

DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT 696 VIRGINIA ROAD CONCORD, MASSACHUSETTS 01742-2751

CENAE-RD-CTRI

10 October 2024

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (USACE) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023),¹ NAE-2022-00290 MFR 1 of 1.²

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a USACE document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.³ AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.⁴

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States," 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a USACE AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),⁵ the 2023 Rule as amended,

¹ While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.

² When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, the territorial seas, or interstate water that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).

³ 33 CFR 331.2.

⁴ Regulatory Guidance Letter 05-02.

⁵ USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

CENAE-RD-CTRI

SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), NAE-2022-00290

as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

- 1. SUMMARY OF CONCLUSIONS.
 - a. There are three (3) delineated aquatic resource features within the project's review area:
 - i. Wetland 4 (1.32-acres; 57,499 sf), non-jurisdictional Section 404
 - ii. Wetland 5 (2.45-acres; 106,722 sf), non-jurisdictional Section 404
 - iii. Wetland 6 (14.96-acres; 651,657 sf), jurisdictional Section 404

2. REFERENCES.

- a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")
- b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023)
- c. Sackett v. EPA, 598 U.S., 143 S. Ct. 1322 (2023)

3. REVIEW AREA.

The AJD review area consists of Tweed New Haven Regional Airport (the "Airport") is a public airport located in the City of New Haven and Town of East Haven, CT, owned and operated by the City of New Haven (see Figure 1, Figure 2). The property is located along the New Haven-East Haven town-line with Long Island Sound approximately ³/₄-mile to the south, New Haven Harbor ¹/₄ mile to the west, and Morris Cove approximately ¹/₄-mile to the southwest. The Airport has two asphalt runways, Runway 2-20 which is approximately 5,200 feet long by approximately 150 feet wide oriented north-south, and Runway 14-32 (currently not in use) which is approximately 3,600 feet long by 100 feet wide with a northwest – southeast orientation.

According to field observations and a review of recent aerial photographs of the review area (Image 3), the Airport is set within a mixed residential, commercial, and industrial area. To the west of the Airport (between Dean Street and Townsend Avenue), land use is mostly residential whereas to the east (along Proto Drive and Commerce Street), it is mostly industrial. There is undeveloped land (wetlands) to the south of Runway 2-20 and to the southeast of the HVN property boundary.

CENAE-RD-CTRI

SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), NAE-2022-00290

Areas interior to and surrounding the runways and taxiways are comprised of maintained grasslands. Along the southwestern, southern, and southeastern perimeter of the airport are extensive vegetated tidal wetland systems with constructed channels and areas of open water. Inland wetlands occur at the northwestern, northern, northeastern, and eastern edges of the runway and taxiway areas. Some of the inland wetlands appear to have been constructed as drainage features as they do not appear on U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) (Figure 4) or CT Department of Energy and Environmental Protection (CTDEEP) wetland mapping. Previous wetland delineations by others did not identity wetland resources within these infield areas (Figure 3a) and a request for a jurisdictional determination was submitted for these wetlands.

Project Review Area

The Project Review Area is outlined in Figure 3A (yellow outline) with a center point at latitude/longitude: 41.261029N, 72.882639W. Figure 3d depicts the layout of the delineated wetlands (green dotted outline) and the potential avenue on the project site.

Historic aerial photographs show that the Project Review Area has been extensively modified since before the 1930s. Aerial imagery from 1934 (Image 1) shows unmodified land and a watercourse system that flows right through where the airport runways would be placed between 1934 and 1949 (Image 2).

- NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS CONNECTED. ⁶
 Morris Creek is a tidally influenced system made of salt marshes and controlled by a tide gate located at 41.250692N, 72.892217W which discharges into Long Island Sound.
- 5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER.
 - i. Wetland 1-3; 7 (outside of Review Area): Delineated wetlands directly abut relatively permanent water or have a distinct flow path to a TNW (Figure 3A).
 - ii. Wetland 4 (within the Review Area): Delineated wetland area does not physically abut or touch an (a)(1), (a)(2), or (a)(3) water, nor does it have a continuous surface connection to such waters via a non-jurisdictional conveyance (e.g., swale, culvert, storm drain) (Image 4 and 5).

