
PIETRAS ENVIRONMENTAL GROUP, LLC

WETLANDS & WATERCOURSES INVESTIGATION REPORT

Date: May 18, 2017 PEG JOB#: 2016-219

Prepared for: Robert Green Associates, LLC
6 Old Waterbury Road
Terryville, CT 06786

Project Location: Proposed Solar Project, Candlewood Mountain Road (163+/- property) & transmission line connection to Rocky River Station, New Milford, CT

Report Site Maps: U.S.G.S. Map, Town of New Milford GIS Maps, CT Environmental Conditions Online Maps

Inspection Dates: December 9 thru 11, 2016 and May 4, 2017

Weather Conditions: December 9-11, 2016: cloudy to mostly sunny, 20's & 30's and no frost.
May 4, 107: sunny, 50's & 60's.

Soil moisture conditions: Moist to saturated

DEFINITIONS OF REGULATED RESOURCES

Federal Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33CFR Part 328.3(b)).

State of CT Regulated Wetlands and Watercourses (General Statutes, Chptr 440, Sec. 22a-28 to 22a-45)

Tidal Wetlands are defined as "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and which may grow or be capable of growing some, but not necessarily all of the following:" (includes plant list) sec. 22a-29(2).

Inland Wetlands "means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service.

Watercourses "means 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 area contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation" section 22a-38(16).

Regulated Wetlands and Watercourses Identified in Project Areas:

Federal Wetlands: **yes** Federal Wetland Classification: **PFO, PSS**
Inland Wetlands: **yes** Watercourses: **yes** river: **XX** brook: **XX** lake: **XX** intermittent watercourse: **XX**

Wetland boundary flag #'s: **The wetland boundaries were delineated with numbered, survey tapes. The approximate locations of the delineated Federal Wetlands and CT Inland Wetlands are portrayed on the wetland sketch maps which are included in this report.**

Local Regulated Upland Review Area: From Wetlands: 100 feet From Watercourses: 100 to 200 feet

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

15 Briarwood Lane
Wallingford, CT 06492
203-314-6636

EMAIL Tom@pietrasenvironmentalgroup.com
WEB SITE pietrasenvironmentalgroup.com

METHODOLOGY FOR IDENTIFICATION OF SOILS, WETLANDS & WATERCOURSES

- 1) Federal Wetlands: The 1987 U.S. Corps of Engineers Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (January 2012) provide information and procedures for conducting Federal Wetland delineation. The methodology established by the Federal Government uses a three parameter approach utilizing hydrologic indicators, hydrophytic vegetation and hydric soils for identifying Federal Wetlands.
- 2) Soil Types: Soils are investigated by digging test holes with a spade and auger. Test holes are typically dug to depths of between 15 and 40 inches. Based on soil features, including coloration patterns, texture and depths to restrictive layers, the soils are identified by soil series name utilizing the classification system of the National Cooperative Soil Survey. Soil series map numbers correspond with the State Soil Map Legend established by USDA, NRCS in the State of Connecticut Soil Survey. For further soils information, refer to the NRCS website for CT: www.ct.nrcs.usda.gov
- 3) Inland Wetlands: Soil test holes and borings are made in selected areas in order to determine the lateral extent of any Inland Wetlands. The boundaries of the Inland Wetlands are identified in the field and delineated with consecutively numbered survey tapes. The approximate locations of the wetland boundaries are hand drawn onto a map and are included with the wetlands report.
- 4) Watercourses: The lateral limits of U.S. Army Corps jurisdiction for non-tidal rivers, streams and water bodies extends to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. The Corps defines the term "ordinary high water mark" as the following: "means the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." 33 CFR 328.3(e). The Corps recommends that whenever possible the investigator should consider the former indicators along with a number of others, that include: wracking; vegetation matted down, bent or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; beds and banks; water staining; and change in plant community.

RESULTS OF INVESTIGATION FOR WETLANDS AND WATERCOURSES

Thomas W. Pietras, Professional Wetland and Soil Scientist, conducted site inspections to the 163+/- acre Candlewood Mountain Road property on December 9, 10 and 11, 2016. The parcel is located on a ridge which lies to the north of Candlewood Lake (refer to USGS Project Location Map). Most of the property is wooded. Grassed fields are present in the southern portion of the property. A horse paddock is located in the southwestern portion and fronts onto Candlewood Mountain Road. The slopes on the property range from very steep to gently sloping. Grades generally fall both to the east and west. On May 4, 2017 Mr. Pietras conducted investigations for wetlands along the proposed transmission line route which will extend from eastern side of the Candlewood Mountain Road Property through First Light Hydro Generating Company land to the Rocky River Station. The proposed transmission route will extend to the north of Candlewood Lake.

Several intermittent watercourses, brooks and the Rocky River are present in the project area. The locations of these watercourses are shown on the CT Inland Wetland and Federal Wetland sketch maps. The far northeastern portion of Candlewood Lake and the dam are located on First Hydro Generating Company Land. A vernal pool is located in the northeastern portion of the Candlewood Mountain Road property (wetland boundary flags 124 thru 132). On 12/10/2016 the pool was found to contain up to four feet of water. On 5/4/2017 the water level in the pool has receded by 3 to 6 inches. However, there was still at least two feet of water in portions of the pool. Excess drainage from the vernal pool passes into an intermittent watercourse which flows off-site in a northeasterly direction. In addition, there was shallow inundation (less than 12 inches) within the more level portions of the large wooded swamp (delineated by wetland flags 1 thru 59).

Wetlands & Watercourses Investigation Report: Proposed Solar Project on Candlewood Mountain Road Property & proposed transmission line to Rocky River Station, New Milford, CT page 3 of 5

Both CT Inland Wetlands and Federal Wetlands are present on the Candlewood Mountain Road property and on First Light Hydro Generating Company land. The majority of the established wetland boundary flags serve to delineate both Federal Wetlands and CT Inland Wetlands. A small area of CT Inland Wetland (delineated by wetland flags CT 501 to 508 & CT 520 to 524) was identified to the south of the large wooded swamp which does not qualify as Federal Wetlands (not dominated by hydrophytes). Several small pockets of CT Wetlands were identified on the eastern side of a deep drainage ditch (CT 530 to 535, CT 540 to 546, CT 550 to 560 & CT 570 to 575). The ditch runs north-south between woodlands and the horse paddock. The ditch has partially drained the CT Inland Wetland soils which do not qualify as Federal Wetlands (absence of wetland hydrology & mix of hydrophytic & non-hydrophytic vegetation).

CT Inland Wetlands include Ridgebury fine sandy loam (2), Ridgebury, Leicester & Whitman soils (3), Timakwa and Natchaug soils (17), Catden and Freetown soils (18) and Fluvaquents-Udifuvents (109). The Ridgebury is a poorly drained glacial till soil which developed in friable loamy till underlain by dense, compact lodgement till (hardpan). Ridgebury, Leicester and Whitman are poorly drained and very poorly drained, very stony, glacial till soils. Timakwa and Natchaug are very poorly drained, moderately deep (16 to 51 inches) peats and mucks (organic soils). Catden and Freetown are very poorly drained, organic soils containing greater than 51 inches of peats and mucks. Fluvaquents-Udifuvents are recently formed, alluvial floodplain soils which contain variable soil drainage classes and soil textures.

The Federal Wetlands in the project area include forested swamp (PFO) and scrub-shrub swamp (PSS). Palustrine (P) wetlands are non-tidal wetlands dominated by trees, shrubs, persistent emergent and emergent mosses or lichens. Palustrine forested swamp (PFO) is characterized by hydrophytic woody vegetation that is 6 meters (20 feet) or taller. They normally include an overstory of trees, understory of young trees or shrubs, and herbaceous layer. Palustrine scrub-shrub wetlands (PSS) are wetlands dominated by woody vegetation less than 6 meters tall (20 feet). They are commonly referred to as shrub swamp or shrub/sapling swamp.

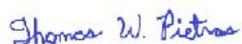
Ten Federal Wetland data plot transects with two data plots per transect were established to document the vegetation, hydrologic indicators and soils along the delineated Federal Wetland boundaries. Approximate locations of the data plots are shown on the Federal Wetland sketch maps. The completed data forms are included with this report.

An eroded drainage channel is located on the steeply sloping hillside which is situated in the northwestern portion of the property (south of the wetland delineated by wetland flag #'s 103 thru 123). There was no flow in the channel during the December site investigations. The drainage channel was labeled as an "eroded channel." The channel was re-inspected on May 4, 2017 which occurred following a 6 week period with rainfall was well above normal. There was no flow in the channel on 5/4/2017. It is likely that periodically, the channel carries storm flow associated with especially large storm events. However, the channel does not qualify as an intermittent watercourse.

A seasonally flowing, brook runs down a very steeply sloping hillside containing a large boulder train on the eastern side of the Candlewood Mountain Road property towards First Light Hydro Generating Company land (to the east of wetland flag #'s 60-83). For 100 to 200 feet the brook channel disappears as the flowage goes underground through the boulder train. The brook re-appears downhill at the base of the boulder train.

Respectfully submitted,

PIETRAS ENVIRONMENTAL GROUP, LLC



Thomas W. Pietras
Professional Wetland and Soil Scientist

BRIEF DESCRIPTIONS OF SOIL MAP UNITS IDENTIFIED

WETLAND SOILS

2 Ridgebury fine sandy loam (Aeric Epiaquepts) - This is a deep, poorly drained, glacial till soil that developed in a friable, coarse-loamy textured solum overlying dense, basal till (hardpan). The till was derived from schist, gneiss and granite. Ridgebury soils occur on glaciated plains, hills and ridges. The hardpan is within 20 to 30 inches of the soil surface and it has very slow permeability. A seasonal, perched ground water table is typically present within a foot of the surface from late fall through mid-spring.

3 Ridgebury, Leicester & Whitman soils (Aquepts) – These are poorly drained and very poorly drained, coarse-loamy textured, glacial till soils. The till was derived from schist, gneiss and granite. These soils occur on glaciated plains, hills and ridges. Ridgebury and Whitman soils contain dense basal till (hardpan) in the subsoil within 20 to 30 inches of the soil surface. A water table is typically present within a foot of the surface from late fall through mid-spring.

17 Timakwa and Natchaug soils (Terric Haplosaprists) – These are deep, very poorly drained, peats and mucks, organic soils overlying either sandy or loamy subsoil. Depth of the peats and mucks ranges from 16 to 51 inches. Timakwa and Natchaug soils developed within depressions subject to ponding. These soils are subject to up to twelve inches of seasonal ponding. The seasonal water table typically remains within six inches of the surface. These soils were formerly mapped in Connecticut as Peat and Muck, shallow.

18 Catden and Freetown soils (Typic Haplosaprists) - These are deep, very poorly drained, peats and mucks, organic soils. Depth of the peats and mucks is over 51 inches. Catden and Freetown soils developed within depressions subject to ponding. These soils are subject to up to twelve inches of seasonal ponding. The seasonal water table typically remains within six inches of the surface. These soils were formerly mapped in Connecticut as Peat and Muck.

109 Fluvaquents-Udifluvents This soil map unit consists of well drained to very poorly drained, nearly level soils that formed in very recent alluvium deposited by rivers and streams. These soils are found in floodplains and along side brooks and rivers. The soils are occasionally to frequently flooded, which often results in stream scouring, lateral erosion and shifting of soil from place to place. Soil characteristics, such as texture and stoniness, are usually highly variable within short distances.

NON-WETLAND SOILS

45 Woodbridge fine sandy loam (Aquic Dystrudepts) - This is a deep, moderately well drained, glacial till soil that developed in a friable, coarse-loamy textured solum overlying dense, basal till (hardpan). The till was derived from schist, gneiss and granite. The hardpan is within 20 to 40 inches of the soil surface. A seasonal water table is present between 18 and 30 inches of the surface.

50 Sutton fine sandy loam (Aquic Dystrudepts) - This is a deep, moderately well drained, friable, coarse-loamy textured, glacial till soil derived from schist, gneiss and granite. A seasonal water table is present between 18 and 30 inches of the surface.

73 Charlton-Chatfield complex (Typic Dystrudepts) - These are deep and moderately deep, well drained, friable, coarse-loamy textured, glacial till soils derived from schist, gneiss and granite. Depth to bedrock ranges from 20 inches to over 5 feet. About 50% of the soils in this complex are greater than 5 feet to bedrock. The water table is generally greater than five feet below the surface.

75 Hollis-Chatfield-rock outcrop complex (Typic & Lithic Dystrudepts) - These are shallow to moderately deep to bedrock, well drained to somewhat excessively drained, friable, coarse-loamy textured, glacial till soils derived from schist, gneiss and granite. Depths to bedrock range from 0 to over 5 feet. Roughly 1/3 of the soils in this complex are shallow (10-20 inches) to bedrock, while another 1/3 are moderately deep (20-40 inches) to bedrock.

76 Rock outcrop-Hollis complex (Lithic Dystrudepts) - This map unit consists mainly of exposed bedrock and shallow to bedrock soils that are 10-20 inches deep. The soils are somewhat excessively drained, friable, coarse-loamy textured, glacial till soils derived from schist, gneiss and granite.

BRIEF DESCRIPTIONS OF SOIL MAP UNITS IDENTIFIED – Non-wetland Soils continued

84 Paxton and Montauk fine sandy loams (Oxyaquic Dystrudepts) - These are deep, well drained, glacial till soils that developed in a friable, coarse-loamy textured solum overlying dense, coarse-loamy to loamy sand textured, basal till (hardpan). The till was derived from schist, gneiss and granite. Typical depth to hardpan is 30-40 inches. An occasional perched, seasonal water table is present between 24 and 36 inches of the surface.

308 Udorthents, smoothed - This is a well drained to moderately well drained, disturbed soil area that has had two or more feet of the original soil surface altered by filling, excavation or grading activities. Udorthents, smoothed soils commonly occur on leveled land and fill landforms.

