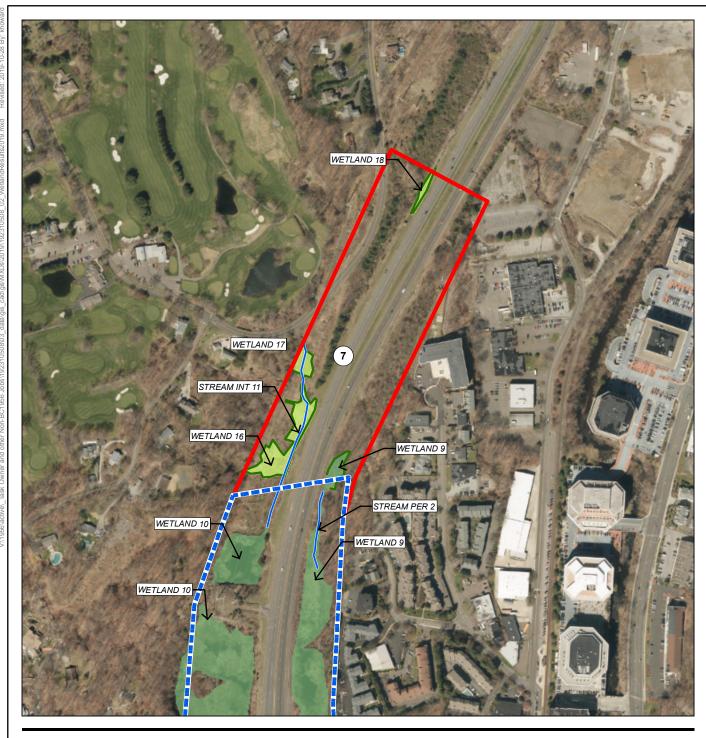
Attachment C – Wetland Determination Data Forms Attachment D – Representative Photographs October 28, 2019

Attachment A – Figures

Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut Reference:

ATTACHMENT A - FIGURES







Notes
1. Coordinate System: NAD 1983 StatePlane
Connecticut FIPS 0600 Feet
2. Data Sources: Stantec, BL Companies
3. Background: ESRI World Imagery, Web Mapping
Service.

Legend

2019 Project Area Extension (approx.) 2016 Wetland Delineation Area

Field Delineated Stream

(Stantec, 2019)

Field Delineated Wetland Boundary (Stantec, 2019)

Field Delineated Wetland (Stantec, 2019)

Previously Delineated Wetland (BL Companies, 2016)



(At original document size of 8.5x11) 1:4,800





Prepared by KWH on 2019-10-21 TR by MPA on 2019-10-21 IR Review by JH on 2019-10-21

Route 7/15 Interchange
Connecticut Department of Transportation (CTDOT)

Title 2019 Wetland and Watercourse **Delineation Map**

October 28, 2019 Attachment B - Tables

Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut Reference:

ATTACHMENT B - TABLES

Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut Reference:

Table 1. Summary of Delineated Wetlands

Wetland	Wetland		Jurisdiction					Soil Drainage &	A daliti annal O annan anta
Number	Classification ¹	Inland Wetland (DEEP)	Tidal Wetland (DEEP)	Federal Wetland (Corps)	Dominant and Characteristic Vegetation	Hydric Soil Criteria	Evidence of Hydrology	Classification	Additional Comments
Wetland 16	PEM/PSS	X		×	Herbs: common reed, spotted touch-menot, (Impatiens capensis), halberd-leaved tearthumb (Persicaria arifolia), spotted trumpetweed (Eutrochium maculatum), broad-leaf cat-tail (Typhya latifolia), lamp rush (Juncus effusus), multiple sedge species (Carex sp.), purple loosestrife (Lythrum salicaria). Shrubs: red osier (Cornus alba), smooth arrow-wood (Viburnum recognitum) Vines: fox grape (Vitis labrusca) and oriental bittersweet (Celastrus orbiculatus)	F3: Depleted Matrix	A3: Saturation (0") B8: Sparsely vegetated concave surface B9: Water-stained leaves B10: Drainage patterns D1: Stunted or stressed plants D2: Geomorphic position D4: Microtopographic relief D5: FAC-neutral test	Wetland: Ridgebury, poorly and very poorly drained observed Upland: Ridgebury, somewhat poorly drained	Wetland begins at two culverts; one outlet of Wetland 17 and the other open at project area boundary to the east. Located within maintained transmission line right-of-way and along Route 7 southbound lane at the edge of fill. Riparian to stream Int 11.
Wetland 17	PEM/PSS	X		X	Herbs: common reed, spotted touch-menot, sensitive fern (Onoclea sensibilis), rough-stemmed goldenrod (Solidago rugosa), eastern poison ivy (Toxicodendron radicans) Shrubs: Black willow (Salix nigra) Vines: fox grape and oriental bittersweet	A5: Stratified Layers	A1: Surface Water (1") A2: High Water Table (1") A3: Saturation (0") B2: Sediment Deposits B8: Sparsely vegetated concave surface B10: Drainage patterns D2: Geomorphic position	Wetland: Whitman, poorly and very poorly drained observed Upland: Hinckley, moderately well drained or better	Wetland open at the Project boundary to the northwest toward North Seir Hill Road. Located within maintained transmission line right-of-way and along Route 7 southbound lane at the edge of fill. Riparian to stream Int 11.
Wetland 18	PEM	×		×	Herbs: common reed, spotted touch-me- not, halberd-leaved tearthumb, lamp rush, rice cut grass (<i>Leersia oryzoides</i>), purple loosestrife, multiple sedge species	F3: Depleted Matrix	A2: High Water Table (0") A3: Saturation (0") B10: Drainage patterns D2: Geomorphic position D4: Microtopographic relief D5: FAC-neutral test	Wetland: Whitman, poorly drained	Wetland located between the base of a steep slope and Route 7 southbound lane edge of fill. Situated in maintained ditch, hydrology source large culvert; scoured channel of an apparent stormwater drainage.

¹Wetland classification follows Federal Geographic Data Committee (2013)

PEM = Palustrine (freshwater) Emergent Marsh

PSS = Scrub Shrub

October 28, 2019

Attachment B - Tables

Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut Reference:

Table 2. Summary of Delineated Streams

Stream Number	Flow Type	Bankfull Width (ft)	Ordinary High Water Mark Width (ft)	Bank Height (ft)	Water Depth During Delineation (in)	Dominant Substrate	Additional Comments
Int 11	Intermittent	2–4	2–4	1–3	2–4	Upstream end comprised of sand and cobble; downstream section flows within a rip-rap ditch along the Route 7 edge of fill.	Located in Wetlands 16 and 17; enters the site from the northeast within the maintained transmission line right-of-way, flows through a culvert in a transmission line access road, then along the Route 7 edge of fill to where it exits Wetland 16 and flows southerly within the rip-rap Route 7 ditch and into Wetland 10.
Per 2	Perennial	4–12	4–12	1–3	2–4	Rip-rap ditch along the Route 7 edge of fill; remaining areas comprised of muck, sand and stone.	Located in Wetland 9; flows from a culvert at Route 7 into Wetland 9, and southerly within the wetland, with the western bank located along the Route 7 edge of fill. The southern downstream end of the stream appears to dissipate into the wetland.