⁶ This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.

CENAE-RD-CTRI

SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), NAE-2022-00290

- iii. Wetland 5 (within the Review Area): Delineated wetland area does not physically abut or touch an (a)(1), (a)(2), or (a)(3) water, nor does it have a continuous surface connection to such waters via a non-jurisdictional conveyance (e.g., swale, culvert, storm drain) (Image 6 9).
- iv. Wetland 6 (within the Review Area): Delineated wetland area including Wetland 6A and 6B (Image 10, 14, and 15) has a continuous surface connection to a perennial stream system that connects through a network of streams, wetland systems, and drainage ditches. Wetland 6 drains to the south to Tuttle Brook, a tributary of Morris Creek, which deposits into Long Island Sound. Conveyance methods were observed in the form of culverts along Pig Farm Road (Image 11 and 12) and at the end of Pig Farm Road running parallel to Proto Drive (Image 13).
- 6. SECTION 10 JURISDICTIONAL WATERS⁷: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.⁸

There are no resources subject to Section 10 of the Rivers and Harbors Act of 1899 in the review area.

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

⁷ 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.

⁸ This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

- a. Traditional Navigable Waters (TNWs) (a)(1)(i): N/A
- b. The Territorial Seas (a)(1)(ii): N/A
- c. Interstate Waters (a)(1)(iii): N/A
- d. Impoundments (a)(2): N/A
- e. Tributaries (a)(3):
- f. Adjacent Wetlands (a)(4): Wetland 6 is a 14.96-acre, contiguous wetland system characterized by two different wetland types: Wetland 6A consists of palustrine emergent wetlands within a mowed lawn airfield. Wetland 6B consists of a palustrine forested broad-leaved deciduous, seasonally saturated, wetland (PFO1E), and bordering palustrine emergent wetlands (PEM2) containing nonpersistent, persistent and Phragmites-dominated subclasses. An upper reach of Morris Creek bisects the PFO portion of this wetland east of Taxiway C and Runway 32. Sheet flow runoff from the adjacent runways and taxiways and direct precipitation contribute to the hydrology of this wetland, however portions of the wetland are transected by permanently flooded / excavated channels lending evidence of a suspected high groundwater elevation. Seasonal flooding along Morris Creek also likely contributes to the sustaining hydrology of the wetland. Acer rubrum dominates the PFO portion, while Phragmites australis has significant cover in the PEM portion. Other hydrophytes noted included the following: Lindera benzoin, Vaccinium corymbosum, Ilex verticillata, Viburnum dentatum, Clethra alnifolia, Lythrum salicaria, Spiraea tomentosa, Euthrochium maculatum, Juncus effusus, Euthamia caroliniana, Eupatorium perfoliatum, , and east of Taxiway C (Wetland 6B). To the west of the former runway 14/32 within the mowed portion of the RSA (Wetland 6A), the wetland is dominated by Paspalum laeve, Rhynchospora capitellata, Cyperus strigosus, and Setaria pumila ssp. pumila.

To determine the potential for Wetland 6 to have a continuous surface connection to waters of the U.S., staff reviewed aerial photographs from 1934 to 1990 (Images 1 – 3). During a site visit on July 22, 2024, staff observed culverts installed along Proto Drive and Pig Farm Road that provide an observable connection between Wetland 6 and the unnamed stream that drains into tidal wetlands and Morris Creek. Consequently, we evaluated field site dates for the site visit date for antecedent precipitation and compared the precipitation to a normal range. Our antecedent precipitation analysis result (Figure 5) revealed wetter than normal conditions. A review of hydrologic connectivity and USGS

StreamStats show the natural and artificial connection from Wetland 6 to Morris Creek (Figure 6, Figure 7). To validate this concept, staff analyzed the State of Connecticut 2016 LiDAR elevation data (Figure 8) for water conveyance through the project review area. In addition, photographs taken from the site visit depict two culverts that allow flow from Wetland 6 and the unnamed stream abutting the wetland to tidal wetlands downstream and Morris Creek (Image 11 – 13). Our evaluation revealed evidence that Wetland 6 has a continuous surface connection via non-jurisdictional conveyance (culverts). Consequently, the wetland area contributes flow to Morris Creek and Long Island Sound.

