

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 6/15/2021 ORM Number: NAE-2020-01597 Associated JDs: N/A Review Area Location¹: State/Territory: CONNECTICUT City: WINDSOR County/Parish/Borough: HARTFORD

Center Coordinates of Review Area: Latitude 41.90271 N Longitude -72.65750 W

II. FINDINGS

- **A. Summary:** Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.
 - □ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
 - □ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
 - There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
 - There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	§ 10 Size)	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): ³						
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination		
N/A.	N/A.	N/A.	N/A.	N/A.		

Tributaries ((a)(2) waters):					
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination	
Stream 2	329	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	Stream 2 currently originates at the outlet of a manmade non-jurisdictional conveyance which consists of a pipe and double basin under what was once a farm road and is now the recently constructed access road for a new industrial distribution warehouse facility. The basin which includes a double drop structure at the base of the re-graded slope was installed in 2017 by the prior property owner to capture surface water flow from the drainage area that includes the farm fields after	

¹ Map(s)/figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination 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. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



Tributaries ((a)	(2) waters)	:		
(a)(2) Name	(a)(2) Size	e	(a)(2) Criteria	Rationale for (a)(2) Determination
				the former irrigation pond at the site was filled. Prior to 2017 and the filling of the manmade irrigation pond, Stream 2, which is intermittent at this location, directly received flow through a non-jurisdictional conveyance (culvert) under the farm road. The naturally occurring and intermittent feature identified as Stream 2 (and its abutting wetland) was altered for construction of the irrigation pond sometime in the late-1930's or early 1940's but maintained channelized surface water connectivity with the downstream tributary. The remote resources we reviewed revealed that the farm road and its non- jurisdictional structural conveyance were not constructed until sometime after 1963. Within the permit area Stream 2 is intermittent, but remote resources, USGS NHD, NWI and state hydrography indicate that all, or most of the tributary, has been characterized as perennial.
				TRADITIONAL NAVIGABLE WATER Staff reviewed current and historical USGS topographic maps, USGS National Hydrography Data, USGS StreamStats, USFWS NWI Maps and other various state data to document the hydrologic connection from the project site to the nearest traditional navigable water which we ultimately determined was the Farmington River. The Farmington River, which is located outside the AJD review area, was assessed for navigability by the Corps in a 1984 New England regional study. The study documented that the first 8 miles of the 47.5- mile Farmington River were navigable with the upper limit of navigability slightly northwest of West Simbsury. The study confirmed that the upper limit of navigability is upstream of the project site's tributary confluence with the Farmington River, which is also a designated "Wild and Scenic" river.
				HYDROLOGICAL CONNECTIVITY Our evaluation revealed that Stream 2 flows in a southwesterly direction for approximately 60-feet before it shows signature of a potential perennial waterway on the aerial photographs and then another 430-ft before it converges with a smaller ephemeral tributary. From there Stream 2 continues to flow 870-ft. where it enters a wetland system and small ponded impoundment. After exiting the pond through a non-jurisdictional pipe, the tributary



I ributaries ((a)	(2) waters):		
(a)(2) Name	(a)(2) Siz	e	(a)(2) Criteria	Rationale for (a)(2) Determination
				continues for approximately 400-ft. in a
				southwesterly direction where it converges with a
				stream of like order. From this location the combined
				Stream 2 flows 200-ft. then enters Stosonis Pond
				which presents as a manmade excavated and
				impounded irrigation pond approximately 0.45-acre
				in area. After exiting the pond through another non-
				jurisdictional pipe conveyance, the watercourse
				flows another 500 linear feet before being conveyed
				under River Street through non-jurisdictional
				conveyance (twin box culverts) and flows northwest
				through a 1-acre floodplain wetland. The waterway
				is then conveyed via non-jurisdictional culvert under
				Old River Street and then into the Farmington River.
				Our evaluation indicates that the Stream 2 maintains
				sunace water connectivity, even with the presence
				or multiple manmade non-jurisdictional conveyances
				from the recourse of consideration (historical
				wetlend/irrigation pand) to confluence with the
				Earmington Divor TNW/ The USCS NHD
				hydrography data indicatos that the feature flows
				0.63 kilomotors (2.067 sq. ft.) to its confluence with
				the Fermington River
				PHOTOGRAPHIC ANALYSIS
				Corps staff reviewed multiple ranged-in-time remote
				resources and ultimately focused on completing
				typical year analysis of aerial imagery from 2012 and
				2016 because of its spring timeframe and "leaf off"
				condition which significantly enhanced visibility
				However, our investigation also weighed heavily on
				the dated point-in-time site photographs from July 9
				2019 Analysis of the aerial photographs from both
				March 29, 2012 and April 20, 2016 revealed visible
				flow signatures within the stream bed immediately
				downstream of the subject permit area and within
				the AJD review area. Direct evidence of surface
				water flow was present in the July 9, 2019 site
				photographs. With positive evidence of flow in a
				channelized stream bed downstream of the permit
				area and the consistent presence of an Ordinary
				High Water Mark above and below artificial
				conveyance structures, we went on to determine
				whether such flow and surface connectivity to
				downstream waters would occur in a "typical year".