October 28, 2019

Attachment C – Wetland Determination Data Forms

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange,

Norwalk, Connecticut

ATTACHMENT C - WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-No	orwalk	City/C	ounty: Norwalk/Fair	field Sa	impling Date: _	10/8/2019	
Applicant/Owner: CTDOT				State: CT	Sampling Point	t: W-17 Upla	
Investigator(s): Rodney Kelshaw			on, Township, Range:				
Landform (hillslope, terrace,etc.): Side S	· · · · · · · · · · · · · · · · · · ·				Slope (%) 8 - 15	
Subregion (LRR or MLRA): LRR R	- · · · · · · · · · · · · · · · · · · ·				Datum: _	NAD83	
Soil Map Unit Name:			2 ′′ ′′	NWI Classifica			
Are climatic / hyrologic conditions on the		· · · · · · · · · · · · · · · · · · ·	ear? Yes <u> X </u>		olain in Remark	-	
Are Vegetation, Soil, or Hydr Are Vegetation, Soil, or Hydr		aturally problem		lain any answers in	_	X NO	
Are vegetation, 30ii, 0i Tiyui	ology	aturally problem	iatic: (ii ficcucu, exp	iani any answers in	itemarks.		
SUMMARY OF FINDINGS - Attach site	e map show	ing sampling p	oint locations, tran	sects, importan	ıt features, et	c.	
Hydrophytic Vegetation Present? Yes	s X No		Is the Sampled Area	1			
Hydric Soil Present? Yes	 S No	X	within a Wetland?	Yes	No 2	X	
Wetland Hydrology Present? Yes		<u> </u>	if yes, optional Wetl	and Site ID:			
·			, со, ориона тте				
Remarks: (Explain alternative procedures here or	iii a separate rep	port.)					
HYDROLOGY							
Wetland Hydrology Indicators:				Secondary Indicate	ors (minimum of	two required)	
Primary Indicators (minimum of one is requi		Surface Soil (Cracks (B6)				
Surface Water (A1)	Wa	ater-Stained Leave	Drainage Pat	terns (B10)			
High Water Table (A2)	Aq	uatic Fauna (B13)		Moss Trim Li	nes (B16)		
Saturation (A3)	Ma	arl Deposits (B15)		Dry-Season \	Water Table (C2)		
Water Marks (B1)	Ну	drogen Sulfide Odo	or (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2)	Ox	idized Rhizosphere	es on Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)			
Drift Deposits (B3)	Pre	esence of Reduced	Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Re	cent Iron Reductio	n in Tilled Soils (C6)	Geomorphic Position (D2)			
Iron Deposits (B5)	Thi	in Muck Surface (C	27)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (E	37) Oti	her (Explain in Rem	emarks) Microtopographic Relief (D4)				
Sparsley Vegetated Concave Surface (E	38)			FAC-Neutral	Test (D5)		
Surface Water Present? Yes No	X Depth	n (inches)					
Water Table Present? Yes No		n (inches)	— Wetland F	lydrology Present	·? Yes	No X	
		n (inches)		ryarology r reserve	. 103		
Saturation Present? Yes No	X Depth	- (inches)	_				
Describe Recorded Data (stream gauge,	monitoring w	vell, aerial photo	s, previous inspection	s), if available:			
Remarks:							

VEGETATION - Use scien	itific names of plai	nts			Sampling Point: Upland - Wetland 1		
Tue a Churchium	(Diet Cies 20 radio		Dominant		Dominance Test Worksheet:		
Tree Stratum	(Plot Size: 30'radiu	<u> </u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)		
			= Total Co	ver	Total Number of Dominant		
					Species Across All Strata: 4 (B)		
					Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)		
					Prevalence Index Worksheet:		
		Ahsolute	e Dominant	Indicator	OBL species 5 x 1 5		
Shrub Stratum	(Plot Size: 15'radiu			Status	FACW species 20 x 2 40		
					FAC species 45 x 3 135		
			= Total Co	ver	FACU species 75 x 4 300		
					UPL species 0 x 5 0		
					Column Totals 145 (A) 480 (B)		
					Prevalence Index = B/A = 3.31		
					Hydrophytic Vegetation Indicators:		
Herb Stratum	/Diot Sizo: 5'radius		Dominant		1- Rapid Test For Hydrophytic Vegetation		
	(Plot Size: 5'radius	_ <i>'</i>	•	Status	X 2- Dominance Test is > 50%		
Phalaris arundinacea Solidago rugosa			X X	FACW FAC	3- Prevalence Index is =< 3.0		
Lythrum salicaria		5		OBL	4- Morphological Adaptations		
Rubus allegheniensis		5		FACU	5- Problematic Hydrophytic Vegetation		
		45	= Total Co	ver			
					Definitions of Vegetation Strata:		
					Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.		
					Sapling/Shrub- Woody plants less than 3 in. DBH and		
					greater than or equal to 3.28ft (1m) tall.		
					Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.		
			e Dominant				
Woody Vine Stratum	(Plot Size: 30'radiu	S_) % Cover	Species?	Status	Woody Vines- All woody vines greater than 3.28ft in height.		
Vitis labrusca			X	FACU FAC			
Amphicarpaea bractea	ата	30 100	X = Total Co	FAC ver	Hydrophytic		
		100	Total co	vei	Vegetation Present? Yes X No		
					1 1		
Remarks: (Include photo no	umbers here or on a	separate she	et.)				

SOIL Sampling Point: Upland - Wetland 17 Depth Matrix **Redox Features** (inches Color % Color % Type Loc Texture Remarks 0-2 7.5YR 2.5/2 100 Sandy Loam 2-8 7.5YR 3/3 100 Fine Sandy Loam 10YR 3/3 100 Gravelly 8-16 Loamy Sand **Hydric Soil Indicators: Indicators for Problematic Soils:** Histosol (A1) Polyvalue Below Surface (B15) 2 cm Muck (A10) Histic Epipedon (A2) Thin Dark Surface (S9) Coast Prarie Redox (A16) 5 cm Mucky Peat or Peat (S3) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Dark Surface (S7) Loamy Gleyed Matric (F2) Stratified Layers (A5) Depleted Matrix (F3) Polyvalue Below Surface (S8) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thin Dark Surface (S9) Thick Dark Surface (A12) Depleted Dark Surface (F7) Iron-Manganese Masses (F12) Sandy Mucky Mineral (S1) Redox Depressions (F8) Piedmont Floodplain Soils (F19) Sandy Gleyed Matrix (S4) Mesic Spodic (TA6) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Hydric Soil Present? Yes No X Depth (inches): Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk	City/County: Norwalk/Fair	rfield Sampling Date: 10/8/2019				
Applicant/Owner: CTDOT		State: CT Sampling Point: W-17 Wetland				
Investigator(s): Rodney Kelshaw	Section, Township, Range:					
Landform (hillslope, terrace,etc.): Side Slope	Local relief (concave, convex,	none): <u>Linear</u> Slope (%) <u>3 - 8</u>				
Subregion (LRR or MLRA): LRR R	Lat: 41.149910 Long:	73.431500 Datum: NAD83				
Soil Map Unit Name:		NWI Classification: PEM				
Are climatic / hyrologic conditions on the site ty	ypical for this time of year? Yes X No	(if no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal	Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrology	naturally problematic? (if needed, exp	plain any answers in Remarks.)				
SUMMARY OF FINDINGS - Attach site map	showing sampling point locations, tran	nsects, important features, etc.				
Hydrophytic Vegetation Present? Yes X	No Is the Sampled Are	a				
Hydric Soil Present? Yes X	No within a Wetland?	Yes X No				
Wetland Hydrology Present? Yes X	No if yes, optional Wet	land Site ID: Wetland 15				
Remarks: (Explain alternative procedures here or in a sep	arate report.)					
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required: ch	eck all that anniv)	Surface Soil Cracks (B6)				
X Surface Water (A1)	Water-Stained Leaves (B9)	X Drainage Patterns (B10)				
						
X High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
X Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)				
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	X Geomorphic Position (D2)				
Iron Deposits (B5)	X Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)				
X Sparsley Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)				
Surface Water Present? Yes X No	Depth (inches) 1					
	- · · · · · · 	Underland Present 2 Van V Na				
Water Table Present? Yes X No	- · · · · 	Hydrology Present? Yes X No				
Saturation Present? Yes X No	Depth (inches) 0					
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previous inspection	ns), if available:				
,						
Remarks:						

VEGETATION - Use scien	ntific names of plants			Sampling Point: Wetland 17
Tree Stratum	(Plot Size: 30'radius)	Absolute Domina % Cover Species		Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
		= Total (Cover	Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/E)
		Absolute Domina	nt Indicator	Prevalence Index Worksheet: OBL species 0 x 1 0
Shrub Stratum	(Plot Size: 15'radius)	% Cover Species	? Status	FACW species 100 x 2 200 FAC species 0 x 3 0
		= Total (Cover	FACU species 15 x 4 60 UPL species 0 x 5 0 Column Totals 115 (A) 260 (
				Column Totals 115 (A) 260 (Prevalence Index = B/A = 2.26
		Absolute Domina	nt Indicator	Hydrophytic Vegetation Indicators: 1- Rapid Test For Hydrophytic Vegetation
Herb Stratum Phragmites australis Impatiens capensis	(Plot Size:5'radius)	% Cover Species 98 X 2		2- Dominance Test is > 50% X 3- Prevalence Index is =< 3.0
impatiens eapensis		= Total (_	4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation
				Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter a breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and
				greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.
Woody Vine Stratum Vitis labrusca	(Plot Size: 30'radius)	Absolute Domina % Cover Species 15 X		Woody Vines- All woody vines greater than 3.28ft in height.
<u>vitis idoi doca</u>		= Total (Hydrophytic Vegetation Present? Yes X No
Remarks: (Include photo n	umbers here or on a sep	arate sheet.)		