PIETRAS ENVIRONMENTAL GROUP, LLC

WETLANDS REPORT

May 21, 2017

Robert Green Associates, LLC
6 Old Waterbury Road
Terryville, CT 06786

Re: Proposed Solar Project, Candlewood Mountain Road (163+/- property) &
transmission line connection to Rocky River Station, New Milford, CT
PEG Job #: 2016-219A

The following are brief descriptions of the wetlands and watercourses identified in the project area:

Wetlands I thru V are located on the Candlewood Mountain Road Property

Wetland I (wetland flag #'s 1 thru 59 & 60 thru 83)

Wetland I is a moderately large wetland (6+/- acres) that mainly supports forested swamp with some areas of shrub swamp. The terrain includes a mix of slight depressional, level, gently sloping and moderately sloping. Soils include poorly drained and very poorly drained, glacial till and very poorly drained organic soils. Some of the organic soils contain more than 4 feet of peats and mucks. Portions of the very poorly drained organic soils are characterized by shallow (less than 12 inches), seasonal inundation. The wetland forms the headwaters for a seasonally flowing watercourse which flows southeasterly to easterly from the wetlands.

Wetland II (wetland flag #'s 95 thru 98 and 99 thru 102)

Wetland II is a narrow section of a wetland corridor extending in a south to north direction. A small pond is located off-site to the south of the subject property. Drainage from the pond flows into a culvert that extends underground through the western portion of Wetland II. The wetland contains poorly drained, glacial till soils and supports a mix of forested swamp, shrub swamp and wet meadow.

Wetland III (wetland flag #'s 103 thru 123)

The wetland is a small (0.75+/- acre) forested swamp on a sloping hillside. The wetland contains poorly drained Ridgebury fine sandy loam and is characterized by minor side-slope seepage with seasonally saturated soils. The seasonal ground water table is perched over the compact, lodgement till subsoil (hardpan).

Wetland IV (CT wetland flag #'s 530 thru 535, 540 thru 546, 550 thru 560 & 570 thru 575)

Several small pockets of poorly drained Ridgebury fine sandy loam (CT Wetlands) are located in the southwestern portion of the subject property and lie to the east of horse paddocks. A deep drainage ditch was excavated at the eastern edge of the horse paddocks. As a result of the excavated ditch the Ridgebury soils have been artificially drained and no longer possess wetland hydrology. The Ridgebury soils support a mix of hydrophytic and non-hydrophytic forest plants. These wetlands qualify as CT Inland Wetlands, but do not qualify as Federal Wetlands.

15 Briarwood Lane
Wallingford, CT 06492
203-314-6636

EMAIL Tom@pietrasenvironmentalgroup.com
WEB SITE pietrasenvironmentalgroup.com

Wetlands Report - Proposed Solar Project, Candlewood Mountain Road (163+/- property) & transmission line connection to Rocky River Station, New Milford, CT page 2 of 2

Wetland V (wetland flag #'s 124 thru 132)

Wetland V consists of a small (0.1+/- acre) vernal pool. The vernal pool wetland is located in a minor valley between two ridges where seasonally water is trapped in a shallow basin. The pool holds up to three feet of water during the wettest periods of the year. Excess drainage from the wetland passes to the northeast into an intermittent watercourse. The pool is located within a forested area. Vegetation is absent from the majority of the vernal pool due to the prolonged inundation.

Wetlands VI thru IX are located on the First Light Hydro Generating Company Land

Wetland VI (wetland flag #'s 201 thru 245)

The wetland includes a stream valley and a portion of a hillside characterized by side-slope seepage. A brook exits from a culvert located at the northern side of the Candlewood Lake dam and flows northerly through the stream valley. The watercourse is locally referred to as the Rocky River. A seasonally flowing brook passes easterly from a boulder train on the Candlewood Mountain Road property and merges with the Rocky River. The wetlands contain poorly drained and very poorly drained, glacial till soils and support forested swamp vegetation.

Wetland VII (wetland flag #'s 246 thru 251, 252 thru 278, 279 thru 306 & 307 thru 314)

The wetlands are characterized as hillslope, seasonally wet forested swamp (several acres or more in size). The soils are poorly drained glacial till soils containing compact, lodgement till (hardpan). The seasonal groundwater table is perched over the hardpan subsoil. A minor brook develops within the wetland and flows in a northeasterly direction and discharges into the Rocky River.

Wetland VIII (wetland flag #'s 315 thru 332)

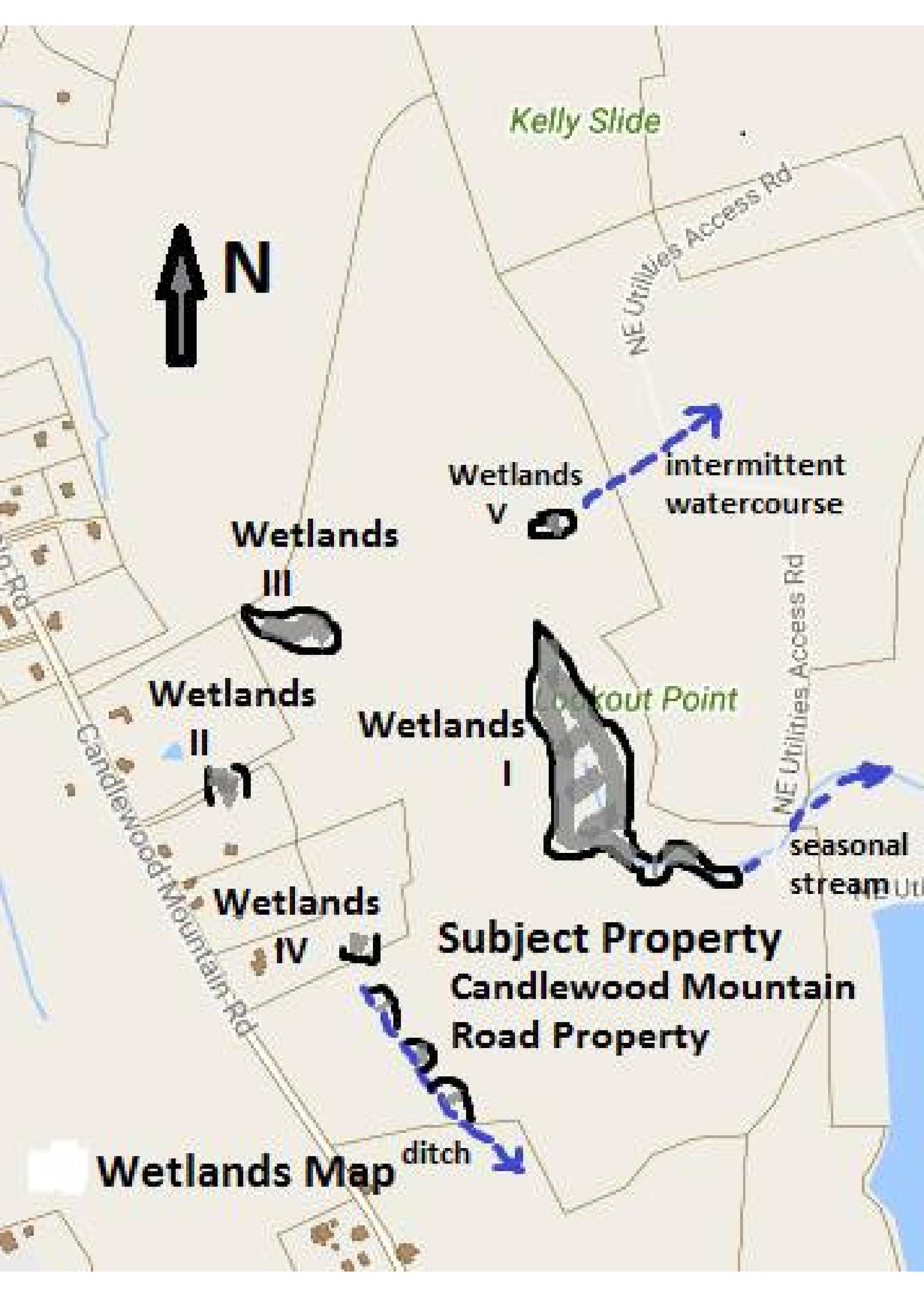
Wetland VIII is on a side slope located downslope from Candlewood Lake. The wetland contains poorly drained glacial till soils with a hardpan which are subject to seasonal seepage. A small watercourse exits from a culvert that outlets into the wetlands. The watercourse flows in a northerly direction for several hundred feet along the eastern side of an access road. These wetlands have been historically altered from some excavation which may be related to the construction of the access road. The wetlands support young forested swamp vegetation.

Wetland IX (flag #'s S2-101 thru 108 & S2-201 thru 208)

The wetland contains a small, seasonally flowing watercourse with a broad channel. On May 4, 2017 there was moderate flow within the channel. It is likely that the stream is dry for extended portions of the year. The stream is located on a sloping, forested hillside.



Project Location Map for Proposed Solar Project, Candlewood Mountain Road, New Milford, CT



Kerry Slide



NE Utilities Access Rd

Wetlands V

intermittent watercourse

Wetlands III

Wetlands II

Wetlands I

Kerry Point

NE Utilities Access Rd

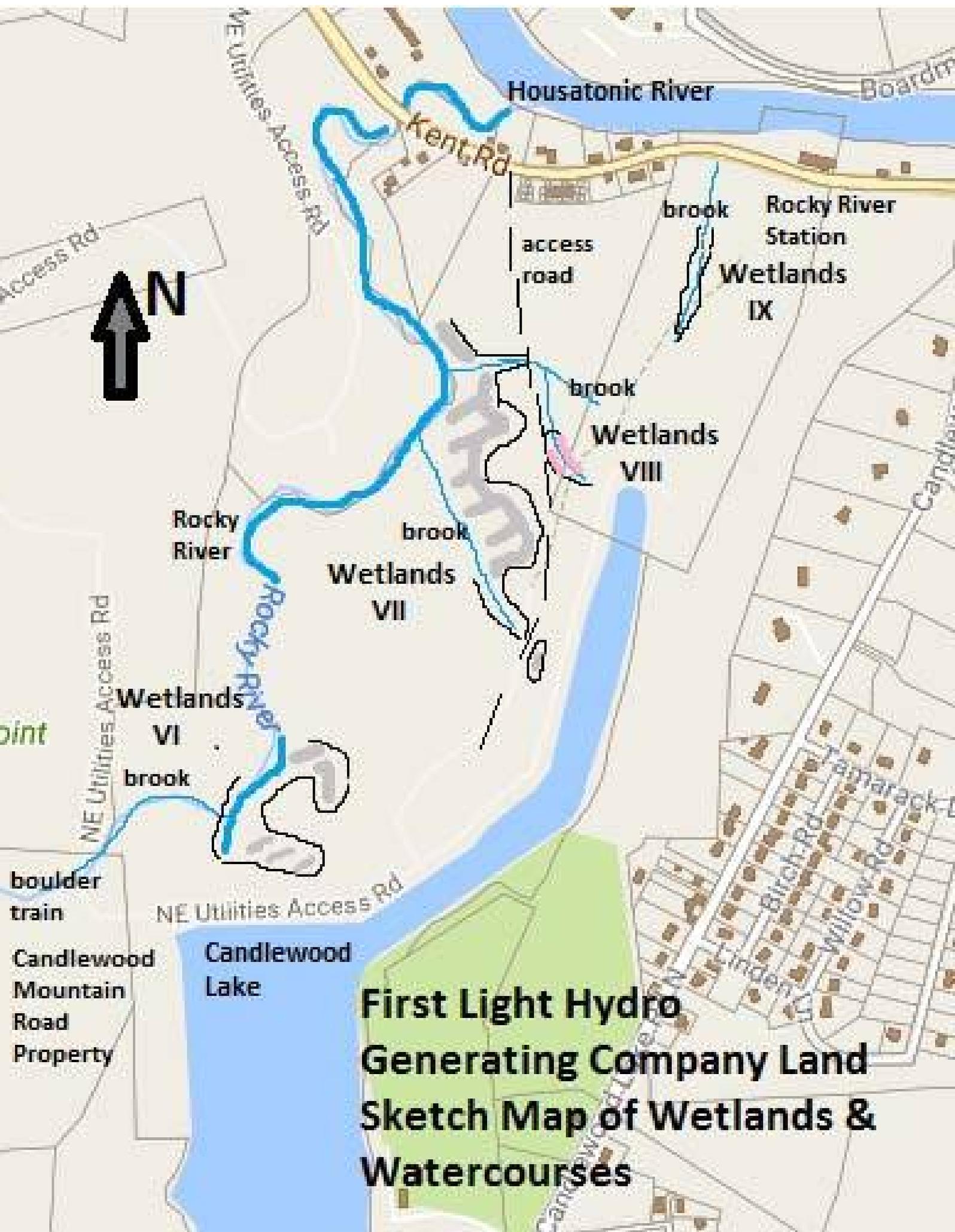
seasonal stream

Wetlands IV

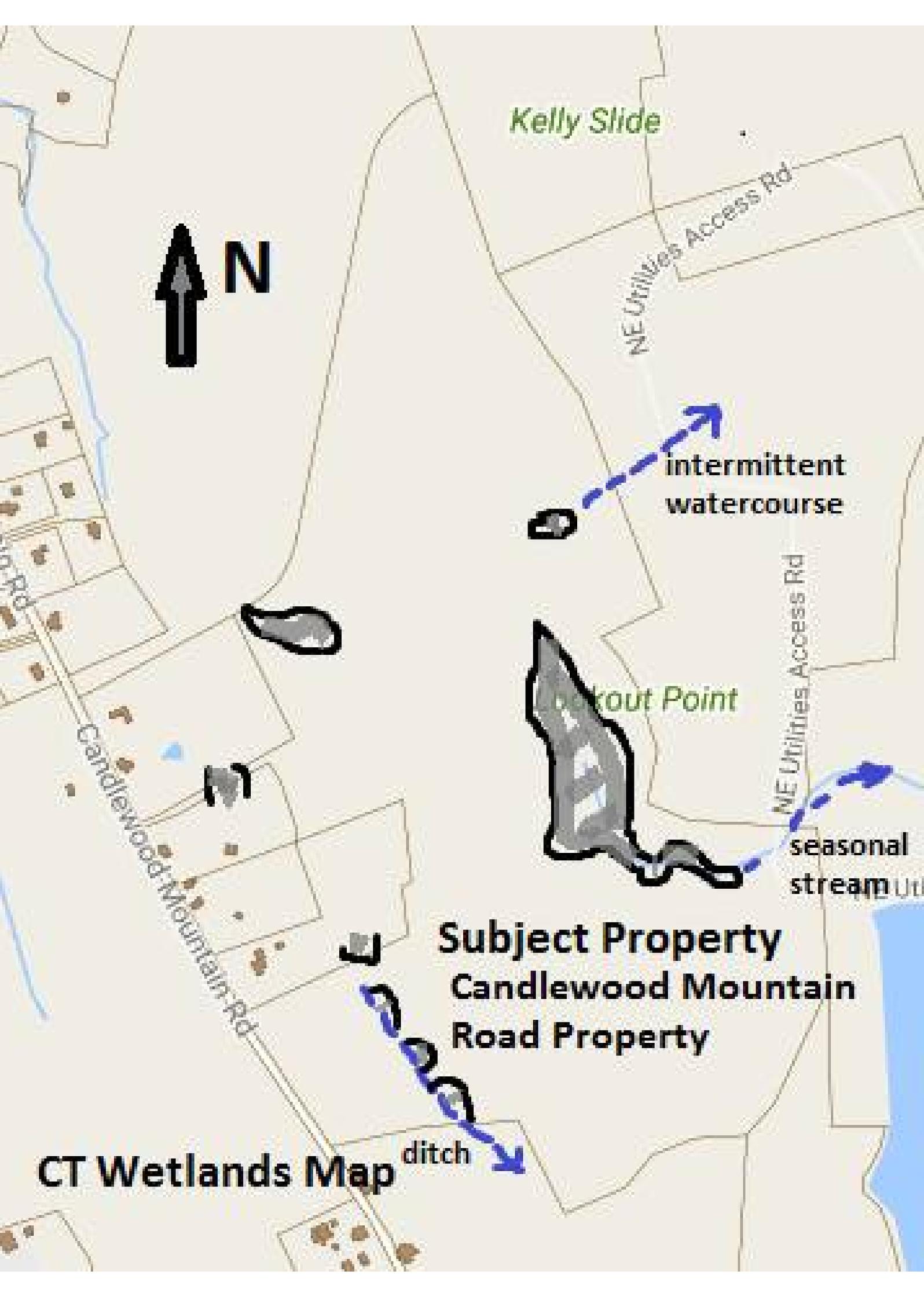
Subject Property
Candlewood Mountain
Road Property