Tributaries ((a)	(2) waters):	-	1
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
			TYPICAL YEAR ASSESSMENT
			Antecedent Precipitation (ATP) analysis was
			conducted for the aerial photographs dated March
			29, 2012 and April 20, 2016 and for the site
			photographs dated July 9, 2019.
			Review of the March 29, 2012 ATP assessment
			indicated that climate conditions were at, or below,
			the 30-year normal range prior, and up to, the date
			that the aerial photograph was taken. The analysis
			revealed that the 30-day rolling totals on March 29
			could be considered drier than normal (normal is
			above 30% and below 70% -orange shaded area)
			and that although the photo date was taken during
			the "wet season" the conditions met the standard
			for "moderate drought" according to the Palmer
			Drought Severity Index (PDSI) The precipitation
			observations document that there were no
			significant unusual rainfall events in the days leading
			up to the range of dates for this photograph. Thus
			this image appears to be a reliable indicator of
			typical flow condition driven by normal precipitation
			and seasonal elevated groundwater inundation at
			the site. The fact that flow is visible in the stream
			bed in the 2012 aerial photograph provides
			supporting evidence that Stream 2 is at least
			intermittent and flows continuously during certain
			times of the year and more than in direct response
			to precipitation. Both state and federal hydrography
			and the LISEWS NWI maps identify the feature as
			perennial (Cowardin classification R51 IBH "Riverine
			Unknown Perennial Unconsolidated Bettern
			Dormonontly Elected")
			Poview of the April 20, 2016 ATP data revealed that
			precipitation was within the 30-year normal range
			prior, and up to the date that the photograph was
			taken. The analysis showed that the 20 day rolling
			totale were leaving on the wetter side of normal
			Although considered the "wet cooper" coil maisture
			and related conditions were trending on a path
			toward "sovere drought" according to the Dalmer
			Drought Soverity Index (PDSI). The precipitation
			observations document that there were no
			cignificant unuqual rainfall events in the days leading
			significant unusual rainfail events in the days leading
			up to April 20, 2016 thus this image appears to be a
			reliable indicator of typical flow condition driven by
			normal precipitation and seasonal elevated



Tributaries ((a)	(2) waters):		
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
			groundwater inundation at the site. We concluded that both of these remote point-in- time aerial photographic observations provided reasonably reliable documentation that Stream 2 is, at least intermittent and flows continuously during certain times of the year, more than in direct response to precipitation and predictably contributes surface water flow to downstream jurisdictional waters, and the Farmington River (TNW), in a typical year.
			Staff also conducted ATP analysis for site photographs taken on July 9, 2019. The ATP analysis revealed that precipitation was on the wetter side for the spring 30-day rolling total. Notably the 30-day rolling totals in early spring (May) were well above normal. However, the analysis also indicated that site condition was within, or slightly below, the 30-year normal range but that by June, prior to when the site photographs were taken, wetland condition was back to "normal". At the time of the July photograph site conditions were trending on the drier side of normal, which would be expected for the dry summer season although the Palmer Drought Severity Index (PDSI) noted moderate wetness most likely due to the significance of precipitation events in April and May. The daily precipitation observations document that there were no significant unusual rainfall events in the days leading up to July 9,2019. Despite the trending "dry" state with a condition index of 10, Stream 2 possessed continuous surface water flow connectivity to downstream waters. ATP data shows that the July 9, 2010 images are a reliable indicator of typical flow condition driven by normal precipitation and seasonal elevated groundwater inundation at the site.
			Our remote review also contributes reasonable and predictable weight of evidence that the channelized non-jurisdictional features outside of the review area continue to maintain the surface water connection of the tributary's flow and that none of these artificial features sever the flow of Stream 2 to into the Farmington River during a typical year, as evidenced by OHWMs both upstream and downstream of such channelized non-jurisdictional manmade features.



Tributaries ((a	Tributaries ((a)(2) waters):						
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination				
			During our review we considered all available and relevant source of information as to flow and hydrologic connectivity of Stream 2. The data we reviewed supports a determination that Stream 2 is predictably either intermittent and/or perennial and that it maintains hydraulic connectivity after passing through multiple channelized non-jurisdictional conveyance structures. Consequently, we conclude that Stream 2 contributes surface water flow to downstream jurisdictional waters and the Farmington River (TNW), at least once, in a typical year.				