SOIL Sampling Point: Wetland 17

Depth	Matrix					x Feat					
(inches	Color	%	Color	%	Туре	Loc	Textu	ure	Remarks		
0-10	7.5YR 2.5/2	100					Mucky	Loam			
10-18	10YR 3/1	100		Mucky Loam							
18-29	2.5Y 3/1	100		Loamy Sand							
29-31	2.5Y 4/2	100		Very Fine Sandy Loam							
								-			
Hydric S	oil Indicators:							Indi	cators for Problematic Soils:		
Histosol (A1)					Polyvalu	e Below	Surface (B15)		_ 2 cm Muck (A10)		
His	Histic Epipedon (A2) Thin Dark Surface (S9)				ce (S9)		_Coast Prarie Redox (A16)				
Bla	nck Histic (A3)			Loamy Mucky Mineral (F1)			1ineral (F1)		_5 cm Mucky Peat or Peat (S3)		
Ну	drogen Sulfide	(A4)		Loamy Gleyed Matric (F2)			Natric (F2)		Dark Surface (S7)		
X Str	atified Layers (ed Layers (A5) Depleted Matrix (F3)				d Matrix	(F3)		_ Polyvalue Below Surface (S8)		
De	pleted Below [w Dark Surface (A11) Redox Dark Surface (F6)			ace (F6)		_ Thin Dark Surface (S9)				
	ick Dark Surfac	-		Depleted Dark Surface (F7)					Iron-Manganese Masses (F12)		
	ndy Mucky Mir	-	-	Redox Depressions (F8)			ons (F8)		_ Piedmont Floodplain Soils (F19)		
	ndy Gleyed Ma		4)					Mesic Spodic (TA6)			
	ndy Redox (S5)								_Red Parent Material (F21)		
	ipped Matrix (_ Very Shallow Dark Surface (TF12)		
ра	rk Surface (S7)								Other (Explain in Remarks)		
Restricti	ve Layer (if obse	erved):									
		Type:						Uudria Sail I	Present? Yes X No		
	Depth (inc							Hyuric 3011 F	riesent: res X NO		
	2 5 p t (
Remark	s:										

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwa	Ik City/County	: Norwalk/Fairfield	d Saı	mpling Date: 1	0/8/2019	
Applicant/Owner: CTDOT		Sta	te: <u>CT</u>	Sampling Point:	W-16 Uplar	
Investigator(s): Rodney Kelshaw	Section, To	wnship, Range:				
Landform (hillslope, terrace, etc.): Side Slope	Local relief (co	ncave, convex, non	e): <u>Linear</u>	Slope (%)	8 - 15	
Subregion (LRR or MLRA): LRR R	Lat: 41.149300	Long: <u>-73.4</u>	31600	Datum: N	AD83	
Soil Map Unit Name:			NWI Classificat	tion: UPL		
Are climatic / hyrologic conditions on the site	typical for this time of year? \	'es <u>X</u> No	(if no, exp	lain in Remarks	.)	
Are Vegetation, Soil, or Hydrology	y significantly disturbed?	Are "Normal Circ	umstances" pr	esent? Yes	No	
Are Vegetation, Soil, or Hydrology	naturally problematic?	(if needed, explain	any answers in I	Remarks.)		
SUMMARY OF FINDINGS - Attach site ma			cts, importan	t features, etc	·•	
Hydrophytic Vegetation Present? Yes		e Sampled Area				
Hydric Soil Present? Yes	No_X	in a Wetland?	Yes	No X		
Wetland Hydrology Present? Yes	No X if ye	s, optional Wetland	Site ID:			
Remarks: (Explain alternative procedures here or in a so	eparate report.)					
LIVEROLOGY						
HYDROLOGY Wetland Hydrology Indicators:		Soci	condany Indicato	ors (minimum of t	wo required)	
	shock all that apply)	360	Surface Soil C	•	wo required)	
Primary Indicators (minimum of one is required:				, ,		
Surface Water (A1)	Water-Stained Leaves (B9)		Drainage Patterns (B10) Moss Trim Lines (B16)			
High Water Table (A2)	Aquatic Fauna (B13)					
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres on L	iving Roots (C3)	Saturation Visible in Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	lled Soils (C6)	Geomorphic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquit	tard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		— Microtopogra	phic Relief (D4)		
Sparsley Vegetated Concave Surface (B8)			FAC-Neutral 1			
	Davida (in the sale	-	<u> </u>			
Surface Water Present? Yes NoX	_ ' ' 					
Water Table Present? Yes NoX	_ ' ' 	Wetland Hydi	rology Present	Yes N	No X	
Saturation Present? Yes No X	Depth (inches)					
Describe Recorded Data (stream gauge, mon	itaring wall parial photos, pro	vious inspections)	if available:			
Describe Recorded Data (stream gauge, mon	itoring well, aeriai photos, pre	vious irispections),	ii avaiiabie.			
Remarks:						

	ific names	of plants				Sampii	ng Ponit.	Upia	nd - Wet	tland 1
Tree Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V Number of Domi That Are OBL, FA	nant Spec	ies	2	(A)
				_= Total Cov	ver	Total Numbe Species Acr	r of Domi	nant	4	_ (B)
						Percent of Dom That Are OBL, F	-		50%	_(A/B)
						Prevalence Index \	Vorkshee	t:		
			Absoluto	Dominant	Indicator	OBL species	0	x 1	0	
Shrub Stratum	(Plot Size:	15'radius)	% Cover	Species?	Status	FACW species	75	x 2	150	
Elaeagnus angustifolia			10	Χ	FACU	FAC species	27	x 3	81	
Quercus rubra			3	Х	FACU	FACU species	13	x 4	52	
Rhamnus cathartica			2 15	= Total Cov	FAC	UPL species	0	x 5	0	
				10tal Cov	rei	Column Totals	115	(A)	283	(B)
						Prevalence	e Index =	B/A =	2.46	
						Hydrophytic Vege	tation Inc	licator	s:	
			Absolute	Dominant	Indicator	1- Rapid Tes				tion
Herb Stratum	(Plot Size:	5'radius)	% Cover	Species?	Status	2- Dominano	•			
Solidago gigantea			75	Χ	FACW					
Toxicodendron radicans	S		25	X	FAC					
			100	_= Total Cov	er er	4- Morpholo		-		
						5- Problema	tic Hydro	phytic	Vegetatic	n
						Definitions of Vegeta	ation Strat	a:		
						Tree- Woody plants 3 breast height (DBH),	٠,	,		eter at
						Sapling/Shrub- Wood greater than or equa				and
						Herb- All herbaceous size, and woody plan			_	less of
Woody Vine Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All wo height.	ody vines g	greater	than 3.28f	t in
				= Total Cov	ver	Hydroph	nytic tion			

SOIL Sampling Point: Upland - Wetland 16

Depth _	Matrix					x Featur				
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks		
0-4	7.5YR 3/3	100					Loam	Very Gravelly		
4-10	10YR 4/3	100					Sandy Loam	Very Cobbly		
10-14	10YR 4/3	98	2.5Y 5/2	2	D	М	Sandy Loam	Very Cobbly		
Hydric So	il Indicators:							Indicators for Problematic Soils:		
	tosol (A1)				•		urface (B15)	2 cm Muck (A10)		
	tic Epipedon ((A2)			•	k Surface	-	Coast Prarie Redox (A16)		
	Black Histic (A3)			Loamy Mucky Mineral (F1)				5 cm Mucky Peat or Peat (S3)		
	lrogen Sulfide			Loamy Gleyed Matric (F2) Depleted Matrix (F3)				Dark Surface (S7)		
	atified Layers		rface (A11)		•		-	Polyvalue Below Surface (S8)		
	oleted Below			Redox Dark Surface (F6) Depleted Dark Surface (F7)				Thin Dark Surface (S9)		
	ck Dark Surfac dy Mucky Mi							Iron-Manganese Masses (F12) Piedmont Floodplain Soils (F19)		
	dy Gleyed Ma	-	-	Redox Depressions (F8)				Mesic Spodic (TA6)		
	dy Redox (S5)		,				-	Red Parent Material (F21)		
	pped Matrix (-	Very Shallow Dark Surface (TF12)		
	k Surface (S7)							Other (Explain in Remarks)		
Restrictiv	e Layer (if obs	erved):								
		Туре:					Hydric	Soil Present? Yes No X		
	Depth (in	_					,			
Remarks	::									