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).⁹

The applicant did not identify or delineate any non-jurisdictional excluded water features in the Review Area. Aerial imagery from 1934 onward do not depict any farmland or roadside ditches within the project Review Area.

- b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).
 - i. Wetland 4: We evaluated the 1.32-acre resource feature identified as Wetland 4 for potential landscape connectivity and a continuous surface connection to waters described in Section 4 above. Wetland 4 is a shallow drainage area located north of Runway 32 and is bound by Taxiway C to the northeast and Taxiway H to the southwest. The consultant characterized Wetland 4 as a palustrine emergent, nonpersistent, intermittently flooded/saturated (PEM2J) wetland. It receives sheet flow runoff from the impervious runways and tarmacs. It is dominated by various species of hydrophytic plant species such as *J. effusus*, *C. strigosus*, *Rumex crispus*, *P. laeve*, and *Symphyotrichum*

⁹ 88 FR 3004 (January 18, 2023)

lateriflorum. A catch basin serves as the outlet that regulates the surface water level of the wetland when it receives collected stormflows. Based upon its morphology and drainage structures, it appears that this wetland has formed within a drainage area that was constructed with the adjacent Runway 14/32 and Taxiways Band C were built. While it is a routinely mowed lawn, since Runway 14/32 has not been used for years, routine maintenance of the basin has declined which may have allowed for the development of hydrophytic plant community. Refer to Table 1, Figure 3d, and Images 4 and 5.

- ii. Wetland 5: We evaluated the 2.45-acre resource feature identified as Wetland 5 for potential landscape connectivity and a continuous surface connection to waters described in Section 4 above. Wetland 5 is a shallow drainage area bounded by Taxiway C to the northeast and southeast, Taxiway H to the northwest, and former Runway 32 to the southwest. The consultant characterized the wetland as palustrine emergent, nonpersistent, intermittently flooded (PEM2J) that collects sheet flow runoff and direct precipitation. During the initial delineation, high levels of standing water were observed in this catch basin, which may indicate high groundwater levels in this area. Hydrophytic vegetation observed within this wetland included the following: J. effusus, C. strigosus, P. leave, Coleataenia longifolia ssp. longifolia, Echinochloa muricata, Eleocharis obtusa, Juncus acuminatus, Ludwigia palustris, Persicaria hydropiperoides, Schoenoplectus pungens var. pungens, S. pumila ssp. *pumila*, and S. *lateriflorum*. A catch basin serves as the outlet that regulates the surface water level of the wetland when it receives stormflows. Based upon its morphology and drainage structures, this wetland may have also formed within a drainage area that was constructed with the adjacent Runway 14/32 and Taxiways Band C were built, similar to Wetland 4. Wetland 5 was a routinely mowed lawn, however, since Runway 14/32 has not been used for years, routine maintenance of the basin has declined. Refer to Table 1, Figure 3d, and Images 6 - 9.
- 9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.
 - a. Field visit completed on 22 July 2024
 - b. CT ECO UCONN Aerial and Lidar Elevation Viewers (2019, 2012, 2009, 2004, and 1934 Aerial Photographs and 2016 Elevation); 30 August 2024
 - c. U.S. Fish and Wildlife Service National Wetlands Inventory Mapper; 30 August 2024

- d. Antecedent Precipitation Tool; 30 August 2024
- e. National Regulatory Viewer, North Atlantic division, Connecticut; 22 April 2024
- f. U.S. Geological Survey StreamStats; 30 August 2024
- g. CT State Library Aerial Survey 1965; 11 September 2024
- h. U.S. Department of Agriculture, Natural Resources Conservation Service Web Soil Survey; 11 September 2024
- 10. OTHER SUPPORTING INFORMATION. N/A
- 11.NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