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):					
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination	
N/A.	N/A.	N/A.	N/A.	N/A.	

Adjacent wetla	ands ((a)(4) waters):		
(a)(4) Name	(a)(4) Siz	ze	(a)(4) Criteria	Rationale for (a)(4) Determination
Wetland 2	0.33	acre(s)	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by an artificial structure allowing a direct hydrologic surface connection between the wetland and the (a)(1)-(a)(3) water, in a typical year.	That hayfield that is currently located in the central south portion of the site was a manmade +/- 55,000 sq. ft. irrigation pond dug by the former agricultural property owner to supply water to the surrounding tobacco fields. Remote resources we analyzed revealed that prior to construction of the irrigation pond, the site possessed a narrow intermittent slope watercourse with riparian wetland surrounded by upland soils. The initial irrigation pond appears on the landscape at the site sometime between 1946 and 1953. The pond was later enlarged to the size above, sometime after 1963. Because the pond and the non-JD conveyance no longer exist we were only able to rely on historical remote resources and a substitute reference within the tributary to determine whether flow from the stream and abutting altered wetlands would possess physical connectivity and convey flow to downstream (a)(2) waters in a typical year. See the ATP analysis above for this evaluation. Historical soil surveys by the USDA depict that soils associated with the tributary were classified as Ninigret Sandy Loam. The current soil classification maps and SSURGO database provide much more detail and identify the presence of hydric inclusions



Adjacent wetla	nds ((a)(4) watei	rs):	
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
			at the site to include the poorly drained Walpole soils (depressions and slopes) and Raypol soils (very deep, poorly drained soils formed over sandy and gravelly outwash in drainageways). Both features are typically surrounded by upland terrace escarpments of sand and gravel (Windsor Loamy Sand and Hinckley Loamy Sand).
			The historical limit of Wetland 2 within the boundary of the filled former farm pond was re-created by the soil scientist through the evaluation of deep soil probes of the altered area and an immediate adjacent wetland reference site that possessed hydric soils, hydrophytic vegetation and wetland hydrology. This field analysis was supported with historical sources of soil characterization (USDA NRCS soil surveys, aerial photography (April 1934), and topographic maps (1946 and 1953)
			Historic resources that we relied on to corroborate the submittal included, but are not limited to, historical aerial imagery (1934) and topographic maps (1892, 1932, 1942 & 1946). We also evaluated the State of Connecticut 2016 bare earth elevation LiDAR which also verified the current physical characteristics of the tributary and associated character of riparian wetland at the site. The use of the reference area speaks indirectly to what the tributary and the abutting wetlands would have looked like prior to their alteration for creation of the irrigation pond.
			The remote resources we reviewed, especially the 1934 aerial, revealed that prior to the historical modification of the wetland and watercourse for the irrigation pond, Wetland 2 would have bordered and physically touched the boundary of Stream 2 on at least one side. There was also no evidence of natural or artificial separation of this feature from the larger system prior to construction in 1934. Evaluation of the Stream 2 reference site further augments the historical remote evidence that the wetland, which would have been present prior to construction of the irrigation feature, would have physically abut or "touched", as necessitated by the landscape position, the watercourse (Stream 2), which we identify as an (a)(2) water above, on at least one side.



Adjacent wetlands ((a)(4) waters):					
(a)(4) Name (a)(4) Size (a)(4) Criteria Rationale for (a)(4) De	etermination				
Ley(1) Cites Ley(1) Cites Based on field forensis the area of wetland m construction of the far roughly 15,000 sq. ft. the agent's site assess we reviewed, especial Connecticut aerial pho validation of the strear site and allows reasor The remote resources also provide reliable e unauthorized pond fill, Stream 2 and its abutt connected to downstre manmade channelized conveyance feature (or remains via drainage of In conclusion our revie documentation, currer a substitute reference area identified as Wet would have met the cr wetland because it pho on at least one point of	c analysis by the consultant odified historically for the initial m pond was estimated at (0.33 acre). We concur with sment as the remote resources lly the 1934 State of otograph provides reasonable m and abutting wetland at the nable interpretation of the area. (and current site condition) vidence that prior to the the pond, and thus historically ting Wetland 2, were directly eam (a)(2) waters by a d non-jurisdictional culvert). Such connectivity drop structure and piped outlet. (area for the filled resource land 2 indicate that the feature riteria for an adjacent (a)(4) ysically abutted or "touched", or structure and piped or "touched",				

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)): ⁴								
Exclusion Name	Exclusion Size		Exclusion ⁵	Rationale for Exclusion Determination				
Irrigation Pond excavated in Upland	0.85	acre(s)	(b)(8) Artificial lake/pond constructed or excavated in upland or a non- jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional	As indicated above, under the (a)(2) waters section, the area of wetland and watercourse modified historically for the initial construction of the farm pond was estimated at roughly 15,000 sq. ft. (0.33 acre). The applicant's agent rightly concluded that for applicability under the (b)(8) exclusion the former irrigation pond would have to have been constructed or excavated wholly in upland or in non-jurisdictional waters.				

 ⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
 ⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1)

exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



Excluded waters $((b)(1) - (b)(12))$: ⁴							
Exclusion Name	Exclusior	n Size	Exclusion⁵	Rationale for Exclusion Determination			
Exclusion Name	Exclusion	n Size	Exclusion ⁵ water that meets (c)(6).	Rationale for Exclusion DeterminationParagraph (b) of the Navigable WatersProtection Rule states that "where portions of a new or modified water feature are built in a jurisdictional water, the agencies would not view the new or modified feature as having been constructed or excavated wholly in upland or in non-jurisdictional waters" and therefore the portion of the feature constructed in jurisdictional 			

III. SUPPORTING INFORMATION



A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

Information submitted by, or on behalf of, the applicant/consultant: Dept. of the Army General Permits for the State of Connecticut After-the-Fact Pre-Construction Notification Application, Amazon.com Services LLC, Distribution Facility, Windsor, Connecticut prepared by All-Points Technology Corp. dated December 2020 including wetland delineation dataforms prepared on July 9, 2019 and Appendix A Application Narrative including wetland evaluation..

This information is sufficient for purposes of this AJD. Rationale: N/A

- Data sheets prepared by the Corps: Title(s) and/or date(s).
- Photographs: Other: Site Photos by All-Points Technology Corp. taken on July 9, 2019.
- \Box Corps site visit(s) conducted on: Date(s).
- Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*
- USDA NRCS Soil Survey: Soil Survey of the State of Connecticut accessed via SSURGO and Web

Soil Survey on 5/27/2021; USDA Soil Conservation Soil Service Hartford County Soil Survey dated August 19, 1958.

USFWS NWI maps: Title(s) and/or date(s).

USGS topographic maps: Windsor and Hartford County dated 1892, 1946, 1953, 1964 accessed 3/8/2021

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information		
USGS Sources	USGS StreamStats for the State of Connecticut; USGS Topographic Maps		
USDA Sources	N/A.		
NOAA Sources	N/A.		
USACE Sources	N/A.		
State/Local/Tribal Sources	State of Connecticut, CTECO Digital Elevation Maps based on light detection and ranging; State of Connecticut Hydrography Database, State of Connecticut Inland Wetland Hydric Soil.		
Other information (specify)	Aerial Photographs from State of Connecticut, UCONN/Magic, Google Earth, CTDOT, USDA/NRCS for 1934, 1986, 1990, 2004, 2008, 2009, 2010, 2012, 2014, 2016, 2018, 2019 and 2020		

B. Typical year assessment(s): Typical Year Assessments and ATP analysis for remote resources dated March 29, 2012, April 20, 2016 and July 9, 2019.

C. Additional comments to support AJD: N/A



Legend

Site
Municipal Boundary

<u>Map Notes:</u> Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, Windsor Locks, CT (1984) Map Scale: 1:24,000 Map Date: September 2020

W E S 000 500 0 1,000

Site Location Map

Project Warrior 1201 Kennedy Road & 1 Joseph Lane Windsor, Connecticut





- Former Irrigation Pond Limits
- Historical Wetland Limits
 - Ref Wtl Data Plots SP-1 UP/WET

ox (APT GIS)\APT GIS Team Folder\Projects\Langan\Windso

h Lane\mxd\Historical W

sers\mk

- Limits of Existing Delineated Wetland Boundary
- Existing Wetland Area

<u>Map Notes:</u> Base Map Source: 2019 CT Aerial Imagery (CTECO) Map Scale: 1 inch = 200 feet Map Date: December 2020

Subject Property

100

Historical Wetland Jurisdiction Map

Project Warrior 1 Joseph Lane and 1201 Kennedy Road Windsor, Connecticut

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AMAZON PROJECT WARRIOR NAE-2020-01597





FIGURE 2

AMAZON PROJECT WARRIOR NAE-2020-01597 - AJD REVIEW AREA



FIGURE 3

Source: Town of Windsor GIS Accessed: May 27, 2021 Created by: Cori M. Rose, USACE

AMAZON PROJECT WARRIOR NAE-2020-01597 – AJD REVIEW AREA



FIGURE 4

Source: Town of Windsor GIS Accessed: May 27, 2021 Created by: Cori M. Rose, USACE

AMAZON PROJECT WARRIOR NAE-2020-01597 – USFWS NWI MAP



Source: USFWS NWI Mapper Accessed: May 27, 2021 Created by: Cori M. Rose, USACE