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk	City/County: Norwalk/Fair	field Sampling Date: 10/8/2019			
Applicant/Owner: CTDOT		State: CT Sampling Point: W-16 Wetland			
Investigator(s): Rodney Kelshaw	Section, Township, Range:				
Landform (hillslope, terrace,etc.): Footslope	Local relief (concave, convex,	none): Linear Slope (%) 3 - 8			
Subregion (LRR or MLRA): LRR R	Lat: 41.149320 Long:	73.431500 Datum: NAD83			
Soil Map Unit Name:		NWI Classification: PEM			
Are climatic / hyrologic conditions on the site type	oical for this time of year? Yes X No	(if no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology _		Circumstances" present? Yes X No			
Are Vegetation, Soil, or Hydrology _	naturally problematic? (if needed, exp	lain any answers in Remarks.)			
CHARLED VOE FINIDINGS AND A STATE OF					
SUMMARY OF FINDINGS - Attach site map					
Hydrophytic Vegetation Present? Yes X	No Is the Sampled Are				
Hydric Soil Present? Yes X	No within a Wetland?	Yes X No			
Wetland Hydrology Present? Yes X	No if yes, optional Wet	land Site ID: Wetland 14			
Remarks: (Explain alternative procedures here or in a separation of the separation o	rate report.)				
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required: che	ck all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)	X Drainage Patterns (B10)			
X High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)			
X Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)			
	_				
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	X Geomorphic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)	X Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	X Microtopographic Relief (D4)			
Sparsley Vegetated Concave Surface (B8)	_	FAC-Neutral Test (D5)			
Surface Water Present? Yes No X	Depth (inches)				
Water Table Present? Yes X No	Depth (inches) 0 Wetland I	Hydrology Present? Yes X No			
Saturation Present? Yes X No	Depth (inches) 0				
) // III			
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspection	ns), it available:			
Remarks:					

VEGETATION - Use scien	itific names	of plants				Sampling Point:	: Wetla	nd 16	
Tree Stratum Salix nigra	(Plot Size:	30'radius)	Absolute % Cover 10 10	Dominant Species? X = Total Co	Status OBL	Dominance Test Workshee Number of Dominant Spec That Are OBL, FACW, or FA Total Number of Domi Species Across All Str Percent of Dominant Spec That Are OBL, FACW, or	cies AC: nant rata:	2 2 100%	(A) (B) (A/B)
Shrub Stratum	(Plot Size:	15'radius)	Absolute % Cover	Dominant Species? _= Total Co	Status	Prevalence Index Workshee OBL species 10 FACW species 0 FAC species 0 UPL species 0 Column Totals 110	-	10 200 0 0 0	
Herb Stratum Phalaris arundinacea Impatiens capensis	(Plot Size:	_5'radius)	Absolute % Cover 98 2 100	Dominant Species? X _= Total Co	Status FACW FACW	Prevalence Index = Hydrophytic Vegetation Inc X 1- Rapid Test For Hyd X 2- Dominance Test is X 3- Prevalence Index is 4- Morphological Ada	B/A = dicators: rophytic > 50% s =< 3.0 aptations	1.91 Vegetat	tion
Woody Vine Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	5- Problematic Hydro Definitions of Vegetation Strat Tree- Woody plants 3 in. (7.6cm breast height (DBH), regardless Sapling/Shrub- Woody plants legreater than or equal to 3.28ft Herb- All herbaceous (non-woo size, and woody plants less than Woody Vines- All woody vines gheight.	n) or more of height ess than 3 (1m) tall. ody) plants n 3.28ft ta	e in diam :- in. DBH a s, regardl	eter at and less of
			= Total Cover		ver	Hydrophytic Vegetation Present? Yes X No			
Remarks: (Include photo no	umbers here	or on a sep	arate shee	rt.)					

SOIL Sampling Point: Wetland 16

Depth	Depth Matrix				Redo	x Featu				
(inches	Color	%	Color	%	Туре	Loc	Texture	Remarks		
0-3	7.5YR 3/3	100					Sandy Loam			
3-10	10YR 4/2	90	10YR 4/6	10	С	М	Loam	Gravelly		
0 10								C.G.G.,		
Hydric Sc	oil Indicators:							Indicators for Problematic Soils:		
Histosol (A1)				Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)			
His	tic Epipedon (A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)		
Bla	ck Histic (A3)				Loamy N	lucky Mii	neral (F1)	5 cm Mucky Peat or Peat (S3)		
Hydrogen Sulfide (A4)					Loamy G	ileyed Ma	atric (F2)	Dark Surface (S7)		
Stratified Layers (A5)			X Depleted Matrix (F3)				Polyvalue Below Surface (S8)			
Depleted Below Dark Surface (A11)			rface (A11)		Redox D	ark Surfa	ce (F6)	Thin Dark Surface (S9)		
Thick Dark Surface (A12)				Depleted	d Dark Su	rface (F7)	Iron-Manganese Masses (F12)			
Sandy Mucky Mineral (S1)				Redox Depressions (F8)				Piedmont Floodplain Soils (F19)		
Sandy Gleyed Matrix (S4)				<u> </u>				Mesic Spodic (TA6)		
Sandy Redox (S5)				<u> </u>				Red Parent Material (F21)		
Stripped Matrix (S6)				_				Very Shallow Dark Surface (TF12)		
Dark Surface (S7)							Other (Explain in Remarks)			
Restrictiv	ve Layer (if obs	erved):								
Type: Stony			Hydric Sc				Soil Present? Yes X No			
Depth (inches): 10										
		-								
Remark	s:									

October 28, 2019

Attachment D – Representative Photographs

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange,

Norwalk, Connecticut

ATTACHMENT D - REPRESENTATIVE PHOTOGRAPHS



Photo 1. Looking southwesterly within Wetland 16. Stantec, October 8, 2019.



Photo 2. Looking southwesterly within Wetland 17. Stantec, October 8, 2019.

Reference: Updated Wetland and Watercourse Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut



Photo 3. Looking southwesterly within Wetland 18. Stantec, October 8, 2019.



Photo 4. Looking southeasterly within Wetland 9. Stantec, October 8, 2019.

Reference: Updated Wetland and Watercourse Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut



Photo 5. Looking northwesterly, upstream along stream Int 11 within Wetland 16. Stantec, October 8, 2019.



Photo 6. Looking northerly, upstream along stream Int 11. Stantec, October 8, 2019.

Reference: Updated Wetland and Watercourse Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut



Photo 7. Looking northerly, upstream along stream Per 2 within Wetland 9. Stantec, October 8, 2019.



Photo 8. Looking southeasterly, downstream along stream Per 2 within Wetland 9. Stantec, October 8, 2019.



Routes 7/15 Interchange Norwalk, Connecticut State Project No. 102-358

Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation

Appendix G3 2021 Wetland Delineation Update

August 2022

Prepared for: Connecticut Department of Transportation Federal Highway Administration





To: John Eberle, Project Manager From: Matt Arsenault, Ecologist

Stantec (New Haven, CT) Stantec (Topsham, ME)

File: 192310508 Date: May 24, 2021

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

The Connecticut Department of Transportation (CTDOT) proposes modifications to the Routes 7/15 interchange in Norwalk, Connecticut (project). In September 2016, BL Companies (BL) conducted an on-site wetland and watercourse delineation of the proposed project area. Following their delineations, the Flock Process Dam located approximately 0.2 miles downstream of the project area on the Norwalk River was removed in 2018 by the City of Norwalk, the Connecticut Department of Energy and Environmental Protection (DEEP), and the US Fish and Wildlife Service (USFWS). The dam was removed to improve public safety and improve aquatic habitats in the Norwalk River.

On March 25, 2021, wetland and soil scientists from Stantec Consulting Services Inc. (Stantec) conducted a site visit to verify if the removal of the Flock Process Dam affected the jurisdictional status or wetland community types of the wetland previously delineated along the Norwalk River within the project area. The field review was prompted by comments received in February 2021 from the Federal Highway Administration on the draft Environmental Assessment report prepared for CTDOT. This memo summarizes these efforts.

In addition, during a May 13, 2021 site walk, Perennial Watercourse 1 through Wetland 1 was incidentally observed to extend beyond the limits shown on the project mapping available at time of the site walk. Therefore, the current extent of Perennial Watercourse 1 through Wetland 1 was delineated at that time.

METHODOLOGY

The March 25, 2021 wetland and watercourse verification field survey was conducted by Ann McMenemy, a Professional Wetland Scientist and soil scientist qualified to delineate wetlands in CT, and Matt Arsenault, a Certified Ecologist. Wetland boundaries under the jurisdiction of the US Army Corps of Engineers (Corps) were determined using the technical criteria presented in the *Corps of Engineers Wetlands Delineation Manual*² and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: *Northcentral and Northeast Region (Version 2.0)*. Inland wetland boundaries under DEEP jurisdiction were determined based upon soil type, as defined in the Connecticut General Statutes (CGS) Section 22a-38. Watercourse boundaries were determined based on the definition provided in CGS Section 22a-18 and guidance available from the Corps regarding identification of an Ordinary High Water Mark (Regulatory Guidance Letter No. 05-05, December 7, 2005).

Wetland and watercourse boundaries as determined during the initial 2016 delineation by BL were uploaded to a Geographic Information Systems (GIS)-enabled tablet device mounted with a Global Positioning System (GPS) receiver capable of submeter accuracy. Each previously delineated wetland along the Norwalk River

¹ BL Companies. 2016. Wetland Report Route 7 and 15 Interchange, Norwalk, CT. CDOT Project 102-358. June 2017.

Design with community in mind

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² Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. January 1987.