ditch

Wetlands Map



First Light Hydro Generating Company Land Sketch Map of Wetlands & Watercourses

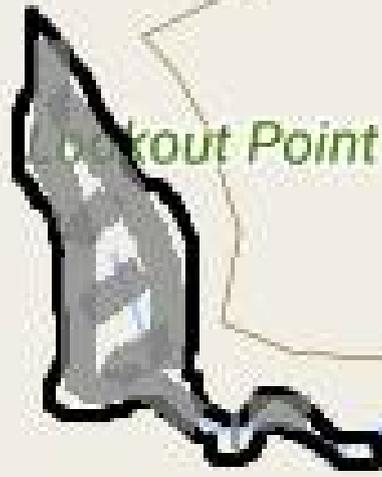


Kelly Slide



NE Utilities Access Rd

intermittent watercourse



Out Point

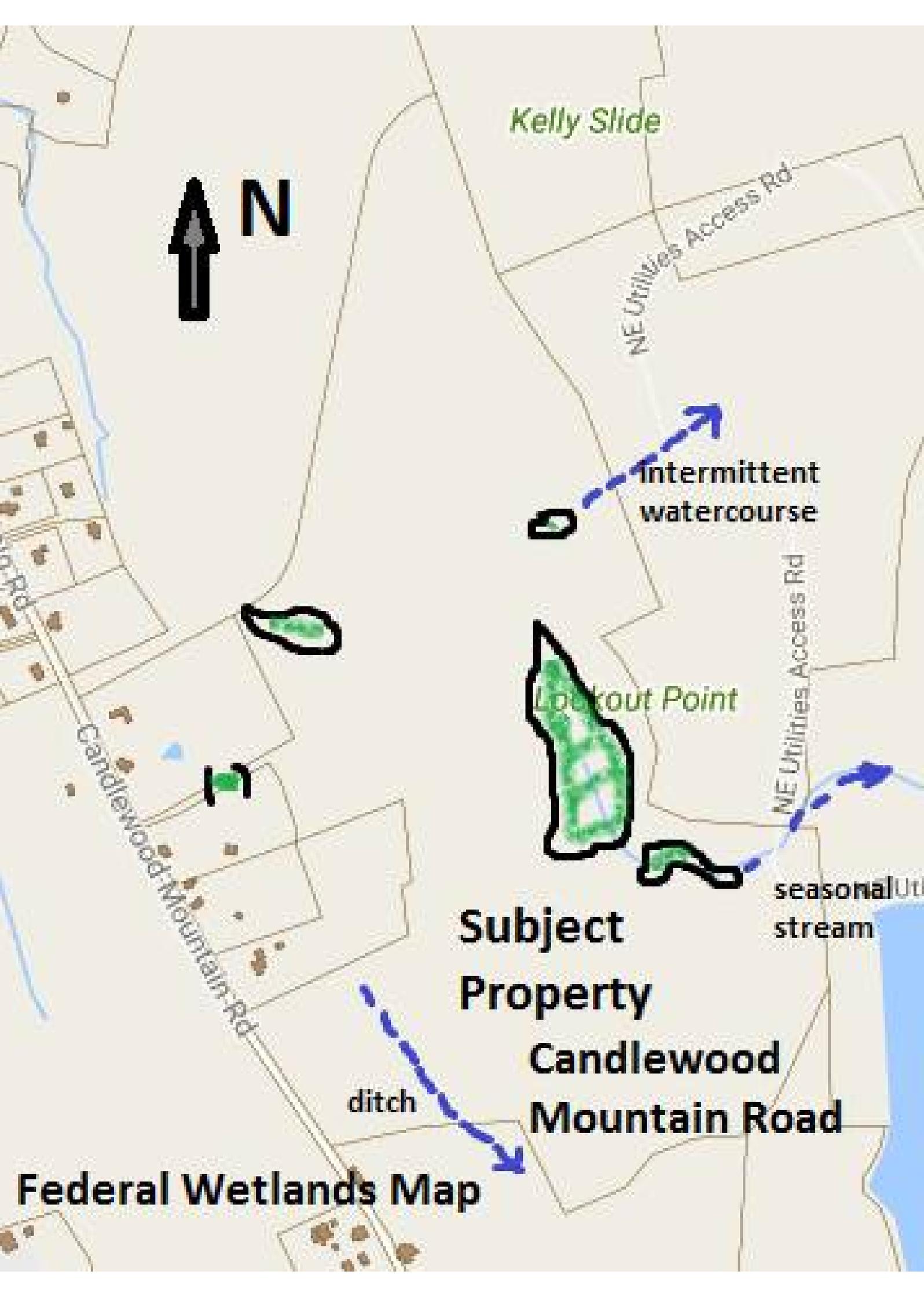
NE Utilities Access Rd

seasonal stream

Candlewood Mountain Rd

**Subject Property
Candlewood Mountain
Road Property**

CT Wetlands Map ditch



Kelly Slide



NE Utilities Access Rd

intermittent watercourse

Lookout Point

NE Utilities Access Rd

seasonal stream

Subject Property
Candlewood Mountain Road

ditch

Federal Wetlands Map



Housatonic River