PREPARED BY:

<u>Andrea Williams</u>	Date: <u>9/30/2024</u>
Andrea Williams	
Regulatory Project Manager	
REVIEWED BY:	
Paul Minkin	
	Date: <u>9-30-2024</u>
Paul Minkin	
Senior Wetland Scientist	
APPROVED BY:	
Kevin R Kotelly	10-10-2024 Date:

Kevin Kotelly, P.E. Chief, CT/RI Section



Figure 1: Site Location Map

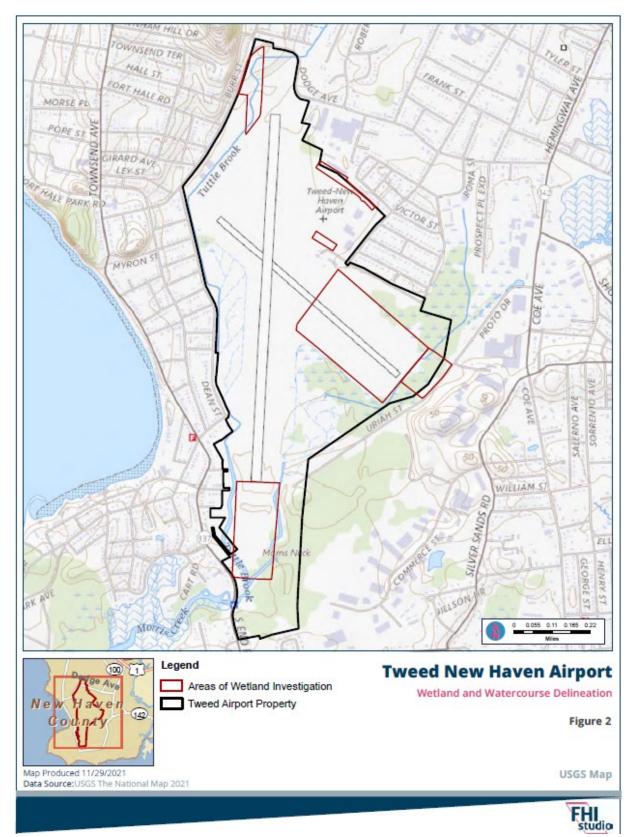
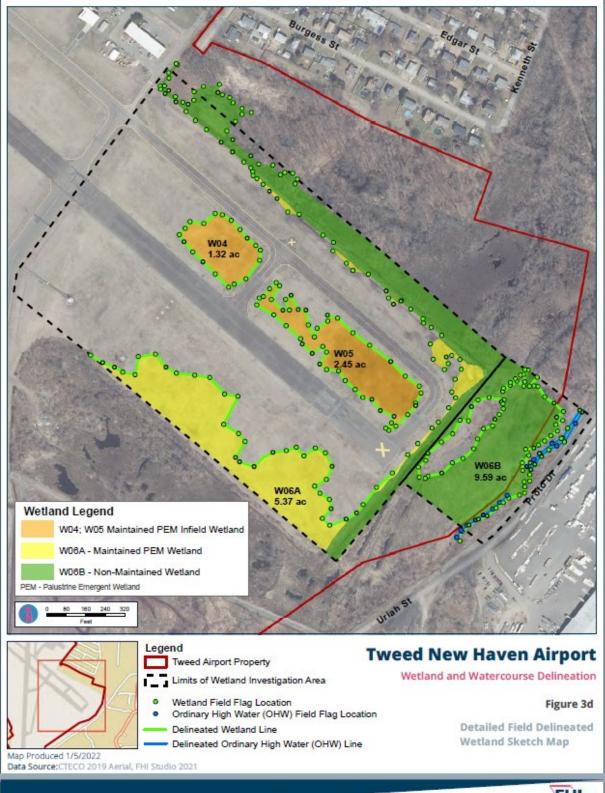