³ US Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. ERDC/EL TR-12, Vicksburg, MS: US Army Corps of Engineers, Engineer Research and Development Center. January 2012.

May 24, 2021 John Eberle, Project Manager Page 2 of 5

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

was visited during the field survey. In addition, each side of the Norwalk River was evaluated to determine if additional wetlands may be present. The previously delineated boundaries were compared to the wetland and watercourse boundaries observed during the March 25, 2021 field survey. If changes to the wetland boundary were observed, the revised boundary was flagged and located with the GPS. Data were collected on hydrophytic vegetation, evidence of wetland hydrology, hydric soil criteria, and soil drainage classification using a Corps Wetland Determination Data Form. Where wetland changes were observed, Stantec also conducted a revised function and values assessment using the Corps Highway Methodology⁴. Representative photographs were taken to document the existing conditions.

Observed changes to watercourse boundaries were located with the GPS and data were collected on bank, substrate, and flow characteristics. Representative photographs were taken, as appropriate.

The May 13, 2021 site walk was conducted by Matt Arsenault. The revised extent of Perennial Watercourse 1 through Wetland 1 was located with a hand-held GPS receiver and refined through aerial imagery interpretation. Data were collected on bank, flow, and substrate characteristics and representative photos were taken.

RESULTS

In 2016, BL delineated four wetlands along the Norwalk River, designated as Wetland 2, Wetland 3, Wetland 4, and Wetland 5. Other than the Norwalk River, no additional watercourses were delineated in the vicinity of the Norwalk River. The results of the March 25, 2021 field survey and May 13, 2021 site walk are summarized below. The revised wetland and watercourse delineation results are provided on Figure 1. Appendix A includes representative photographs, and Appendix B includes competed Corps Wetland Determination Data Forms. Appendix C includes completed Corps Wetland Function – Value Evaluation Forms for revised wetland areas.

EXISTING WETLANDS

Wetland 2

There were no measurable changes to Wetland 2 observed as a result of the downstream dam removal.

Wetland 3

Wetland 3 is the closest wetland within the project area along the Norwalk River to the former Flock Process Dam. This wetland experienced several changes as a result of the dam removal. Previously, Wetland 3 was delineated as a palustrine scrub-shrub (PSS) wetland with two wetland areas separated by an area of open water. The removal of the dam resulted in a lower ordinary high water level on the Norwalk River upstream of the dam. As a result, the area of open water area previously separating the two sections of Wetland 3 is no longer underwater and has been replaced by a palustrine emergent marsh (PEM). The previously delineated northern PSS section of Wetland 3 remains unchanged compared with the previous delineation. However, the southern section of Wetland 3 has been largely replaced by a natural rechanneling of the Norwalk River channel.

⁴ US Army Corps of Engineers New England District. 1999. The Highway Methodology Workbook Supplement. September 1999.

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

The recently created PEM portion of Wetland 3 is dominated by deer-tongue rosette grass (*Dichanthelium clandestinum*), lamp rush (*Juncus effusus*), common woolgrass (*Scirpus cyperinus*), and spotted touch-menot (*Impatiens capensis*). Soils within the wetland are very poorly drained organic soils. Evidence of hydrology included water marks, water stained leaves, and drainage patterns. The wetland extends underneath the existing parking garage and office building complex. No wetland vegetation is present under the building due to the permanently shaded conditions. Figure 1 shows an approximate wetland boundary under the office building complex due to poor GPS reception in this area.

In addition, a new small intermittent watercourse (designated as Intermittent Watercourse 12) flows southerly through the PEM portion of Wetland 3 into the Norwalk River. The top of bank and ordinary highwater mark widths were approximately two feet, and the watercourse contains a scoured silt substrate.

The removal of the Flock Process Dam created a revised natural channel and bank geomorphology of the Norwalk River upstream of the dam location and adjacent to Wetland 3. The revised bank was located with the GPS and is provided on Figure 1.

The functions and values of Wetland 3 remain unchanged compared to the previous assessment and continue to include groundwater recharge/discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization, wildlife habitat, passive recreation, and visual quality/aesthetics.

The revised portions of Wetland 3 and Intermittent Watercourse 12 meet both the federal and state criteria for jurisdiction.

Wetland 4

There were no measurable changes to Wetland 4 observed as a result of the downstream dam removal.

Wetland 5

There were no measurable changes to Wetland 5 observed as a result of the downstream dam removal.

NEW WETLAND AREAS

Two additional wetland areas were delineated during the March 25, 2021 field survey, Wetlands 19 and 20.

Wetland 19

Wetland 19 is a narrow, forested floodplain wetland located along the western bank of the Norwalk River between Route 15 and Glover Ave. The wetland is dominated by hydrophytic vegetation, including American sycamore (*Platanus occidentalis*) trees with glossy false buckthorn (*Frangula alnus*) and Eurasian-buttercup (*Ficaria verna*) in the understory. Evidence of hydrology at the time of the delineation included drift and alluvial deposits, water marks, and geomorphic position. The soils qualified as alluvial floodplain soils but were determined not to meet hydric soil criteria.

Wetland 19 meets the DEEP jurisdictional criteria for inland wetlands but does not meet the Corps definition of a wetland due to an absence of hydric soil indicators.

May 24, 2021 John Eberle, Project Manager Page 4 of 5

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

The wetland provides limited functions and values due to its small size but includes sediment/toxicant retention, floodflow alteration, nutrient removal/retention/transformation, wildlife habitat, fish habitat, and sediment/shoreline stabilization.

Wetland 20

Wetland 20 is a newly formed small PEM wetland that was formerly an open water area located within the Norwalk River. The area is no longer underwater, as a result of the removal of the Flock Process Dam, and now supports a small PEM wetland community. The wetland is dominated by white panicled American-aster (*Symphyotrichum lanceolatum*). A few individuals of silky dogwood (*Cornus amomum*) shrubs are present along the wetland edge. Evidence of hydrology at the time of the delineation included water marks. Soils were alluvial floodplain soils, and hydric soil criteria included sandy redox. Wetland 20 meets both the federal and state wetland criteria for jurisdiction.

The wetland abuts a lawn and patio area associated with the neighboring office complex. The wetland does not provide significant functions and values due to its small size, but given its location and surrounding development it does provide some sediment/toxicant retention, nutrient removal/retention/transformation, and sediment/shoreline stabilization.

UPDATED WATERCOURSES

The revised reach of Perennial Watercourse 1 begins at a culvert on the south side of Route 15 and flows southerly through Wetland 1 and into the previously delineated watercourse reach beginning at the southern end of Wetland 1 (Figure 1). The banks through Wetland 1 are approximately 6–8 feet wide and the stream contains a gravel, sand, and mucky substrate. There was approximately 3–4 inches of water flowing in the channel at the time of the field survey, and fish were observed within the reach.

The 2016 delineation by BL noted that the Perennial Watercourse 1 channel lost definition through Wetland 1. Landscape changes, including significant runoff events over the past 5 years, may have influenced the channel morphology through Wetland 1, thereby resulting in development of the present well-defined channel.

Note that the delineation of this resource was conducted incidentally at the time of the May 13, 2021 site walk and the location of the watercourse through Wetland 1 as shown on Figure 1 is approximate. A delineation with survey-grade equipment accuracy is recommended if impacts to this watercourse are anticipated during the project design phase.

Please let us know if you have any questions on the information presented in this report.

May 24, 2021

John Eberle, Project Manager Page 5 of 5

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

Stantec Consulting Services Inc.

Matt Arsenault

Botanist / Ecologist - Sr. Project Manager

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Mich Cons

Attachment: Figure 1 – Revised Wetland and Watercourse Delineation Map

Appendix A. Representative Photographs

Appendix B. Corps Wetland Determination Data Forms

Appendix C. Corps Wetland Function – Value Evaluation Forms

Ann McMenemy

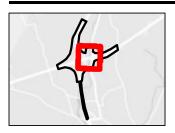
Senior Wetland Scientist Phone: 617 620 6961

an Mc Menery

ann.mcmenemy@stantec.com



Figure



Notes
1. Coordinate System: NAD 1983 StatePlane
Connecticut FIPS 0600 Feet
2. Data Sources: Stantec, BL Companies
3. Background: ESRI World Imagery, Web Mapping
Service.

Legend

Field Delineated Stream (see note below)

Field Delineated Wetland Boundary

Field Delineated Wetland

Riverine Wetland (Norwalk River)

2021 Wetland and Watercourse Delineation Verification Area Project Area Boundary

** The portion of PER Watercourse 1 within Wetland 1 was observed in 2021 and mapped using aerial photo interpretation and limited GPS data.



(At original document size of 8.5x11) 1:3,600





Prepared by KWH on 2021-04-05 TR by MPA on 2021-04-06 IR Review by JH on 2021-04-05 Route 7/15 Interchange Connecticut Department of Transportation (CTDOT)

2021 Wetland and Watercourse **Delineation Map**



Appendix A. Representative Photographs



Photo 1. Recently created PEM portion of Wetland 3, view to the south. Stantec. March 25, 2021.