Kent Rd

Rocky River Station

brook

access road

brook

brook

Rocky River

Rocky River

brook

NE Utilities Access Rd

NE Utilities Access Rd

Candlewood Lake

**First Light Hydro
Generating Company Land
Sketch Map of Wetlands &
Watercourses**



boulder train

Candlewood Mountain Road Property

point

Access Rd

NE Utilities Access Rd

Boardm

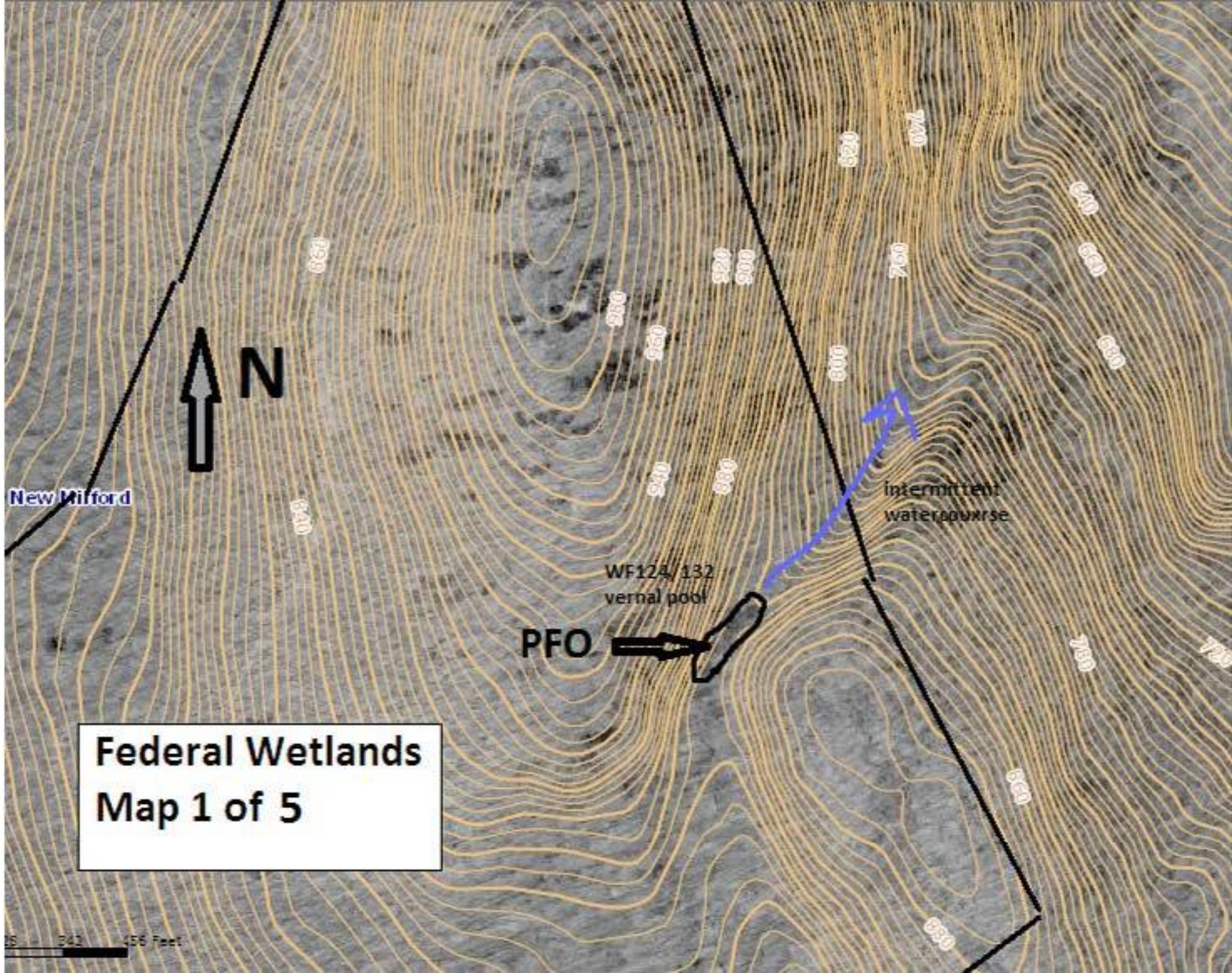
Candlewood

Anarack Rd

Birch Rd

Willow Rd

Candlewood Lake



N

New Milford

WF124, 132
vernal pool

PFO

intermittent
watercourse

Federal Wetlands
Map 1 of 5

0 342 684 Feet

Federal Wetlands Map 2 of 5



WF 123
WF 103

PFO

data plots