Figure 2: Wetland and Watercourse Delineation Map

Figure 3A: Delineated Wetland Map



Figure 3d: Wetlands for AJD





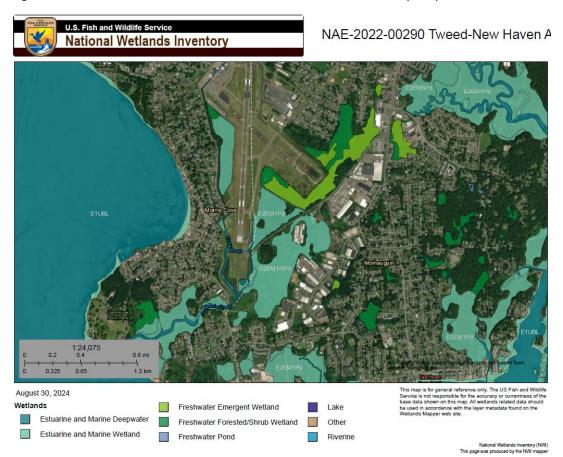


Figure 4: U.S. Fish and Wildlife Service National Wetlands Inventory Map

Figure 5: Antecedent Precipitation Tool 07-22-2024

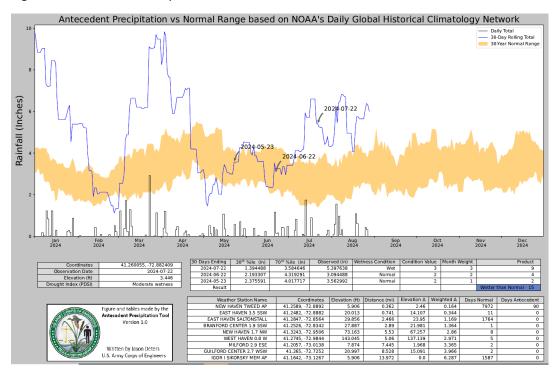


Figure 6: National Hydrography Dataset

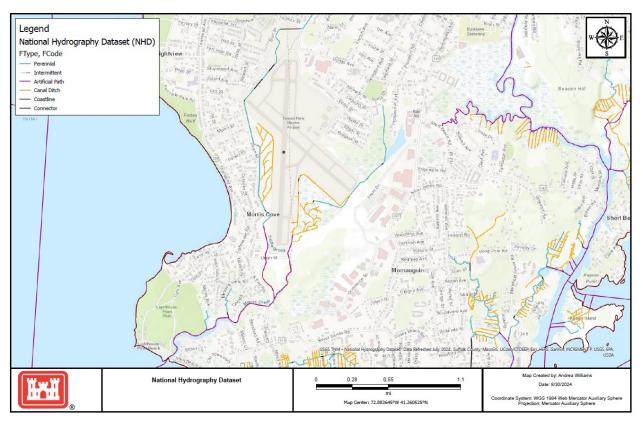
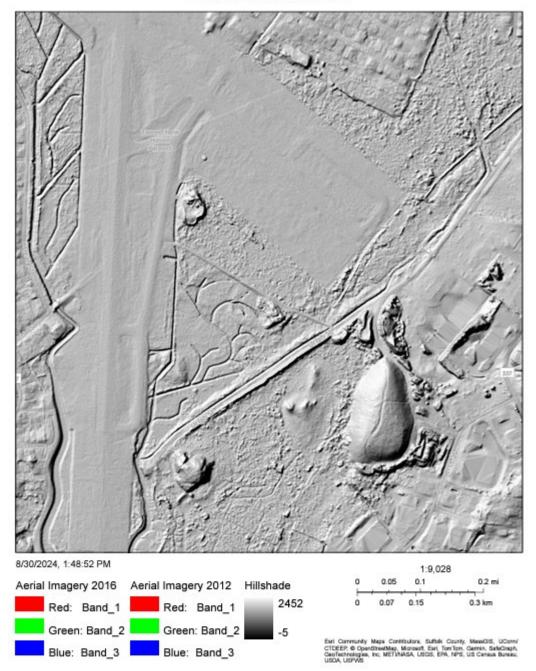