Photo 2. Recently created PEM portion of Wetland 3, view to the north. Stantec. March 25, 2021.



Photo 3. Portion of Wetland 3 under office building. Stantec. March 25, 2021.



Photo 4. View to the east of the revised Norwalk River channel alignment adjacent to Wetland 3. Stantec. March 25, 2021.



Photo 5. Former location of southern segment of Wetland 3 that has been since replaced by the revised Norwalk River channel, view to the north. Stantec. March 25, 2021.



Photo 6. View to the south towards the former location of the Flock Process Dam on the Norwalk River. Stantec. March 25, 2021.





Photo 7. Intermittent Watercourse 12 in Wetland 3, view to the south. Stantec. March 25, 2021.



Photo 8. Floodplain Wetland 19 along west edge of Norwalk River, view to the north. Stantec. March 25, 2021.





Photo 9. Wetland 20, view to the north. Stantec. March 25, 2021.



Photo 10. Wetland 20, view to the east across the Norwalk River. Stantec. March 25, 2021.



Photo 21. Perennial Watercourse 1 through Wetland 1, view to the southwest. Stantec. May 13, 2021.



Photo 22. Perennial Watercourse 1 through Wetland 1, view to the south. Stantec. May 13, 2021.



Appendix B. Corps Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk	City/Co	ounty: Norwalk/Fair	ield Sa	mpling Date: 3/25/2021
Applicant/Owner: ConnDOT	-	·	State: <u>CT</u>	Sampling Point: Wetland
Investigator(s): Matt Arsenault	Sectio	n, Township, Range:		
Landform (hillslope, terrace,etc.): Floodplain	Local relie	ef (concave, convex, n	one): Linear	Slope (%) <u>0</u> - 0
Subregion (LRR or MLRA): LRR R	Lat: 41.140490	Long:7	3.426744	Datum: NAD83
Soil Map Unit Name:		_	NWI Classifica	ition: PEM
Are climatic / hyrologic conditions on the site to	ypical for this time of ye	ar? Yes <u>X</u> No	(if no, exp	olain in Remarks.)
Are Vegetation , Soil , or Hydrology	significantly distur	bed? Are "Normal (ircumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problema	atic? (if needed, exp	ain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling po	oint locations, tran	sects, importar	nt features, etc.
Hydrophytic Vegetation Present? Yes X	No	Is the Sampled Area		
Hydric Soil Present? Yes X	No	within a Wetland?	Yes	X No
Wetland Hydrology Present? Yes X	No	if yes, optional Wetl	and Site ID:	W3
Remarks: (Explain alternative procedures here or in a sep	parate report.)			
Recently exposed wetland as a result of d	dewatering from dowr	nstream dam remo	/al	
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one is required: ch	neck all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	X Water-Stained Leaves	; (B9)	X Drainage Pa	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim L	
Saturation (A3)	Marl Deposits (B15)			Water Table (C2)
X Water Marks (B1)	Hydrogen Sulfide Odo	or (C1)	Crayfish Bur	
Sediment Deposits (B2)				
	Oxidized Rhizosphere			isible in Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced	•		tressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction	` ,	X Geomorphic	
Iron Deposits (B5)	Thin Muck Surface (C		Shallow Aqu	•
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	arks)		aphic Relief (D4)
Sparsley Vegetated Concave Surface (B8)			FAC-Neutral	Test (D5)
Surface Water Present? Yes No _ X	Depth (inches)	_		
Water Table Present? Yes No X	Depth (inches)	Wetland H	ydrology Present	:? Yes X No
Saturation Present? Yes No X	Depth (inches)	_		
Describe Recorded Data (stream gauge, monit	oring well, aerial photos	s, previous inspection	s), if available:	
2 000.100 110001 404 2014 (01.04.11 84480) 11101111	ormg wen, demar prieses	,, p. 611666 op 6616	,, a tanas.c.	
Remarks:				

VEGETATION - Use scientific names of plants Sampling Point: Wetland-W3 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) **Tree Stratum** % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: (A) = Total Cover **Total Number of Dominant** Species Across All Strata: (B) 1 Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: 100% **Prevalence Index Worksheet:** x 1 **OBL** species 15 15 Absolute Dominant Indicator **FACW** species 80 x 2 160 (Plot Size: 15'radius) Status **Shrub Stratum** % Cover Species? **FAC** species х3 0 = Total Cover **FACU** species 0 x 4 0 **UPL** species 0 x 5 0 **Column Totals** 95 (A) 175 (B) Prevalence Index = B/A = 1.84 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator X 1- Rapid Test For Hydrophytic Vegetation **Herb Stratum** (Plot Size: 5'radius) % Cover Species? Status X 2- Dominance Test is > 50% **FACW** Dichanthelium clandestinum 70 Χ X 3- Prevalence Index is =< 3.0 OBL Juncus effusus 15 4- Morphological Adaptations Impatiens capensis 10 **FACW** 95 = Total Cover 5- Problematic Hydrophytic Vegetation **Definitions of Vegetation Strata:** Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) Status **Woody Vine Stratum** % Cover Species? height. = Total Cover Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Wetland-W3

Depth Matrix	Redox Features	
(inches Color % Color	% Type Loc Te	xture Remarks
0-20 10YR 3/1 100	Peat	y Muck
Hydric Soil Indicators:		Indicators for Problematic Soils:
X Histosol (A1)	Polyvalue Below Surface (B1	5)2 cm Muck (A10)
Histic Epipedon (A2)	Thin Dark Surface (S9)	Coast Prarie Redox (A16)
Black Histic (A3)	Loamy Mucky Mineral (F1)	5 cm Mucky Peat or Peat (S3)
Hydrogen Sulfide (A4)	Loamy Gleyed Matric (F2)	Dark Surface (S7)
Stratified Layers (A5)	Depleted Matrix (F3)	Polyvalue Below Surface (S8)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Thin Dark Surface (S9)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Iron-Manganese Masses (F12)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Piedmont Floodplain Soils (F19)
Sandy Gleyed Matrix (S4)		Mesic Spodic (TA6)
Sandy Redox (S5)		Red Parent Material (F21)
Stripped Matrix (S6)		Very Shallow Dark Surface (TF12)
Dark Surface (S7)		Other (Explain in Remarks)
Restrictive Layer (if observed):		
Type:		W 1: 6:18
		Hydric Soil Present? Yes X No
Depth (inches):		
Remarks:		
remarks.		

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwal	City/Co	ounty: Norwalk/Fairf	eld Sampling	Date: 3/25/2021
Applicant/Owner: ConnDOT			tate: <u>CT</u> Sampli	ng Point: Upland
Investigator(s): Matt Arsenault	Sectio	n, Township, Range:		
Landform (hillslope, terrace,etc.): Floodplain	Local relie	ef (concave, convex, n	one): <u>Concave</u> S	Slope (%) <u>0 - 0</u>
Subregion (LRR or MLRA): LRR R	Lat: 41.142891	Long: -7	.426867 Da	atum: NAD83
Soil Map Unit Name:	-	_	NWI Classification:	UPL
Are climatic / hyrologic conditions on the site	typical for this time of ye	ar? Yes X No	(if no, explain in	Remarks.)
Are Vegetation , Soil , or Hydrology	significantly distur	bed? Are "Normal C	rcumstances" present?	Yes X No
Are Vegetation, Soil, or Hydrology	naturally problem	atic? (if needed, expl	in any answers in Remark	s.)
SUMMARY OF FINDINGS - Attach site ma	n showing sampling n	oint locations trans	ects important feati	ires etc
Hydrophytic Vegetation Present? Yes X		Is the Sampled Area	ects, important reatt	
Hydric Soil Present? Yes	No X	within a Wetland?	Yes	No X
·		if yes, optional Wetla	-	
		- Yes, optional Wette		
Remarks: (Explain alternative procedures here or in a se				
State-regulated Inland Wetland; Corps u	piand			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (min	imum of two required)
Primary Indicators (minimum of one is required: c	heck all that apply)		Surface Soil Cracks (E	36)
Surface Water (A1)	Water-Stained Leaves	s (B9)	Drainage Patterns (B	10)
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16	5)
Saturation (A3)	Marl Deposits (B15)	-	Dry-Season Water Ta	able (C2)
X Water Marks (B1)	Hydrogen Sulfide Odo	or (C1)	Crayfish Burrows (C8	3)
Sediment Deposits (B2)	Oxidized Rhizosphere	-	Saturation Visible in	
X Drift Deposits (B3)	Presence of Reduced	-	Stunted or Stressed I	
Algal Mat or Crust (B4)	Recent Iron Reduction		X Geomorphic Position	
		` ,		
Iron Deposits (B5)	Thin Muck Surface (C	•	Shallow Aquitard (D3	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	iarks)	Microtopographic Re	
Sparsley Vegetated Concave Surface (B8)		-	FAC-Neutral Test (D5	i)
Surface Water Present? Yes No _ X	Depth (inches)	_		
Water Table Present? Yes No X	Depth (inches)	Wetland H	drology Present? Yes	s X No
Saturation Present? Yes No X	Depth (inches)	_		
Describe Recorded Data (stream gauge, moni	toring well aerial photos	nrevious inspections) if available:	
Describe Recorded Data (Stream Badge, mon	toring wen, derial priotos	, previous mapeumon	,, ii available.	
Remarks:				