113-W/113-U
WF 113

WF 29

PFO

WF 32
data plots
32-W/32-U

PFO

data plots
101-W/101-U

eroded channel
not an intermittent
watercourse

data plots
40-W/40-U

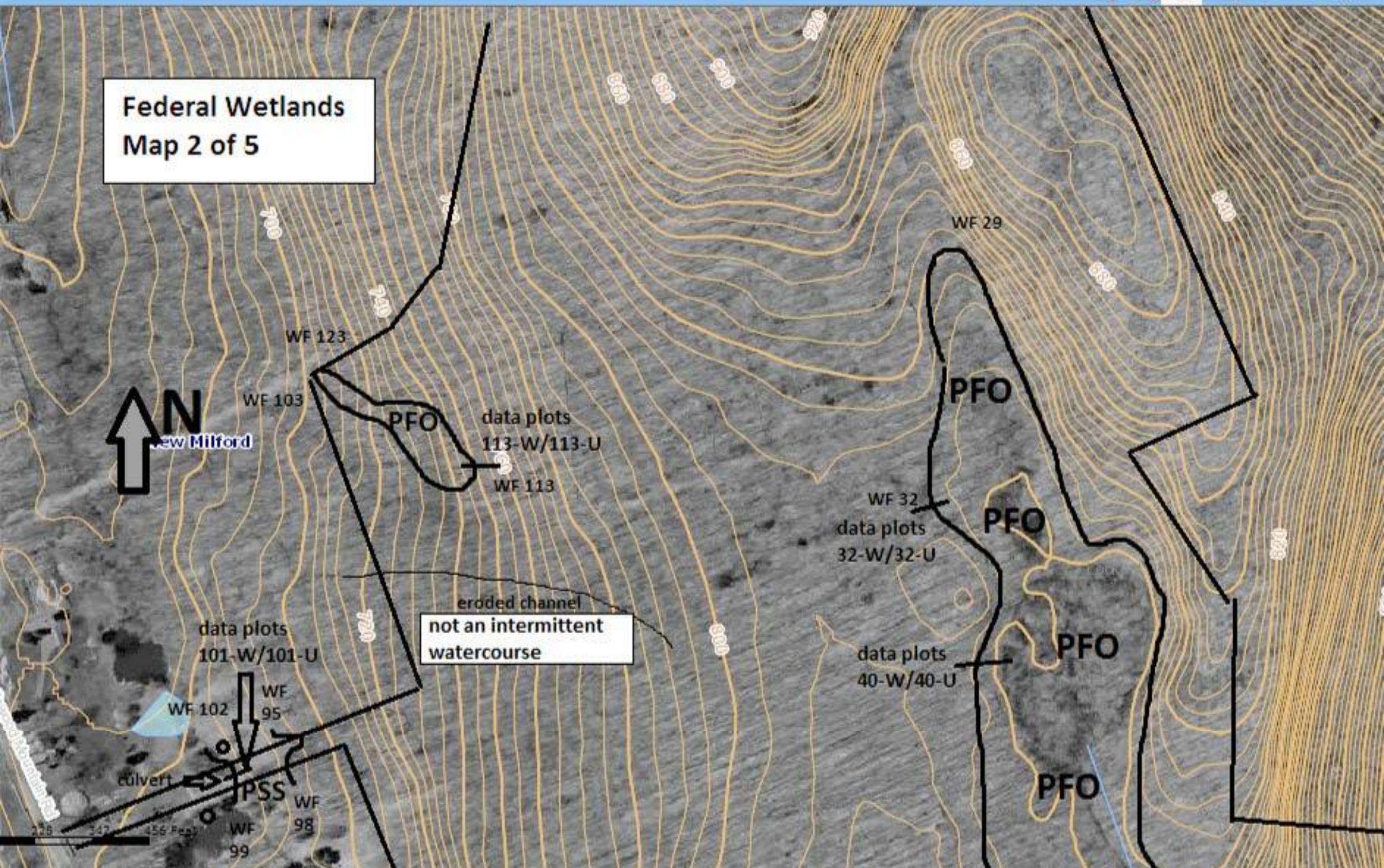
PFO

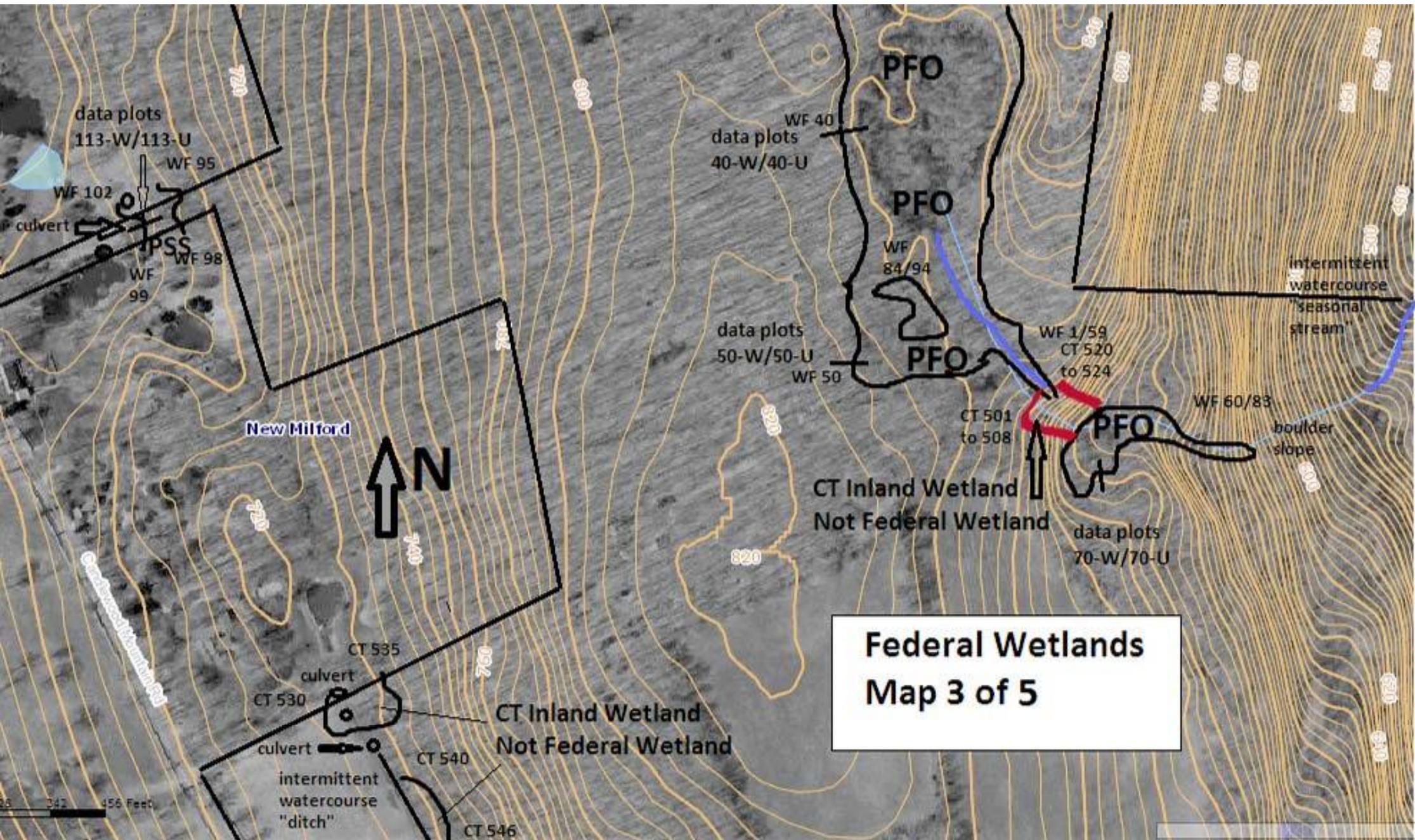
PFO

WF 102
WF 95
IPSS
WF 98
WF 99

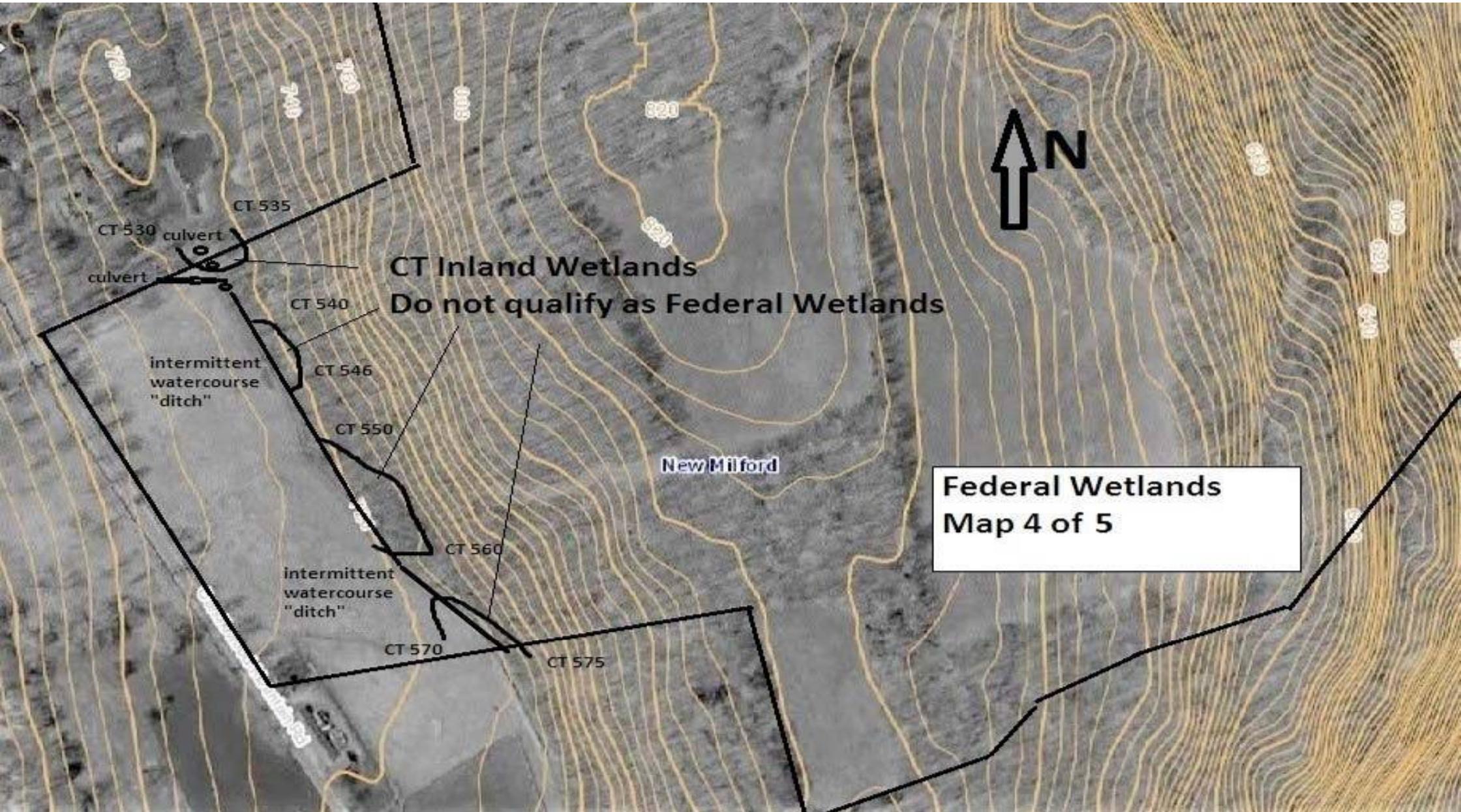
culvert

228 342 456 Feet



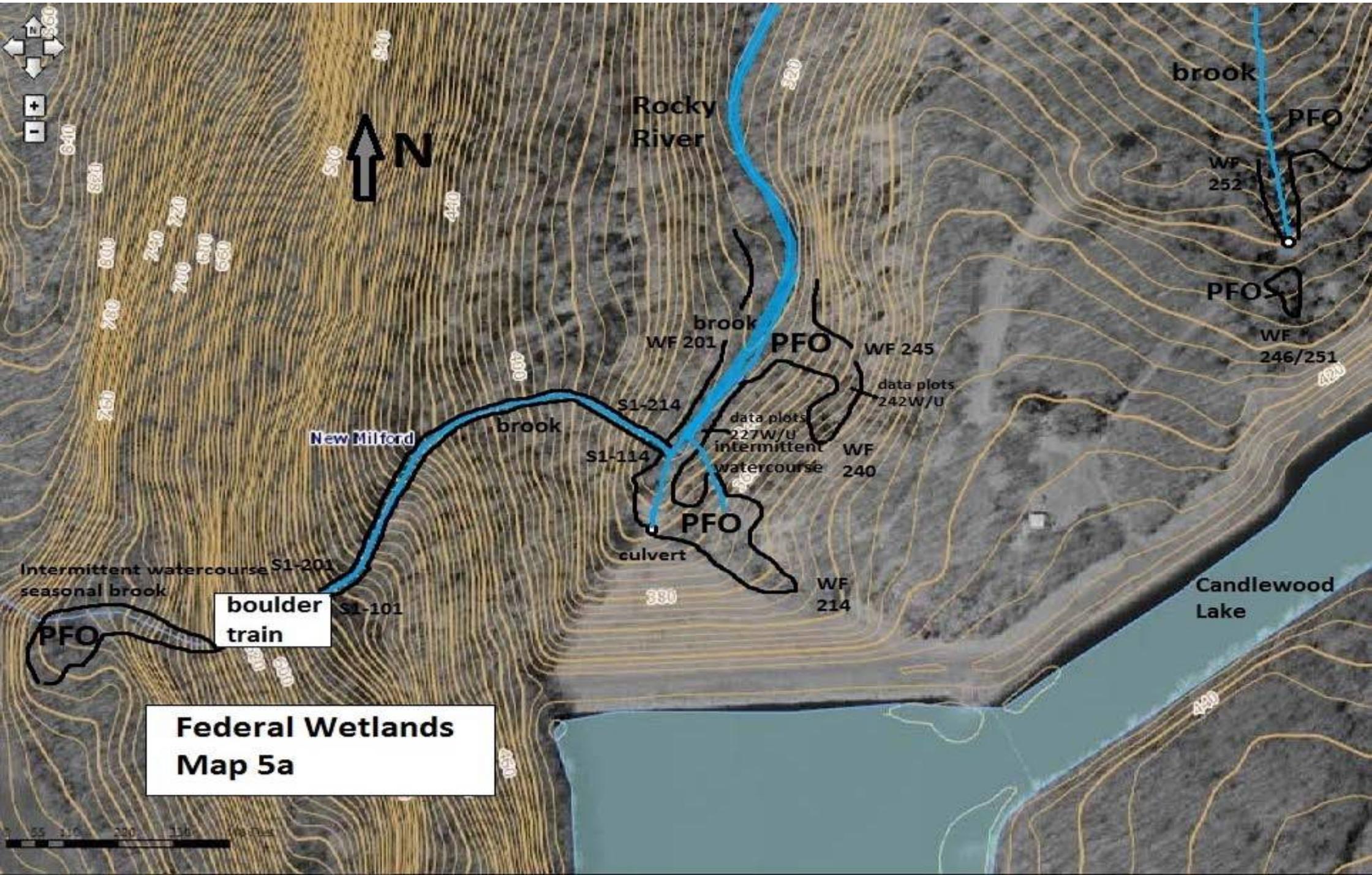


**Federal Wetlands
Map 3 of 5**

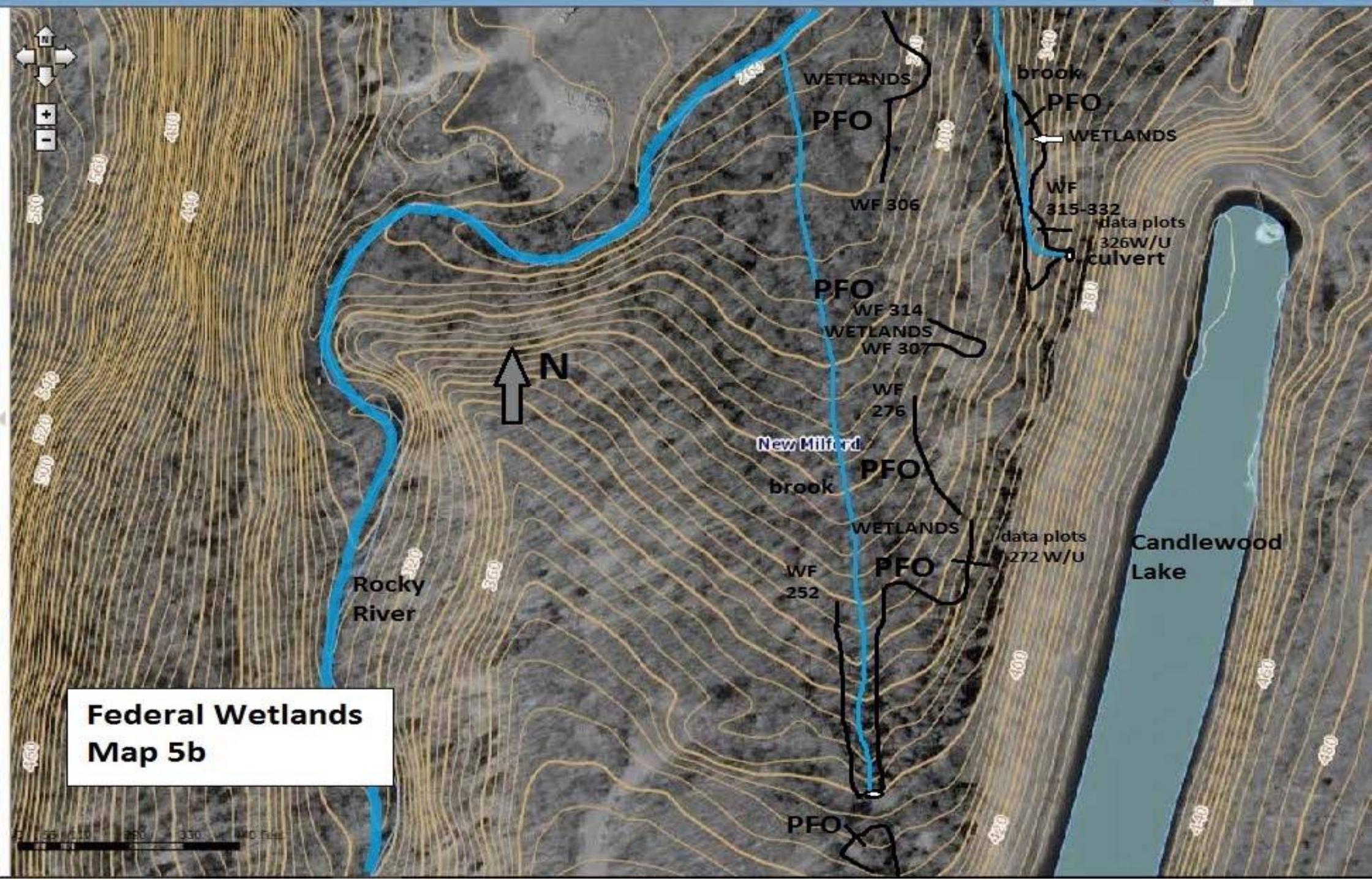


**CT Inland Wetlands
Do not qualify as Federal Wetlands**

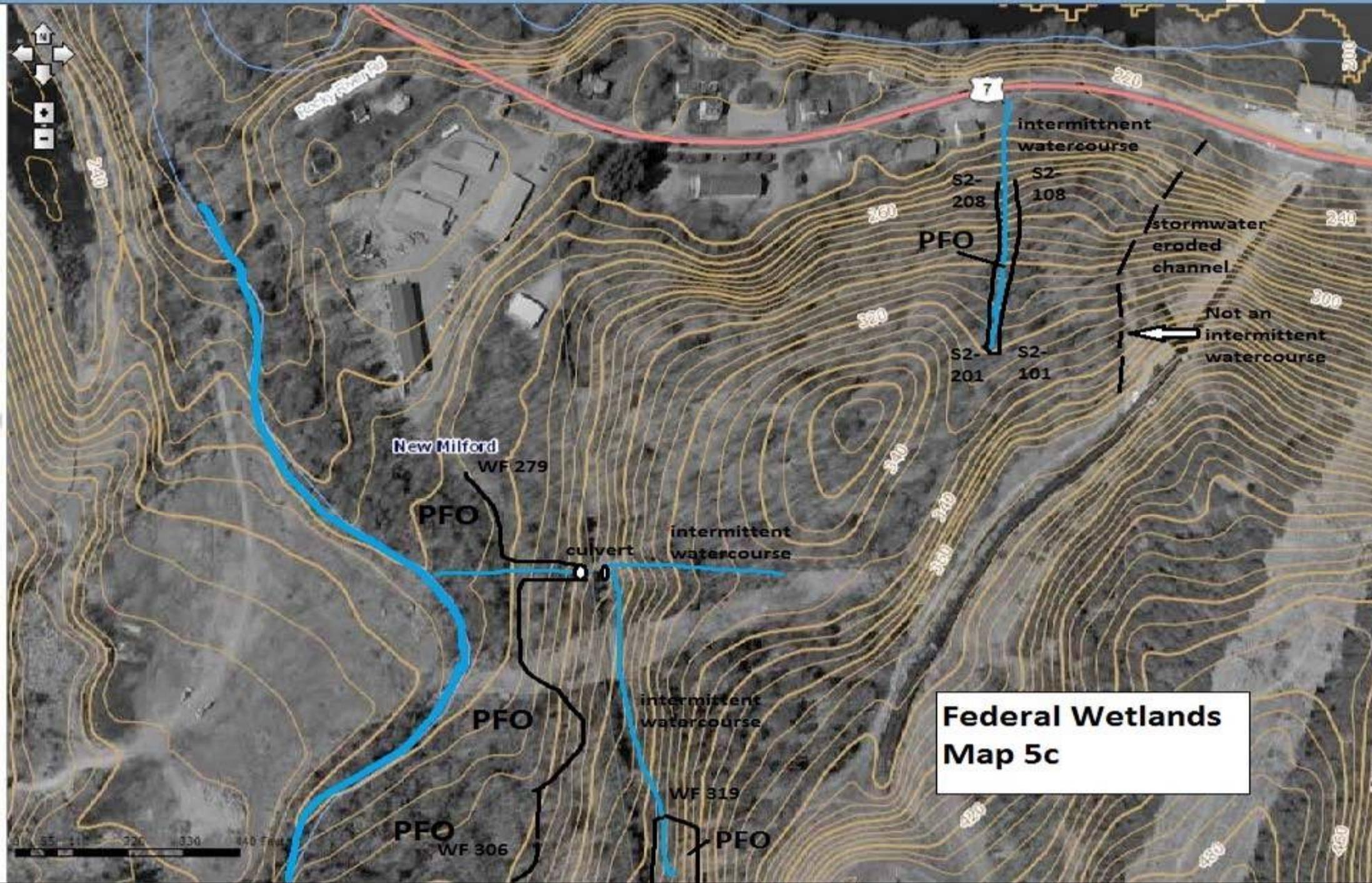
**Federal Wetlands
Map 4 of 5**



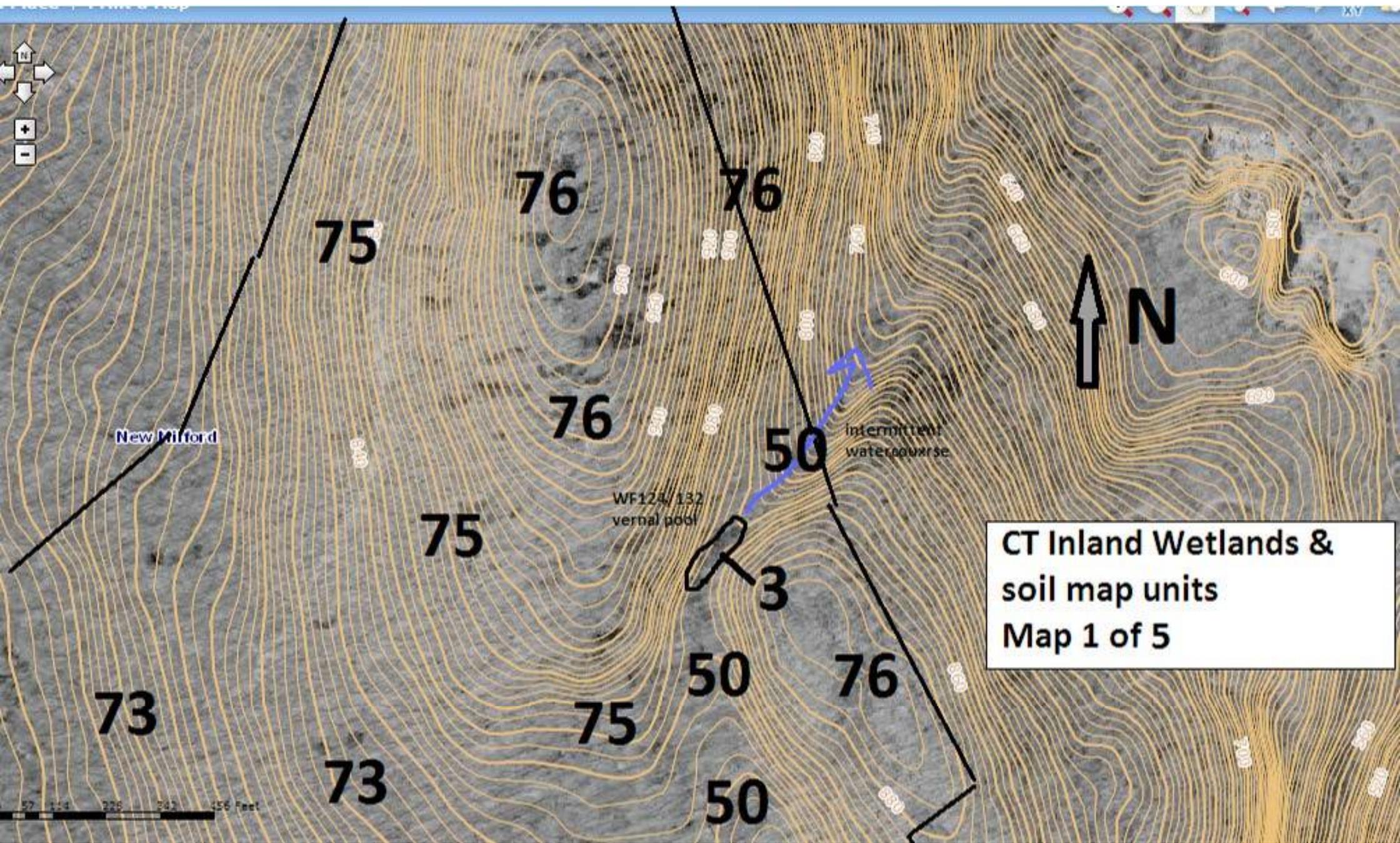