Figure 7: USGS StreamStats Map



Figure 8: Connecticut Elevation Map



Connecticut Elevation

CT ECO Earl Community Maps Contributions, Sulfolk County, MessOl S, UConn/CTDEEP, & OpenStreet/Map, Microsoft, Earl, TomTom, Germin, SafeCraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,

Figure 9: USDA Web Soil Survey Map



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Wilbraham and Menlo soils, 0 to 8 percent slopes, extremely story	2.0	0.2%
13	Walpole sandy loam, 0 to 3 percent slopes	21.7	1.7%
15	Scarboro muck, 0 to 3 percent slopes	10.8	0.8%
24A	Deerfield loamy fine sand, 0 to 3 percent slopes	61.3	4.8%
35B	Perwood loamy sand, 3 to 8 percent slopes	12.9	1.0%
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	7.3	0.6%
55B	Watchaug fine sandy loam, 3 to 8 percent slopes	1.5	0.1%
63B	Cheshire fine sandy loam, 3 to 8 percent slopes	2.8	0.2%
70C	Branford-Holyoke complex, 3 to 15 percent slopes, very rocky	3.0	0.2%
77C	Cheshire-Holyoke complex, 3 to 15 percent slopes, very rocky	21.1	1.6%
78C	Holyoke-Rock outcrop complex, 3 to 15 percent slopes	4.0	0.3%
78E	Holyoke-Rock outcrop complex, 15 to 45 percent slopes	20.5	1.6%
87C	Wethersfield loam, 8 to 15 percent slopes	3.3	0.3%
87D	Wethersfield loam, 15 to 25 percent slopes	1.5	0.1%
98	Westbrook mucky peat, 0 to 2 percent slopes, very frequently flooded	46.1	3.6%
224A	Deerfield-Urban land complex, 0 to 3 percent slopes	37.9	2.9%
230C	Branford-Urban land complex, 8 to 15 percent slopes	20.8	1.6%
2358	Perwood-Urban land complex, 0 to 8 percent slopes	302.4	23.5%
237C	Manchester-Urban land complex, 3 to 15 percent slopes	44.1	3.4%
2558	Watchaug-Urban land complex, 0 to 8 percent slopes	9.0	0.7%
2638	Cheshire-Urban land complex, 3 to 8 percent slopes	36.5	2.8%
263C	Cheshire-Urban land complex, 8 to 15 percent slopes	22.5	1.7%
269C	Yalesville-Urban land complex, 8 to 15 percent slopes	5.5	0.4%
302	Dumps	7.8	0.6%
306	Udorthents-Urban land complex	353.8	27.5%
307	Urban land	48.6	3.8%
308	Udorthents, smoothed	148.6	11.6%
W Water		28.8	2.2%
Totals for Area of Interest		1,286.0	100.0%

Image 1: 1934 Aerial Image



Image 2: 1965 CT State Library Aerial Image



Image 3: CT ECO Viewers 2019 Aerial Image



Image 4: Mapped Photo Log (Wetland 4)







Image 6: Mapped Photo Log (Wetland 5)







Image 8: Mapped Photo Log (Wetland 5)







Image 10: Mapped Photo Log (Wetland 6B)





Image 11: Mapped Photo Log (Culvert 1 SW side-Pig Farm Road)



Image 12: Mapped Photo Log (Culvert 1 NE Side-Pig Farm Road)