VEGETATION - Use scientific names of plants Sampling Point: Upland-W19 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) **Tree Stratum** % Cover Species? Status **Number of Dominant Species** Platanus occidentalis 70 Χ **FACW** That Are OBL, FACW, or FAC: (A) 70 = Total Cover **Total Number of Dominant** Species Across All Strata: (B) 4 Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: 75% **Prevalence Index Worksheet:** x 1 **OBL** species 0 0 Absolute Dominant Indicator **FACW** species 75 x 2 150 (Plot Size: 15'radius) Species? Status **Shrub Stratum** % Cover FAC species 18 54 х3 Frangula alnus 15 Χ FAC Acer negundo 3 FAC 7 **FACU** species x 4 28 Rosa multiflora 3 FACU **UPL** species 0 x 5 0 21 = Total Cover **Column Totals** 100 (A) 232 (B) Prevalence Index = B/A = 2.32 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator 1- Rapid Test For Hydrophytic Vegetation **Herb Stratum** (Plot Size: 5'radius) % Cover Species? Status X 2- Dominance Test is > 50% 5 **FACW** Ficaria verna Χ X 3- Prevalence Index is =< 3.0 Χ Reynoutria japonica 3 **FACU** 4- Morphological Adaptations Lonicera japonica 1 **FACU** 9 = Total Cover 5- Problematic Hydrophytic Vegetation **Definitions of Vegetation Strata:** Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) Status **Woody Vine Stratum** % Cover Species? height. = Total Cover Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Upland-W19

Depth	Matrix	,			Dode	v Eootur	0.5	Sampling Point. Opland-W13		
inches	Matrix Color	<u> </u>	Color	%	Type	x Featur Loc	es Texture	 Remarks		
				70	турс	LOC				
8-0	10YR 3/2	100					Fine Sandy Loa			
8-16	10R 3/4	100					Sandy Loam			
Judric Sc	oil Indicators:							Indicators for Problematic Soils:		
-	tosol (A1)				Polyvalu	e Relow S	urface (B15)	2 cm Muck (A10)		
	tic Epipedon ((A2)			=	k Surface		Coast Prarie Redox (A16)		
	ck Histic (A3)	(* _)				lucky Min	• •	5 cm Mucky Peat or Peat (S3)		
	drogen Sulfide	- (Δ Δ)			· ·	leyed Ma		Dark Surface (S7)		
	atified Layers					d Matrix (I		Polyvalue Below Surface (S8)		
	oleted Below		rface (A11)		-	ark Surfac	-	Thin Dark Surface (S9)		
	ck Dark Surfac			Depleted Dark Surface (F7)				Iron-Manganese Masses (F12)		
	idy Mucky Mi			Redox Depressions (F8)				Piedmont Floodplain Soils (F19)		
	idy Gleyed Ma					ор. соо.с	. (.)	Mesic Spodic (TA6)		
	idy Redox (S5		,					Red Parent Material (F21)		
	pped Matrix (Very Shallow Dark Surface (TF12)		
	k Surface (S7)							Other (Explain in Remarks)		
		,						,		
Restrictiv	ve Layer (if obs	erved):								
		Type:					Llvd	ric Soil Present? Yes No X		
	Depth (ir	_					пуи	ric Soil Present? Yes No X		
	Deptii (ii	_								
Remarks							I.			

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk	City/County: Norwalk/Fai	rfield Sampling Date: 3/25/2021
Applicant/Owner: ConnDOT		State: CT Sampling Point: Wetland
Investigator(s): Matt Arsenault	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex,	none): <u>Concave</u> Slope (%) <u>0 - 0</u>
Subregion (LRR or MLRA): LRR R	Lat: <u>41.141113</u> Long:	73.427116 Datum: NAD83
Soil Map Unit Name:		NWI Classification: PEM
Are climatic / hyrologic conditions on the site to		
Are Vegetation, Soil, or Hydrology		Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic? (if needed, exp	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling point locations train	sects important features etc.
Hydrophytic Vegetation Present? Yes X	No Is the Sampled Are	
	within a Wetland?	Yes X No
Hydric Soil Present? Yes X	No if yes, optional Wet	
Wetland Hydrology Present? Yes X	No if yes, optional wet	W20
Remarks: (Explain alternative procedures here or in a sep	parate report.)	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: ch	eck all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)
X Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	X Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)	Other (Explain in Kellarks)	FAC-Neutral Test (D5)
		FAC-Neutral Test (D3)
Surface Water Present? Yes NoX	Depth (inches)	
Water Table Present? Yes NoX	Depth (inches) Wetland	Hydrology Present? Yes X No
Saturation Present? Yes No _ X	Depth (inches)	
Describe Recorded Data (stream gauge, monit	oring well aerial photos previous inspection	ns) if available:
Describe Recorded Data (stream gauge, monte	ornig wen, derial priocos, previous inspection	ns), ii available.
Remarks:		

VEGETATION - Use scientific names of plants Sampling Point: Wetland-W20 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) **Tree Stratum** % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: (A) = Total Cover **Total Number of Dominant** Species Across All Strata: (B) 2 Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: 100% **Prevalence Index Worksheet: OBL** species x 1 0 Absolute Dominant Indicator **FACW** species 80 x 2 160 (Plot Size: 15'radius) % Cover Species? Status **Shrub Stratum FAC** species 5 15 х3 Cornus amomum 10 Χ **FACW** 10 = Total Cover **FACU** species 3 x 4 12 **UPL** species 0 x 5 0 **Column Totals** 88 (A) 187 (B) Prevalence Index = B/A = 2.12 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator X 1- Rapid Test For Hydrophytic Vegetation **Herb Stratum** (Plot Size: 5'radius) % Cover Species? Status X 2- Dominance Test is > 50% 70 **FACW** Symphyotrichum lanceolatum Χ X 3- Prevalence Index is =< 3.0 FAC Solidago rugosa 5 4- Morphological Adaptations Alliaria petiolata 3 **FACU** 78 = Total Cover 5- Problematic Hydrophytic Vegetation **Definitions of Vegetation Strata:** Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) Status **Woody Vine Stratum** % Cover Species? height. = Total Cover Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)

IL								Sampling Point: Wetland-W20		
Depth	Matrix	<u>.</u>			Redo	x Featur	es			
inches	Color	%	Color	%	Type	Loc	Texture	Remarks		
0-2	10R 3/1	100					Sandy Loam			
2-3	2.5Y 4/2	100					Sand			
3-13	10YR 3/2	85	7.5YR 4/6	15	С	PL	Loamy Sand			
13-20	10R 4/2	85	7.5YR 4/6	15	С	PL	Loamy Sand			
	·		·				,			
Hydric Soil								Indicators for Problematic Soils:		
	sol (A1)				-		urface (B15)	2 cm Muck (A10)		
	Epipedon (A2)				k Surface		Coast Prarie Redox (A16)		
	Histic (A3)	. (^ 4 \				lucky Min		5 cm Mucky Peat or Peat (S3)		
	ogen Sulfide					leyed Mat		Dark Surface (S7)		
	ified Layers		rfaco (A11)		-	l Matrix (F ark Surfac	•	Polyvalue Below Surface (S8)		
	eted Below I Dark Surfac					l Dark Sur		Thin Dark Surface (S9) Iron-Manganese Masses (F12)		
	y Mucky Mi	-						Piedmont Floodplain Soils (F19)		
	y Gleyed Ma	-	•	Redox Depressions (F8)				Mesic Spodic (TA6)		
	y Redox (S5)		7					Red Parent Material (F21)		
	ped Matrix (Very Shallow Dark Surface (TF12)		
	Surface (S7)							Other (Explain in Remarks)		
Restrictive	Layer (if obs	erved):								
		Type:					Hydrid	c Soil Present? Yes X No		
	Depth (in	iches):						<u> </u>		
Remarks:										
rtemarks.										