**Federal Wetlands
Map 5a**



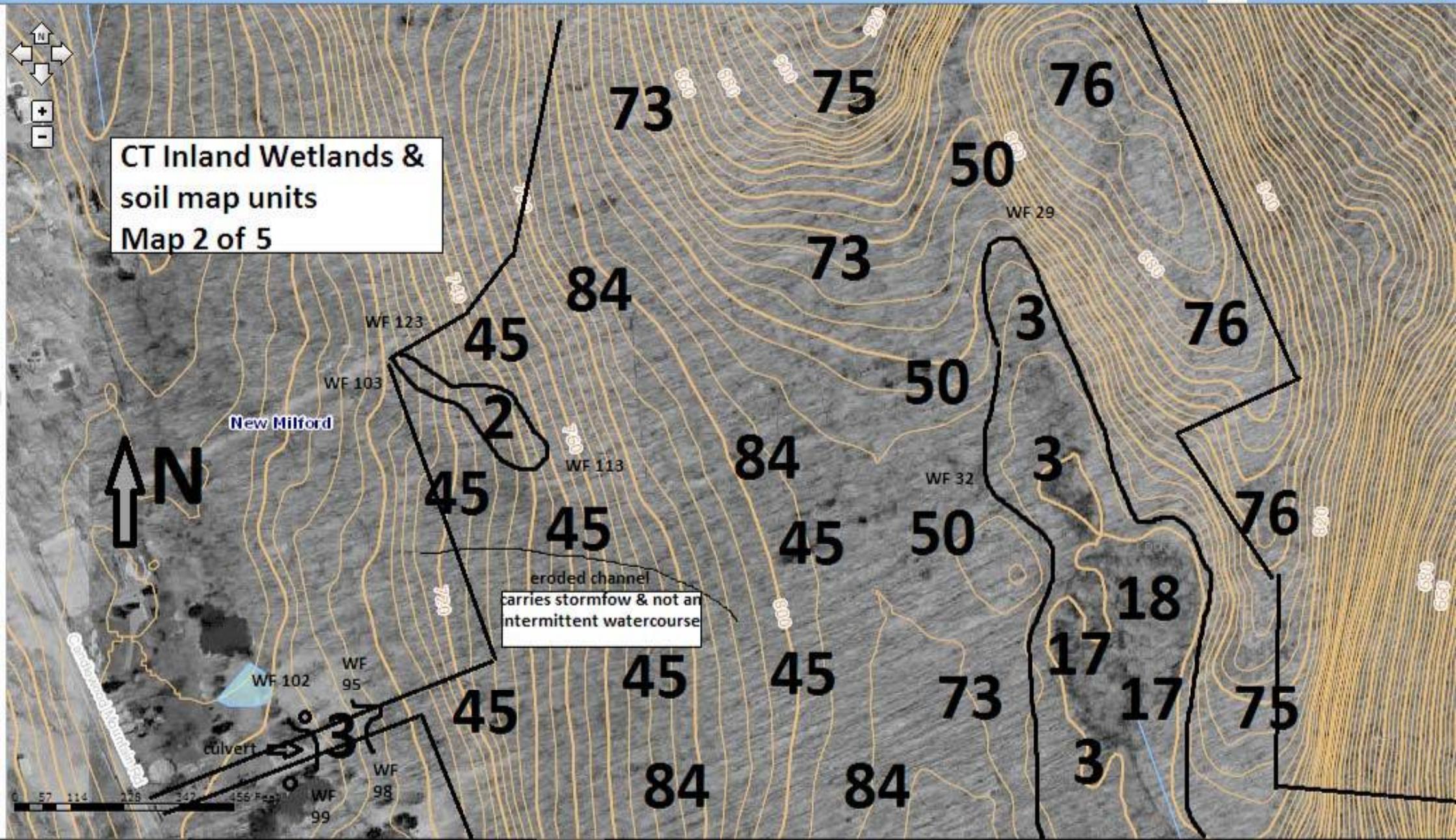
**Federal Wetlands
Map 5b**



**Federal Wetlands
Map 5c**



**CT Inland Wetlands &
soil map units
Map 1 of 5**



CT Inland Wetlands &
soil map units
Map 2 of 5

eroded channel
carries stormflow & not an
intermittent watercourse

N

New Milford

culvert

WF 123

WF 103

WF 113

WF 102

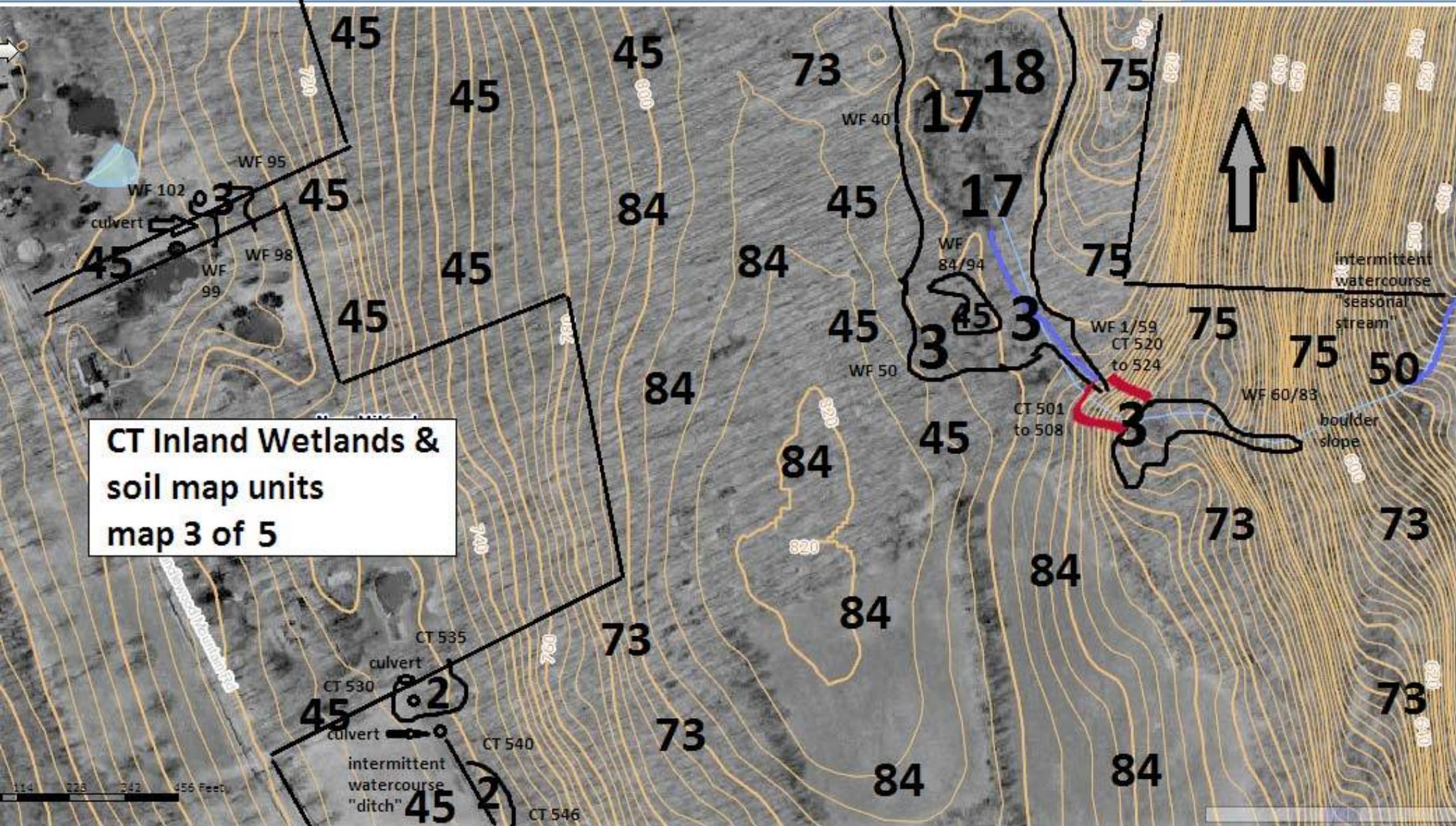
WF 95

WF 98

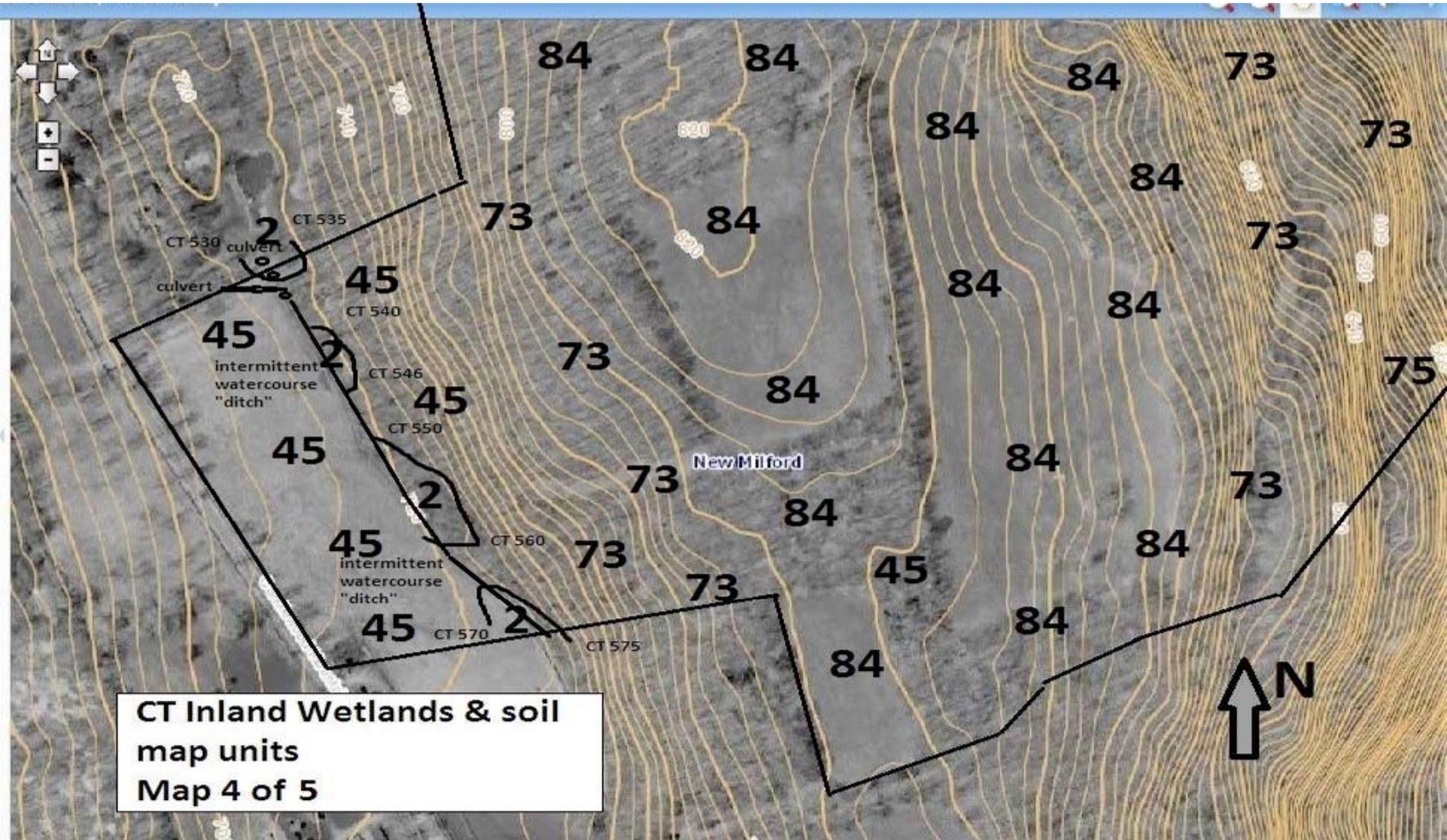
WF 99

WF 29

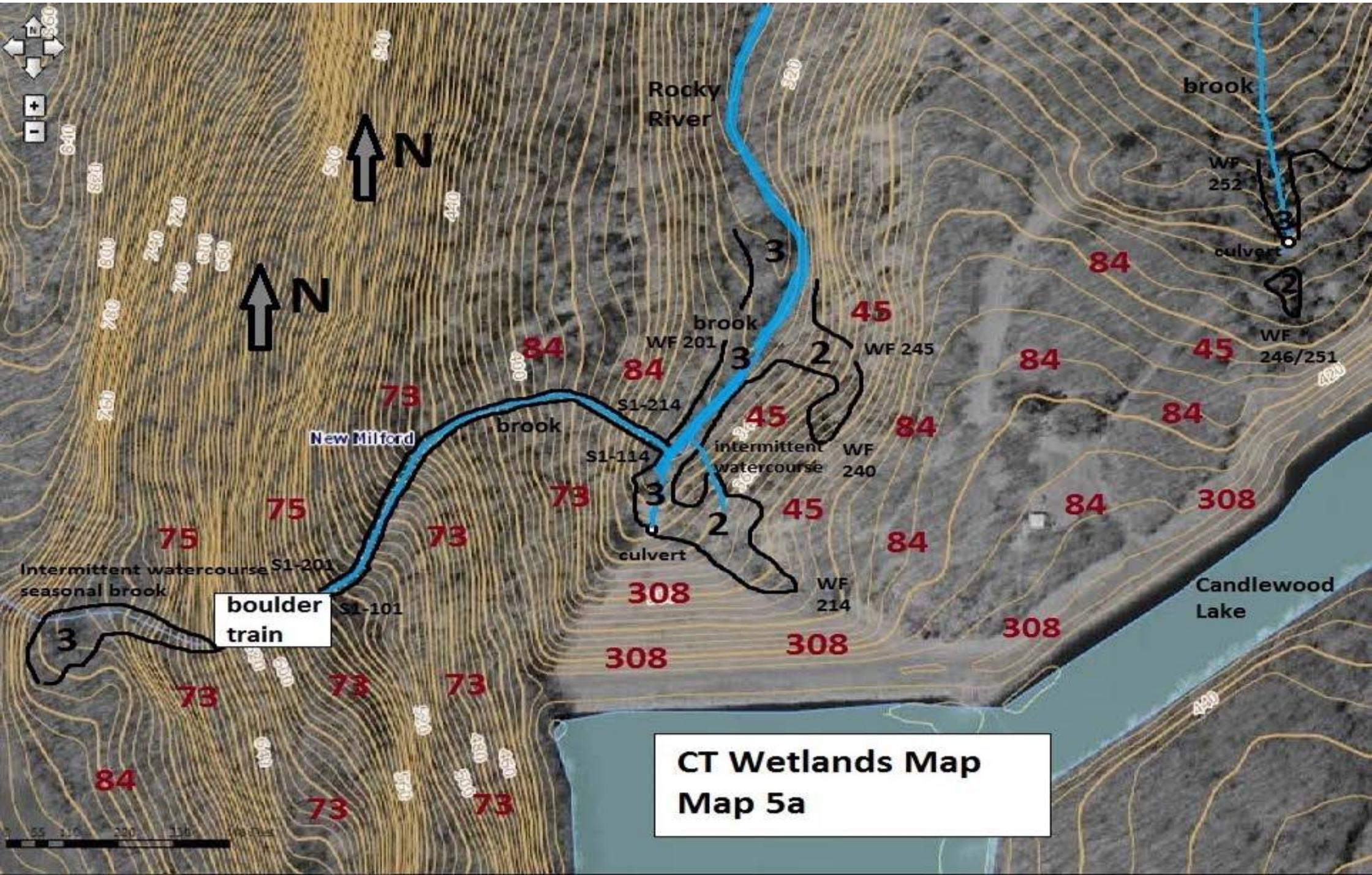
WF 32



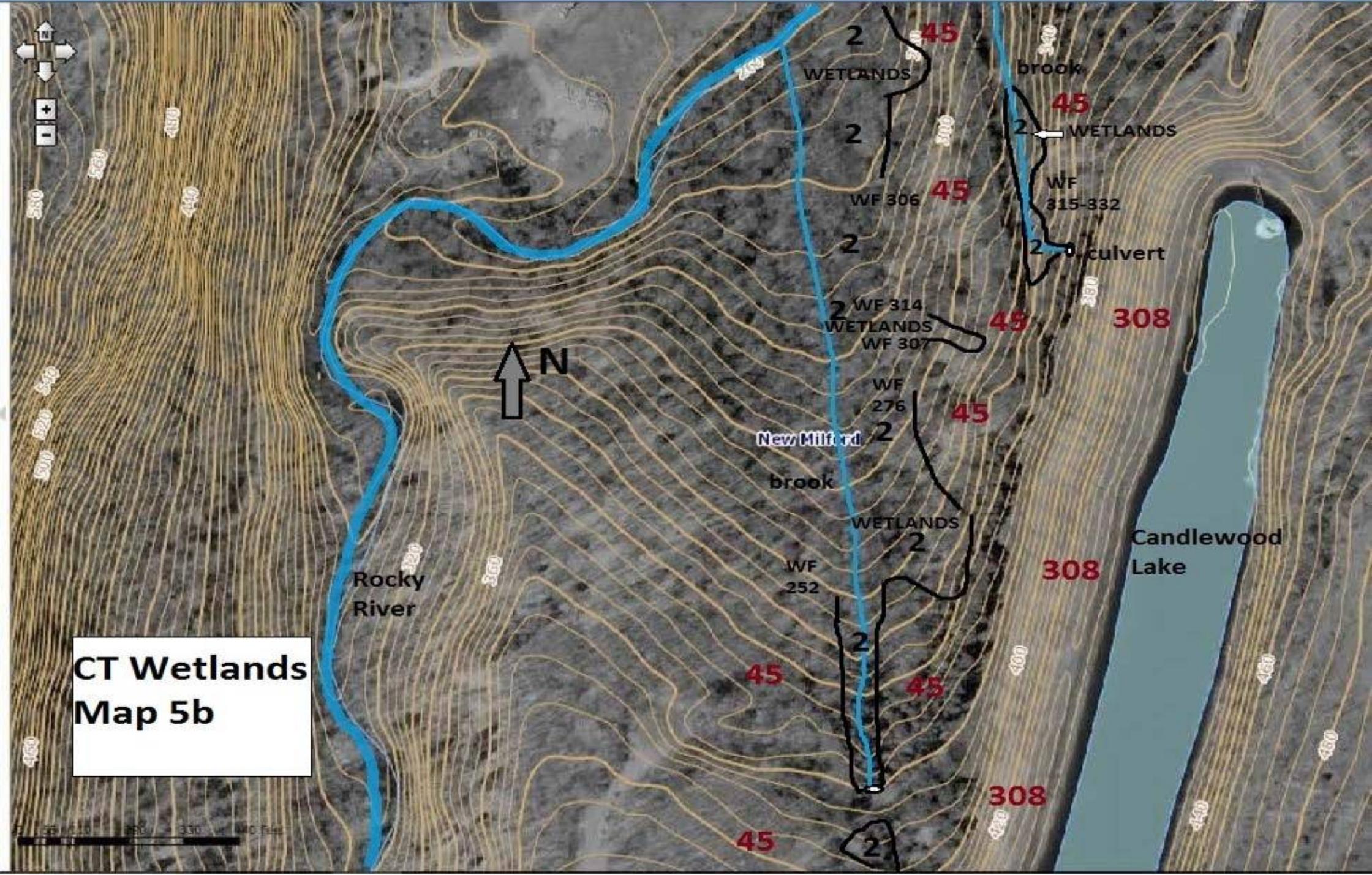
CT Inland Wetlands & soil map units map 3 of 5