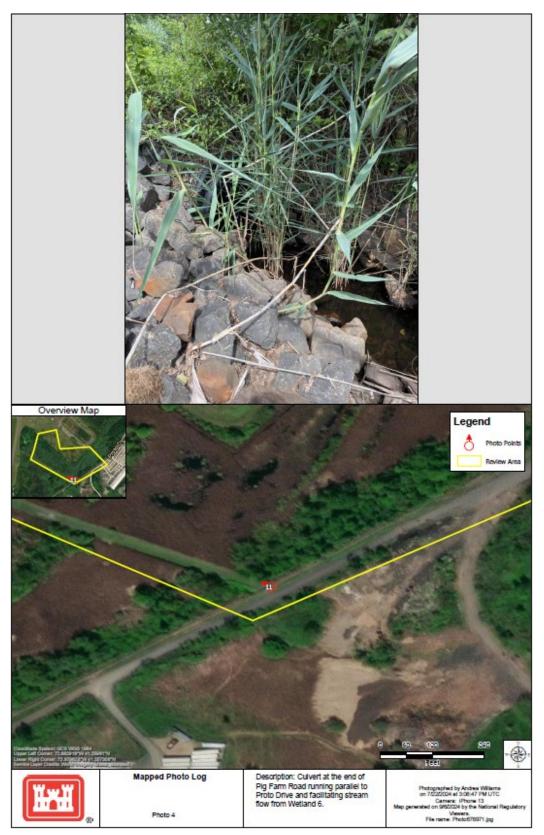


Image 13: Mapped Photo Log (Culvert 2- Proto Drive)







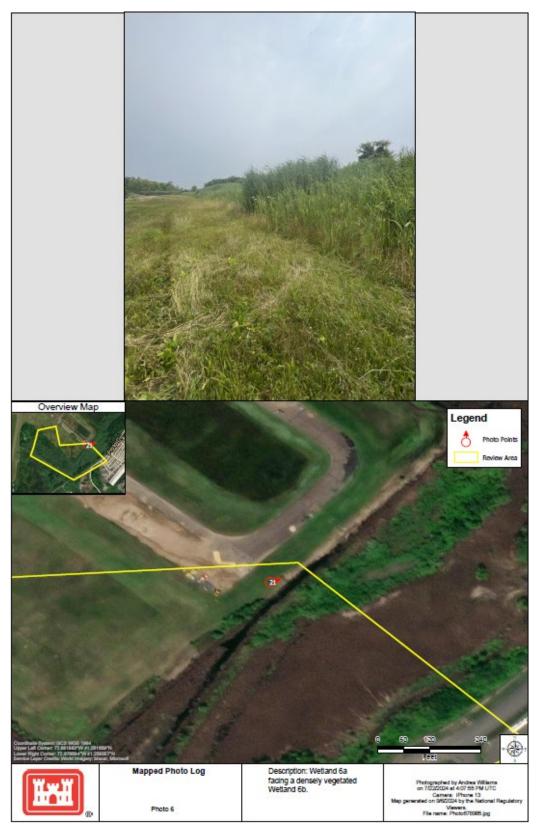


Table 1: Wetlands within the Limit if Wetland Delineation

Wetland ID (flagging sequence)	Wetland Type ^(a)	General Description	Soil Type (drainage class)	Principal Functions and Values of the Wetland	Characteristic Vegetation (indicator status) ^(b)
Wetland 1 (OHWA1- A33; OHWB1-B11; E1-E48)	R2UB2/4 and PEM1/5	A relocated reach of Tuttle Brook flanked by bordering vegetated wetland dominated by emergent persistent vegetation.	Walpole (Poorly Drained) and Scarboro (Very Poorly Drained)	Sediment/Toxicant Retention Nutrient Removal Production Export	Sambucus nigra (FACW) Alnus sp. Phragmites australis (FACW) Typha latifolia (OBL) Onoclea sensibilis (FACW)
Wetland 2 (H1-H32)	PFO1Ed and PEM5H	Red Maple swamp adjacent to an excavated channel that drains easterly and is flanked by stands of Phragmites	Walpole (Poorly drained) and Aquents (poorly drained fill materials)	Sediment/Toxicant Retention Nutrient Removal	Acer rubrum (FAC) Nyssa sylvatica (FAC) Quercus palustris (FACW) Clethra alnifolia (FAC) Lindera benzoin (FACW) Vaccinium corymbosum (FACW) Phragmites australis (FACW)
Wetland 3 (B1-B14)	PEM2J	Shallow basin dominated by gramminoids	Aquents (poorly drained fill materials)	Sediment/Toxicant Retention	Juncus effusus (OBL) Juncus tenuis (FAC) Paspalum laeve (FAC) Symphyotrichum lateriflorum (FAC) Ludwigia palustris (OBL)
Wetland 4 (F1-F20)	PEM2J	Routinely mowed lawn area bounded by Taxiway C on the northeast side, and Taxiway H on the southeast side. Low depression with	Aquents (poorly drained fill materials)	Sediment/Toxicant Retention	Juncus effusus (OBL) Cyperus strigosus (FACW) Rumex crispus (FAC) Paspalum laeve (FAC) Symphyotrichum lateriflorum
		suspected high groundwater table.			(FAC)
Wetland 5 (G1-G48)	PEM2J	Routinely mowed lawn area bounded by Taxiway C on the northeast and southeast sides, Taxiway H on the northwest side and former Runway 32 on the southwest side. Low depression with high groundwater table.	Aquents (poorly drained fill materials)	Sediment/Toxicant Retention Production Export	Juncus effusus (OBL) Cyperus strigosus (FACW) Paspalum laeve (FAC) Coleataenia longifolia ssp. longifolia (FACW) Echinochloa muricata (OBL) Eleocharis obtusa (OBL) Juncus acuminatus (OBL) Juncus acuminatus (OBL) Ludwigia palustris (OBL) Persicaria hydropiperoides (OBL) Schoenoplectus pungens var. pungens (OBL) Setaria pumila ssp. pumila (FAC) Symphyotrichum lateriflorum (FAC)
Wetland 6 (A1-A121; D1-D50; D51- D62 & D63 to D-88)	PFO1E PEM2	Forested and scrub-shrub wetland (6B portion) and bordering mowed lawn area (6A portion) transected by permanently flooded excavated channel. Low depressions with apparent high groundwater table in mowed areas.	Aquents (poorly drained fill materials)	Sediment/Toxicant Retention	Acer rubrum (FAC) Lindera benzoin (FACW) Vaccinium corymbosum (FACW) Ilex verticillata (FACW) Viburnum dentatum (FAC) Clethra alnifolia (FAC) Phragmites australis (FACW)

Wetland 7 (C1-C104)	E2EM1/5 P and E1UBL	The majority of this wetland system consists of a <i>Phragmites australis</i> - dominated tidal wetland bordered by a zone of <i>Baccharis halimifolia</i> landward.	Aquents (poorly drained fill materials)	Floodflow Alteration Fish and Shellfish Habitat Wildlife Habitat Uniqueness/Heritage	Lythrum salicaria (OBL) Spiraea tomentosa (FACW) Euthrochium maculatum (OBL) Juncus effusus (OBL) Paspalum laeve (FAC) Euthamia caroliniana (FAC) Eupatorium perfoliatum (FACW) Rhynchospora capitellata (OBL) Setaria pumila ssp. pumila (FAC) Cyperus strigosus (FACW) Phragmites australis (FACW) Spartina alterniflora (OBL) Spartina patens (FACW) Distichlis spicata (FACW) Juncus gerardii (OBL) Baccharis halimifolia (FACW) Iva frutescens (FACW)
Notes: (a) Wetland Type (Cowardin, et. al., 1979 and Federal Geographic Data Committee, 2013) R3UB2/4 - Riverine lower perennial unconsolidated bottom (sand/mud) watercourse PFO1E - Palustrine Forested Broad-leaved Deciduous seasonally flooded/saturated wetland PEM5H - Palustrine Emergent Phragmites australis-dominated permanently flooded wetland PEM2 - Palustrine Emergent, non-persistent wetland PEM21 - Palustrine Emergent, non-persistent intermittently-flooded wetland E2EM1/5P - Estuarine intertidal emergent, persistent/Phragmites australis, irregularly flooded wetland					