Appendix C. Corps Wetland Function – Value Evaluation Forms

Wetland Function – Value Evaluation Form

Wetland Description: Wetland 19 is a narrow floodplain forest along the Norwalk River. It is dominated by <i>Platanus occidentalis, Frangula alnus</i> , and	File number:	
Ficaria verna	Wetland identifier: W19	
	Latitude: 41.14289167	Longitude: -73.426867
	Preparer(s): Matt Arsenault	
	Date: 4/2/2021	

Function/Value	Capa V	bility N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	1	X	No evidence of groundwater discharge was observed; wetland is small to provide measurable groundwater recharge	1 05/110
Floodwater Alteration	X		Wetland is adjacent to Norwalk River and is within its floodplain but small size prohibits it from providing substantial flood storage. Qualifiers: 4, 6, 9, 11, 12	No
Fish and Shellfish Habitat		X	Norwalk River adjacent to wetland provides fish and shellfish habitat but terrestrial wetland area does not provide this function	
Sediment/Toxicant Retention	X		Wetland is adjacent to impervious surfaces; potential for sediment and toxicants in runoff. Qualifiers: 1, 2,10	Yes
Nutrient Removal	X		Wetland is adjacent to impervious surfaces; potential for nutrient removal and retention. Qualifiers: 3, 4, 10, 11	Yes
Production Export	X		Wetland has vegetation and can flush organic material downstream. Qualifiers: 1, 2, 12	No
Sediment/Shoreline Stabilization	X		Wetland is adjacent to Norwalk River. Qualifiers: 1, 3, 4, 5	Yes
Wildlife Habitat		X	Wetland is too small to be used in a measurable capacity by wetland-dependent species	
Recreation		X	Wetland does not provide recreation value	
Education/Scientific Value		X	Wetland is small and does not provide this value.	
Uniqueness/Heritage		X	Wetland is small and consists of common species	
Visual Quality/Aesthetics		X	Wetland is small and does not provide this value	
ES Endangered Species Habitat		X	Endangered species are not present in wetland.	
Other				

Notes: * Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Wetland 20 is a small wetland dominated by wet meadow species including Symphyotrichum lanceolatum. It is located in the	File number:	
floodplain of the Norwalk River. A lawn and patio area as well as parking garage associated with an adjacent office complex is located next to the wetland	Wetland identifier: W20	
	Latitude: 41.1411137	Longitude: -73.427116
	Preparer(s): Matt Arsenault	
	Date: 4/2/2021	

Function/Value	Capal V	oility N	Summary	Principal Yes/No
Groundwater Recharge/Discharge		X	No evidence of groundwater discharge was observed; wetland is small to provide measurable groundwater recharge	T CS/T VO
Floodwater Alteration	X		Wetland is adjacent to Norwalk River and is within its floodplain but small size prohibits it from providing substantial flood storage. Qualifiers: 4, 6, 9, 11, 12	No
Fish and Shellfish Habitat		X	Norwalk River adjacent to wetland provides fish and shellfish habitat but terrestrial wetland area does not provide this function	
Sediment/Toxicant Retention	X		Wetland is adjacent to lawn and patio area as well as impervious surfaces; potential for sediment and toxicants in runoff. Qualifiers: 1, 2,10, 16	No
Nutrient Removal	X		Wetland is adjacent to lawn and patio area as well as impervious surfaces; potential for nutrient removal and retention. Qualifiers: 3, 4, 8, 10, 11	Yes
Production Export	X		Wetland has dense vegetation and can flush organic material downstream. Qualifiers: 1, 2, 12	No
Sediment/Shoreline Stabilization	X		Wetland is adjacent to Norwalk River. Qualifiers: 1, 3, 4, 5	No
Wildlife Habitat		X	Wetland is too small to be used in a measurable capacity by wetland-dependent species	
Recreation		X	Wetland does not provide recreation value	
Education/Scientific Value		X	Wetland is small and does not provide this value.	
Uniqueness/Heritage		X	Wetland is small and consists of common species	
Visual Quality/Aesthetics		X	Wetland is small and does not provide this value	
ES Endangered Species Habitat		X	Endangered species are not present in wetland.	
Other				

Notes: * Attach list of considerations.



Routes 7/15 Interchange Norwalk, Connecticut State Project No. 102-358

Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation

Appendix G4 Wetland Impact Tables

August 2022

Prepared for: Connecticut Department of Transportation Federal Highway Administration

Routes 7/15 Interchange Norwalk, Connecticut State Project No. 102-358



•				Alternative 21D Alternative 26								
Wetland/Watercourse ID	_	Existing Wetlands and Watercourses		Temporary Wetland/ Watercourse Impact	Permanent Watercourse Impact	Temporary Watercourse Impact	Permanent Wetland Impact	Temporary Wetland/ Watercourse Impact	Permanent Watercourse Impact	Temporary Watercourse Impact		
	AC	LF	AC	AC	LF	LF	AC	AC	LF	LF		
Wetland 1	0.8	-	0.6	0	-	-	0.2	0	-	-		
Wetland 2	0.2	-	0.1	0	-	-	0.1	0	-	-		
Wetland 3	0.6	-	0	0	-	-	0	0	-	-		
Wetland 4	0.9	-	0.7	0	-	-	0.5	0	-	-		
Wetland 5	0.1	-	0	0	-	-	0	0	-	-		
Wetland 6	0.2	-	0.2	0	-	-	0.1	0	-	-		
Wetland 7	0.02	-	0	0	-	-	0	0	-	-		
Wetland 8	0.3	-	0.01	0	-	-	0	0	-	-		
Wetland 9	2.3	-	0.9	0.004	-	-	0.4	0.001	-	-		
Wetland 10	3.8	-	0.1	0.03	-	-	0	0	-	-		
Wetland 11	0.3	-	0	0	-	-	0	0	-	-		
Wetland 12	0.4	-	0.004	0	-	-	0	0	-	-		
Wetland 13	0.1	-	0.1	0	-	-	0	0	-	-		
Wetland 14	0.02	-	0	0	-	-	0	0	-	-		
Wetland 15	0.1	-	0	0	-	-	0	0	-	-		
Wetland 16	0.7	-	0	0	-	-	0	0	-	-		
Wetland 17	0.2	-	0	0	-	-	0	0	-	-		
Wetland 18	0.1	-	0	0	-	-	0	0	-	-		
Wetland 19	0.1	-	0.02	0.01	-	-	0.02	0.01	-	-		
Wetland 20	0.02	-	0	0	-	-	0	0	-	-		
POND 1	0.1	-	0	0	-	-	0	0	-	-		
Norwalk River	3.1	-	-	0.5	-	-	-	0.4	-	-		
Intermittent Stream 1	-	40	-	-	40	0	-	-	40	0		
Intermittent Stream 2	-	180	-	-	0	0	-	-	0	0		
Intermittent Stream 3	-	270	-	-	0	0	-	-	0	0		
Intermittent Stream 4	-	60	-	-	0	0	-	-	0	0		
Intermittent Stream 5	-	330	-	-	0	0	-	-	0	0		
Intermittent Stream 6	-	50	-	-	50	0	-	-	0	0		
Intermittent Stream 7	-	30	-	-	30	0	-	-	0	0		
Intermittent Stream 8	-	90	-	-	0	0	-	-	0	0		
Intermittent Stream 9	-	40	-	-	0	0	-	-	0	0		
Intermittent Stream 10	-	150	-	-	0	0	-	-	0	0		
Intermittent Stream 11	-	800	-	-	0	0	-	-	0	0		
Intermittent Stream 12	-	128	-	-	0	0	-	-	0	0		
Perennial Stream 1	-	1,500	-	-	320	170	-	-	200	170		
Perennial Stream 2	-	330	-	-	330	0	-	-	210	0		

Note: Wetland and watercourse acreage (AC) and linear feet (LF) are approximate.

				Wetland Functions and Values								
Wetland ID	Existing Wetland Area (AC)	Alternative 21D Percent potential permanent wetland impact	Alternative 26 Percent potential permanent wetland impact	Groundwater recharge/	Flood flow alteration	Fish habitat	Sediment/ toxicant retention	Nutrient removal/ retention/ transformation	Production export	Sediment/ shoreline stabilization	Wildlife habitat	
Wetland 1	0.8	75	25	Х	х		х	х	Х		х	
Wetland 2	0.2	50	50		x		х	х		х	х	
Wetland 4	0.9	75	55	х	x		х	х	х	х	х	
Wetland 6	0.2	100	50	х	х		х	х			х	
Wetland 8	0.3	<5	0	х	x		х	х			х	
Wetland 9	2.3	40	20	х	х	х	х	х	х	х	х	
Wetland 10	3.8	<5	0	х		х	х	х		х	х	
Wetland 12	0.4	<5	0	х	х		х	х			х	
Wetland 13	0.1	100	0	х	х						х	
Wetland 19	0.1	20	20		х		х	х	х	х		

Notes:

- 1. Wetlands not anticipated to be impacted are not included in this table.
- 2. Percentages have been rounded to nearest 5 percent.