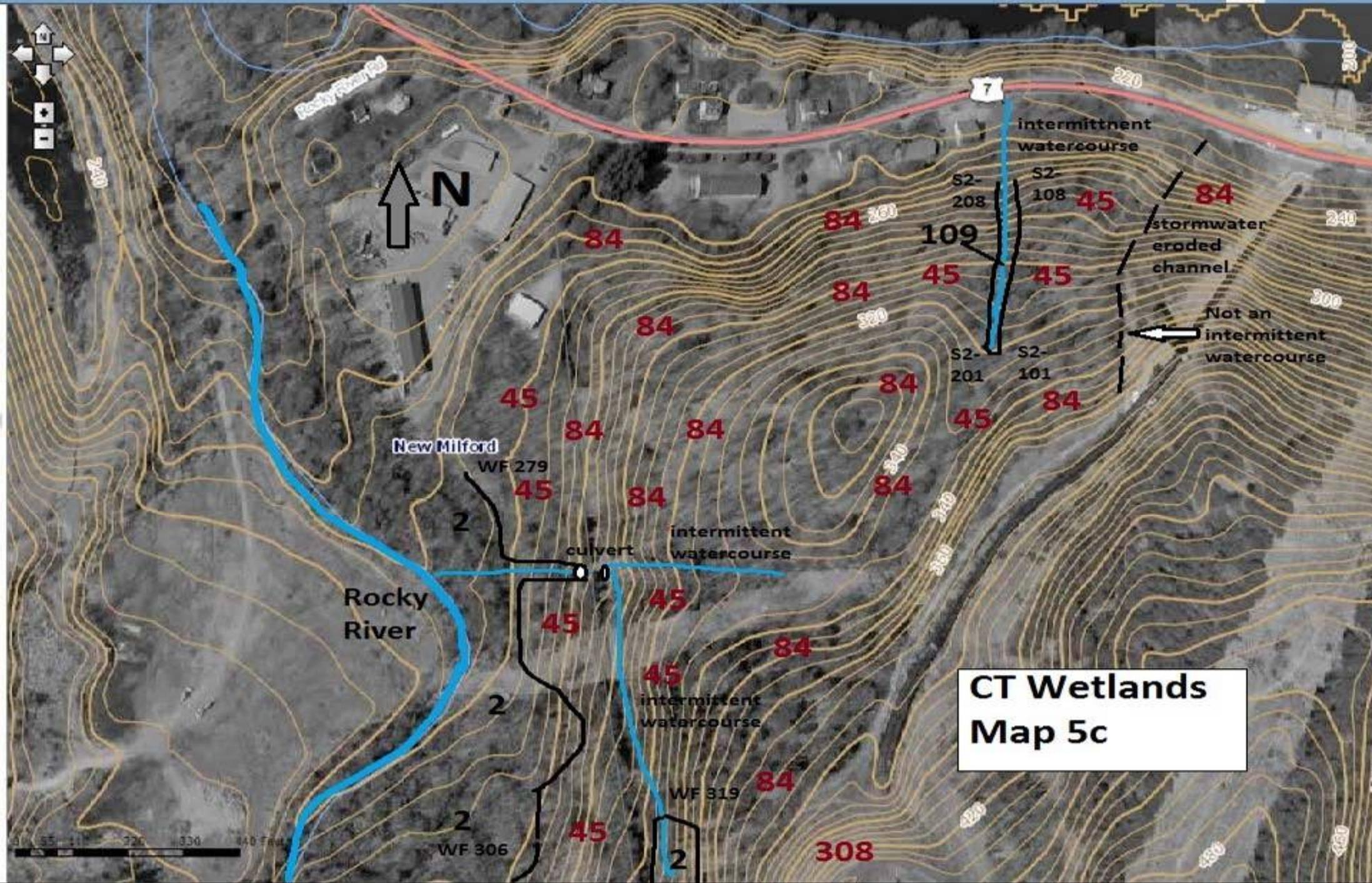
**CT Inland Wetlands & soil
map units
Map 4 of 5**



**CT Wetlands Map
Map 5a**



CT Wetlands Map 5b



**CT Wetlands
Map 5c**



VEGETATION – Use scientific names of plants.

Sampling Point: 227-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Acer saccharum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63</u> (A/B)	
2. <u>Ulmus americana</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>75</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Ulmus americana</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
2. <u>Betula lenta</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Carpinus caroliniana</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>25</u>				
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Dryopteris marginalis</u>	<u>12</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Carex stricta</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>		
3. <u>Erythronium americanum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
4. <u>Symplocarpus foetidus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		
5. <u>Geum canadense</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6. <u>Arisaema triphyllum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
7. <u>Persicaria amphibia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>52</u>				
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>0</u>				
Hydrophytic Vegetation Present? Yes <u>XX</u> No _____					
Remarks: (Include photo numbers here or on a separate sheet.) 					

SOIL

Sampling Point: 227-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/2	95	5YR 4/6	5	C	M	si l	mucky
6-14	10YR 4/2	93	5YR 4/6	7	C	M	ls & lfs	
14+								large stone

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes XX No _____

Remarks:

Data Plot 227-W is located 6 feet west of WF# 227.
 Data Plot 227-U is located 8 feet east of WF# 227.
 The approximate difference in elevation from Data Plot 227-W to 227-U is 1.5 to 2 feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed solar project transmission line route City/County: New Milford/Litchfield Sampling Date: May 4, 2017
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 227-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): lower hillside Local relief (concave, convex, none): convex
 Slope (%): 25% Lat: 41.573959 Long: -73.445006 Datum: 347 ft
 Soil Map Unit Name: Woodbridge fine sandy loam (Aquic Udorthents) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>17</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: 227-U

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Acer saccharum</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17</u> (A/B)	
2. <u>Liriodendron tulipifera</u>	<u>15</u>	<u>N</u>	<u>FACU</u>		
3. <u>Fraxinus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4. <u>Ulmus americana</u>	<u>8</u>	<u>N</u>	<u>FACW</u>		
5. _____					
6. _____					
7. _____					
	<u>78</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Tsuga canadensis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>		
2. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Ulmus americana</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
4. <u>Hamamelis virginiana</u>	<u>8</u>	<u>N</u>	<u>FACU</u>		
5. _____					
6. _____					
7. _____					
	<u>43</u>			Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Polystichum acrostichoides</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>		
2. <u>Dryopteris marginalis</u>	<u>8</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Geum canadense</u>	<u>2</u>	<u>N</u>	<u>FAC</u>		
4. <u>Symplocarpus foetidus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>27</u>			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____					
2. _____					
3. _____					
4. _____					
	<u>0</u>			Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 227-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 2/2	100					fsl	stony
7-14	10YR 5/4	100					fsl	very stony
14-22	10YR 5/3	97	5YR 4/6	3	C	M	fsl	stony

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 242-W

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u>Fraxinus americana</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Betula lenta</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Betula populifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. <u>Quercus rubra</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>85</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. <u>Lindera benzoin</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>35</u>	= Total Cover		
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Symplocarpus foetidus</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Polystichum acrostichoides</u>	<u>8</u>	<u>N</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>58</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <u>XX</u> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) 				

SOIL

Sampling Point: 242-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100					si l	mucky
8-15	2.5Y 4/2	95	5YR 4/6	5	C	M	vfsl	
15-24	2.5Y 5/3	85	5YR 4/6	10	C	M	fsl	firm
			10YR 5/2	5	D	M		

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: lodgement till
 Depth (inches): 15

Hydric Soil Present? Yes XX No

Remarks:

Data Plot 242-W is located 8 feet west of WF# 242.
 Data Plot 242-U is located 8 feet east of WF# 242.
 The approximate difference in elevation from Plot 242-W to 242-U is two feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed solar project transmission line route City/County: New Milford/Litchfield Sampling Date: May 4, 2017
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 242-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): convex
 Slope (%): 25% Lat: 41.574019 Long: -73.444019 Datum: 375 ft
 Soil Map Unit Name: Woodbridge fine sandy loam (Aquic Udorthents) NWI classification: _____

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

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 242-U

<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinum americana</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. <u>Quercus rubra</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata:	<u>5</u> (B)
3. <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)
4. <u>Betula lenta</u>	<u>8</u>	<u>N</u>	<u>FACU</u>		
5. <u>Betula populifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6. _____					
7. _____					
	<u>83</u>	= Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft</u>)				Prevalence Index worksheet:	
1. <u>Fagus grandifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	Total % Cover of:	Multiply by:
2. _____				OBL species _____	x 1 = _____
3. _____				FACW species _____	x 2 = _____
4. _____				FAC species _____	x 3 = _____
5. _____				FACU species _____	x 4 = _____
6. _____				UPL species _____	x 5 = _____
7. _____				Column Totals: _____	(A) _____ (B)
	<u>15</u>	= Total Cover		Prevalence Index = B/A = _____	
<u>Herb Stratum</u> (Plot size: <u>5 ft</u>)				Hydrophytic Vegetation Indicators:	
1. <u>Dryopteris marginalis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation	
2. <u>Polystichum acrostichoides</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%	
3. <u>Maianthemum canadense</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
4. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
7. _____				Definitions of Vegetation Strata:	
8. _____				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
9. _____				Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
10. _____				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
11. _____				Woody vines – All woody vines greater than 3.28 ft in height.	
12. _____					
	<u>20</u>	= Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft</u>)				Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>	
1. _____					
2. _____					
3. _____					
4. _____					
	<u>0</u>	= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 242-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1/2 to 0								leaf litter
0-4	10YR 3/2	100					vfsl	stony
4-9	10YR 4/4	100					fsl	very stony
9-16	10YR 5/4	100					fsl	stony
16-22	10YR 5/3	100					fsl	stony

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed solar project transmission line route City/County: New Milford/Litchfield Sampling Date: May 4, 2017
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 272-W
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillside seep Local relief (concave, convex, none): concave
 Slope (%): 5% Lat: 41.575873 Long: -73.440146 Datum: 365 ft
 Soil Map Unit Name: Ridgebury fine sandy loam (Epiaquepts) NWI classification: PFO

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

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

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

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 272-W

<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Picea rubens</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57</u> (A/B)	
2. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>60</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lindera benzoin</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Ulmus americana</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Viburnum sp.</u>	<u>8</u>	<u>N</u>	<u>-</u>		
4. _____					
5. _____					
6. _____					
7. _____					
<u>38</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Symplocarpus foetidus</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Impatiens capensis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Persicaria amphibia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>		
4. <u>Poa palustris</u>	<u>8</u>	<u>N</u>	<u>FACW</u>		
5. <u>Solidago sp.</u>	<u>5</u>	<u>N</u>	<u>-</u>		
6. <u>Allium canadense</u>	<u>3</u>	<u>N</u>	<u>FACU</u>		
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>71</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>XX</u> No _____	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Celastrus orbiculata</u>	<u>5</u>	<u>Y</u>	<u>UPL</u>		_____ _____ _____ _____
2. _____					
3. _____					
4. _____					
<u>5</u> = Total Cover					

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

SOIL

Sampling Point: 272-W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					si l	mucky
6-12	2.5Y 4/2	95	5YR 4/6	5	C	M	vfsl	
12-18	2.5Y 4/3	90	5YR 4/6	10	C	M	fsl	firm

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: lodgement till
 Depth (inches): 12

Hydric Soil Present? Yes XX No

Remarks:

Plot 272-W is located 8 feet west of WF# 272.
 Plot 272-U is located 8 feet east of WF# 272.
 The approximate difference in elevation from Plot 272-W to 272-U is two feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed solar project transmission line route City/County: New Milford/Litchfield Sampling Date: May 4, 2017
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 272-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): convex
 Slope (%): 25% Lat: 41.575870 Long: -73.440114 Datum: 367 ft
 Soil Map Unit Name: Woodbridge fine sandy loam (Aquic Udorthents) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes XX No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 272-U

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft</u>)				
1. <u>Picea rubens</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
2. <u>Fraxinus americana</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>75</u>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. <u>Viburnum recognitum</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Ulmus americana</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Lindera benzoin</u>	<u>3</u>	<u>Y</u>	<u>FACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
	<u>13</u>			
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Celastrus orbiculata</u>	<u>8</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Polystichum acrostichoides</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Dryopteris marginalis</u>	<u>3</u>	<u>Y</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>16</u>			
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. <u>Celastrus orbiculata</u>	<u>8</u>	<u>Y</u>	<u>UPL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
	<u>8</u>			
Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: 272-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1/2 to 0								leaf litter
0-4	10YR 3/3	100					fsl	
4-16	10YR 4/4 & 10YR 5/3	mixed					fsl	very stony
16-20	10YR 5/3	100					fsl	stony

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 326-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)	
2. <u>Fraxinus americana</u>	<u>8</u>	<u>Y</u>	<u>FACU</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>45</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Lindera benzoin</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>20</u>				
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Impatiens capensis</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Symplocarpus foetidus</u>	<u>8</u>	<u>N</u>	<u>OBL</u>		
3. <u>Solidago sp.</u>	<u>8</u>	<u>N</u>	<u>-</u>		
4. <u>Berberis thunbergii</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
5. <u>Equisetum hyemale</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6. <u>Allium canadense</u>	<u>3</u>	<u>N</u>	<u>FACU</u>		
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>79</u>				
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>0</u>				
Hydrophytic Vegetation Present? Yes <u>XX</u> No _____					
Remarks: (Include photo numbers here or on a separate sheet.) 					

SOIL

Sampling Point: 326-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	100					si l	mucky
4-10	2.5Y 5/2	95	5YR 4/6	5	C	M	vfsi	
10-18	2.5Y 4/2	90	5YR 4/6	10	C	M	vfsi	firm

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: lodgement till
 Depth (inches): 10

Hydric Soil Present? Yes XX No

Remarks:

Plot 326-W is located 6 feet west of WF# 326.
 Plot 326-U is located 6 feet east of WF# 326.
 The approximate difference in elevation from Plot 326-W to 326-U is two feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed solar project transmission line route City/County: New Milford/Litchfield Sampling Date: May 4, 2017
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 326-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): convex
 Slope (%): 30% Lat: 41.578148 Long: -73.439575 Datum: 347 ft
 Soil Map Unit Name: Woodbridge fine sandy loam (Aquic Udorthents) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes XX No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>20</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>14</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: 326-U

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u>Fraxinus americana</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Acer rubrum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>45</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. <u>Acer rubrum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Carpinus carolinana</u>	<u>8</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Lindera benzoin</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Berberis thunbergii</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
<u>28</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Polystichum acrostichoides</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Allium canadense</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Maianthemum canadense</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
4. <u>Arisaema triphyllum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>				
Remarks: (Include photo numbers here or on a separate sheet.) 				

SOIL

Sampling Point: 326-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1/2 to 0								leaf litter
0-5	10YR 3/2	100					fsl	
5-14	110YR 5/3	100					fsl	very stony
14-22	10YR 5/3	98	5YR 4/6	2	C	M	fsl	stony, firm to slight firm

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 32-W
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): lower hill slope Local relief (concave, convex, none): nearly level
 Slope (%): 1-3% Lat: 41.57567 Long: -73.45152 Datum: 805 ft
 Soil Map Unit Name: Leicester loam (Aeric Endoaquepts) NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation no, Soil no, or Hydrology no 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 32-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Acer rubrum</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83%</u> (A/B)	
2. <u>Liriodendron tulipifera</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Betula alleghaniensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>		
4. <u>Quercus rubra</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
	<u>75</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Carpinus caroliniana</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
2. <u>Euonymus purpureus</u>	<u>3</u>	<u>N</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
	<u>23</u>	= Total Cover			
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Symplocarpus foetidus</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Osmunda cinnamomea</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Dennstaedtia punctilobula</u>	<u>3</u>	<u>N</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
	<u>23</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>XX</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 32-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1/2 to 0								leaf litter
0-10	10YR 2/1	100					si l	
10-16	10YR 4/2	90	5YR 4/6	10	C	M	si l	Mn stains
16-22	10YR 5/2	85	5YR 4/6	10	C	M	l	slight firm
			10YR 6/1	5	D	M		

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Plot 32-W is located 10 feet east of WF # 32.
 Plot 32-U is located 10 feet west of WF #32.
 The approximate difference in elevation from Plot 32-U to Plot 32-W is 2 feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 32-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): lower hill slope Local relief (concave, convex, none): convex
 Slope (%): 3-5% Lat: 41.57568 Long: -73.45159 Datum: 807 ft
 Soil Map Unit Name: Sutton very fine sandy loam (Aquic Dystrudepts) NWI classification: _____

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

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 32-U

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Quercus rubra</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)	
2. <u>Acer rubrum</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Fraxinus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>90</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Euonymus purpureus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
2. <u>Lindera benzoin</u>	<u>3</u>	<u>Y</u>	<u>FACW</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>8</u>			Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Dennstaedtia punctilobula</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
2. <u>Polystichum acrostichoides</u>	<u>3</u>	<u>Y</u>	<u>FACU</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>8</u>			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____					
2. _____					
3. _____					
4. _____					
	<u>0</u>			Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 32-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1/2 to 0								leaf litter
0-2	10YR 2/1	100						sapric
2-4	10YR 2/2	100					vfsI	
4-14	10YR 5/4	100					vfsI	
14-20	10YR 5/3	97	5YR 4/6	3	C	M	vfsI	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 40-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Acer rubrum</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>70%</u> (A/B)	
2. <u>Quercus rubra</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>60</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Lindera benzoin</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		
2. <u>Vaccinium corybosum</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Hamamelis virginiana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>50</u>			Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Carex stricta</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>		
2. <u>Osmunda cinnamomea</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Symplocarpus foetidus</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>		
4. <u>Onoclea sensibilis</u>	<u>8</u>	<u>Y</u>	<u>FACW</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>38</u>			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____					
2. _____					
3. _____					
4. _____					
	<u>0</u>			Hydrophytic Vegetation Present? Yes <u>XX</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 40-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex
 Slope (%): 5-8% Lat: 41.57478 Long: -73.45133 Datum: 802 ft
 Soil Map Unit Name: Sutton very fine sandy loam (Aquic Dystrudepts) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes XX No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 40-U

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Quercus rubra</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17%</u> (A/B)	
2. <u>Acer rubrum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
4. <u>Quercus prinus</u>	<u>15</u>	<u>N</u>	<u>NI</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>90</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Hamamelis virginiana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
2. <u>Acer pensylvanica</u>	<u>8</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Betula lenta</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>33</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Carex pensylvanica</u>	<u>3</u>	<u>Y</u>	<u>NI-UPL</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>3</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 40-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
1 to 0							leaf litter
0-3	10YR 2/1	100					sapric
3-6	10YR 2/2	100				vfsI	
6-14	10YR 5/4	100				vfsI	
14+							rock

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 50-W
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex
 Slope (%): 3-5% Lat: 41.57322 Long: -73.45071 Datum: 810 ft
 Soil Map Unit Name: Ridgebury loam (Aeric Epiaquepts) NWI classification: PFO

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

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 50-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Betula lenta</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)	
2. <u>Acer rubra</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Ulmus americana</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		
4. <u>Fraxinus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
5. _____					
6. _____					
7. _____					
	<u>80</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Lindera benzoin</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>		
2. _____					
3. _____					
4. _____					
5. _____					
	<u>25</u>				
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Microstegium vimineum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Sphagnum sp.</u>	<u>10</u>	<u>-</u>	<u>-</u>		
3. <u>Polystichium acrostichoides</u>	<u>3</u>	<u>N</u>	<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>43</u>				
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>0</u>			Hydrophytic Vegetation Present? Yes <u>XX</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 50-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 to 0								leaf litter
0-4	10YR 2/2	100					si l	
4-14	2.5 Y 5/2	90	5YR 4/6	10	C	M	si l	Mn stains
14-22+	2.5Y 6/2	85	5YR 4/6	15	C	M	l	firm

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: compact lodgement till
 Depth (inches): 14

Hydric Soil Present? Yes No

Remarks:

Plot 50-W is located 12 feet east of WF # 50.
 Plot 50-U is located 12 feet west of WF #50.
 The approximate difference in elevation from Plot 50-U to Plot 50-W is 1.5 feet

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 50-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex
 Slope (%): 5-8% Lat: 41.57322 Long: -73.45075 Datum: 812 ft
 Soil Map Unit Name: Woodbridge loam (Aquic Dystrudepts) NWI classification: _____

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

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

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

HYDROLOGY

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 50-U

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
1. <u>Acer rubrum</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Betula lenta</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Ulmus americana</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>75</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. <u>Betula lenta</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lindera benzoin</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>30</u>	= Total Cover		
Herb Stratum (Plot size: <u>5 ft</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Dennstaedtia punctilobula</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Polystichum acrostichoides</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
3. <u>Dryopteris marginalis</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
4. <u>Carex pensylvanica</u>	<u>3</u>	<u>N</u>	<u>NI</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>19</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30 ft</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) 				Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>

SOIL

Sampling Point: 50-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 to 0								leaf litter
0-5	10YR 3/2	100					I	
5-12	10YR 5/3	100					I	
12-19+	10YR 5/3	95	5YR 4/6	5	C	M	I	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 70-W
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex
 Slope (%): 5% Lat: 41.57279 Long: -73.44953 Datum: 745 ft
 Soil Map Unit Name: Leicester loam (Aeric Endoaquepts) NWI classification: PFO

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: 70-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Betula lenta</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)	
2. <u>Carya ovata</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Betula alleghaniensis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
4. <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
5. _____					
6. _____					
7. _____					
	<u>50</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Lindera benzoin</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
3. _____					
4. _____					
5. _____					
	<u>25</u>				
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Lindera benzoin</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Carex stricta</u>	<u>3</u>	<u>Y</u>	<u>OBL</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>8</u>				
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>0</u>			Hydrophytic Vegetation Present? Yes <u>XX</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 70-W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 to 0								leaf litter
0-4	10YR 2/1	100					mucky sil	
4-9	2.5 Y 4/2	85	5YR 4/6	15	C	M	I	Mn stains
16-22+	2.5Y 5/2	90	5YR 4/6	10	C	M	I	slight firm

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Plot 70-W is located 10 feet north of WF # 70.
 Plot 70-U is located 12 feet south of WF #70.
 The approximate difference in elevation from Plot 70-U to Plot 70-W is 1.5 feet

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-10-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 70-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex
 Slope (%): 5-8% Lat: 41.57275 Long: -73.44954 Datum: 747 ft
 Soil Map Unit Name: Sutton very fine sandy loam (Aquic Dystrudepts) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes XX No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 70-U

<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Betula lenta</u>	<u>55</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. <u>Quercus rubra</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Carya ovata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>30</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
<u>Herb Stratum</u> (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Berberis thunbergii</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>
2. <u>Polystichum acrostichoides</u>	<u>3</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Dryopteris marginalis</u>	<u>3</u>	<u>Y</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>11</u> = Total Cover					
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 70-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 to 0								leaf litter
0-2	10YR 2/2	100					vfsl	
2-7	10YR 3/2	100					vfsl	
7-12	10YR 4/4	100					vfsl	stony
12-19+	10YR 5/4	100					fsl	stony

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 101-W

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft</u>)					
1. <u>Pinus strobus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83%</u> (A/B)	
2. <u>Acer rubrum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	<u>25</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)					
1. <u>Alnus incana</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
2. <u>Salix discolor</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Acer rubrum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
4. <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
5. _____					
6. _____					
7. _____					
	<u>55</u>				
Herb Stratum (Plot size: <u>5 ft</u>)					
1. <u>Onoclea sensibilis</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Carex stricta</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>		
3. <u>Solidago sp.</u>	<u>10</u>	<u>-</u>	<u>-</u>		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>50</u>				
Woody Vine Stratum (Plot size: <u>30 ft</u>)					
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>0</u>				
Hydrophytic Vegetation Present? Yes <u>XX</u> No _____					
Remarks: (Include photo numbers here or on a separate sheet.) 					

SOIL

Sampling Point: 101-W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/2						I	oxidized rhizosphere
6-16	10YR 5/2 & 5/3	80	5YR 4/6	15	C	M	I	
			10YR 5/1	5	D	M		

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Plot 101- is located 10 east of WF # 101.
 Plot 101-U is located 10 feet west of WF #101.
 The approximate difference in elevation from Plot 101-U to Plot 101-W is 1 feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-11-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 101-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): lower hill slope Local relief (concave, convex, none): convex
 Slope (%): 3-5% Lat: 41.57399 Long: -73.45112 Datum: 691 ft
 Soil Map Unit Name: Sutton very fine sandy loam (Aquic Dystrudepts) NWI classification: _____

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

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

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

HYDROLOGY

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

SOIL

Sampling Point: 101-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2						vfsl	
6-14	10YR 5/3	100					vfsl	
14-20	10YR 5/3	95	5YR 4/6	5	C	M	fsl	stony

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 113-W

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
1. <u>Quercus rubra</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Fraxinus americana</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <u>Lindera benzoin</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>35</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Microstegium vimineum</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Sphagnum sp.</u>	<u>8</u>	<u>-</u>	<u>-</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>33</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) 				Hydrophytic Vegetation Present? Yes <u>XX</u> No _____

SOIL

Sampling Point: 113-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1/2 to 0								leaf litter
0-6	10YR 2/2	100					si l	oxidized rhizosphere
6-14	2.5 Y 5/2	85	5YR 4/6	15	C	M	si l	Mn stains
14-18	2.5Y 4/3	90	5YR 4/6	10	C	M	si l	slight firm
18-24+	2.5Y 5/3	85	5YR 4/6	10	C	M	l	firm
			10YR 6/2	5	D	M		

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: compact lodgement till
 Depth (inches): 18

Hydric Soil Present? Yes No

Remarks:

Plot 113-W is located 10 west of WF # 113.
 Plot 113-U is located 8 feet east of WF #113.
 The approximate difference in elevation from Plot 113-U to Plot 1130-W is 2 feet.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Proposed Solar, Candlewood Mountain Road City/County: New Milford/Litchfield Co. Sampling Date: 12-11-2016
 Applicant/Owner: Amec Foster Wheeler Environment & Infrastructure, Inc. State: CT Sampling Point: 113-U
 Investigator(s): Thomas W. Pietras, PEG, LLC Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex
 Slope (%): 10-15% Lat: 41.57576 Long: -73.45600 Datum: 752 ft
 Soil Map Unit Name: Woodbridge very fine sandy loam (Aquic Dystrudepts) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes XX No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 113-U

<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Quercus rubra</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14%</u> (A/B)	
2. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Quercus alba</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>		
4. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>		
5. <u>Betula lenta</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Hamamelis virginiana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Carpinus caroliniana</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>35</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Carex pensylvanica</u>	<u>5</u>	<u>Y</u>	<u>NI-UPL</u>		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>5</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes _____ No <u>XX</u>
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: 113-U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 to 0								leaf litter
0-3	10YR 2/2	100					vfsl	
3-10	10YR 4/4	100					vfsl	
10-18	10YR 5/3	100					vfsl	stony
18-22+	10YR 4/4	97	5YR 4/6	3	C	M	vfsl	stony

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No XX

Remarks: