

Appendix L

Wetlands and Waterways Delineation



WETLAND & WATERWAY DELINEATION REPORT

ENVIRONMENTAL ASSESSMENT FOR RUNWAY 6-24 SAFETY AREA IMPROVEMENTS PROJECT TOWN OF WAPPINGERS FALLS DUTCHESS COUNTY, NEW YORK

April 2021

Prepared for:
Hudson Valley Regional Airport
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Wappingers Falls, New York 12590

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- Appendix B: Web Soil Survey
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1.0 INTRODUCTION

Hudson Valley Regional Airport is preparing an Environmental Assessment for the proposed Runway 6-24 Safety Area Improvements project 263 New Hackensack Road, Wappingers Falls in Dutchess County. The purpose of the Proposed Project is to bring Runway 6-24 runway safety areas into compliance with federal design standards and regulations. The proposed project includes the following:

- Displace Runway 6 threshold 193 feet
- Reconfigure and re-cable medium intensity runway lights with runway end identifier lights (MALSR) and associated grading (includes construction of at least three new light towers, removal of at least three light towers, height modification of six light towers). It is possible that all existing light towers and foundations must be replaced within the MALSR limits of disturbance depending on the structural effects of light tower height adjustments and condition of the existing MALSR system.
- Relocation of approximately 200 feet of existing gravel access road adjacent to light tower located 1,000 feet from the displaced threshold.
- Relocate instrument landing system (ILS) glideslope antenna, equipment shelter, and access road and associated grading
- Relocate precision approach path indicator (PAPI) lights on Runway 6 end
- Fill, re-grade, and remove uneven paved areas on the Runway 24 end
- Re-marking and re-lighting on Runway 6 end

The Area of Interest (AOI) encompasses approximately 8.4-acres and is depicted in the attached Figure 1 – Project Location Map. The delineation is prepared consistent with the United States Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) guidelines. This report outlines review of published resource materials, existing site conditions, and the results of field investigation.

1.1 Project Description

Hudson Valley Regional Airport is preparing an Environmental Assessment for the proposed Runway 6-24 Safety Area Improvements project.

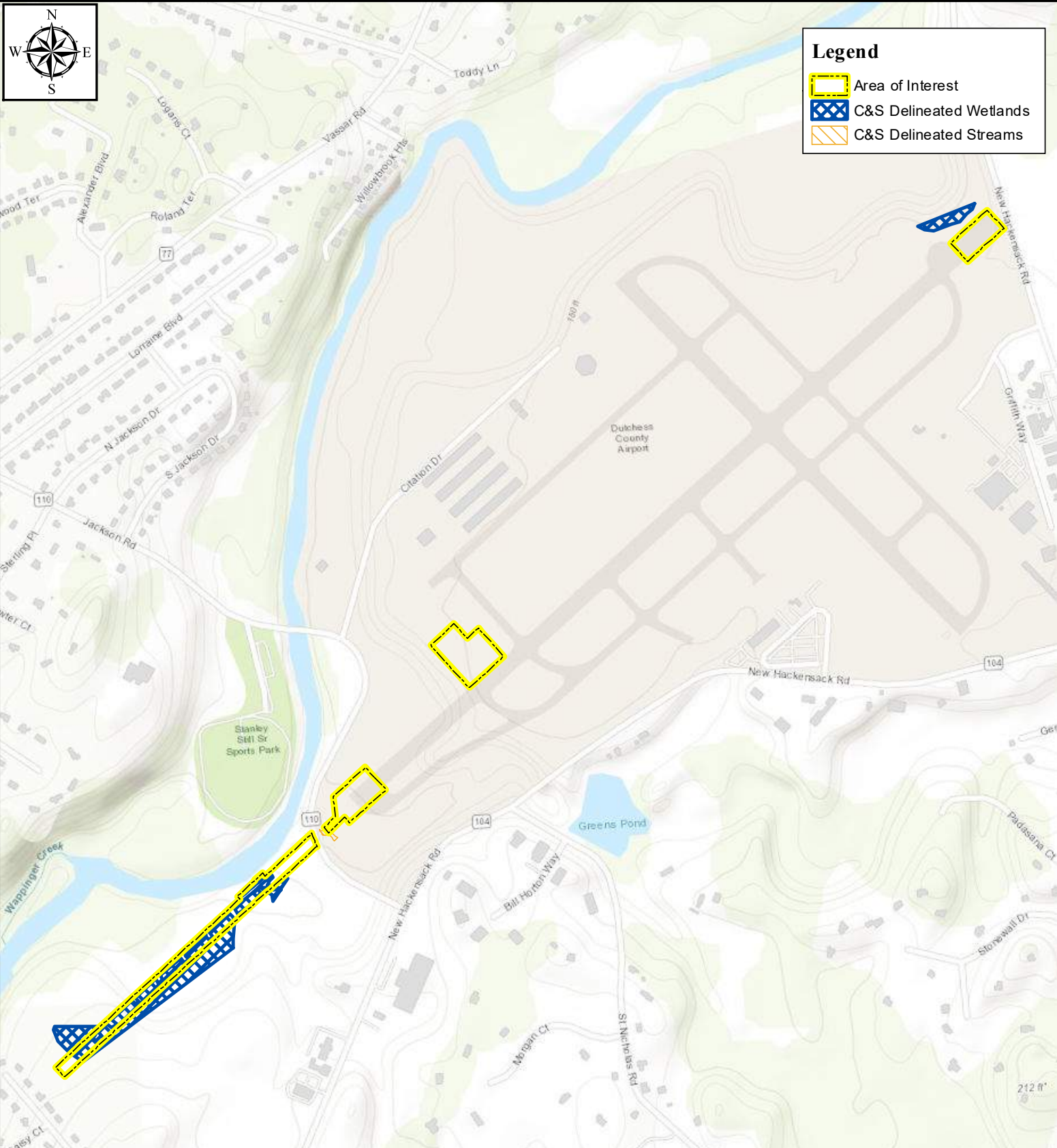
1.2 Project Location

The AOI is on 263 New Hackensack Road, Wappingers Falls in Dutchess County (See Figure 1). The site occurs within the Wappinger Lake-Wappinger Creek (USGS Cataloging Unit: 020200080206).



Legend

- Area of Interest
- C&S Delineated Wetlands
- C&S Delineated Streams



Notes:

1. WETLAND & WATERWAYS BOUNDARIES WERE DELINEATED BY C&S ENGINEERS ON 3/9/2021
2. WETLAND & WATERWAYS BOUNDARIES WERE SURVEYED VIA TRIMBLE GPS UNIT

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance METI, Esri China (Hong Kong), swisstopo, MapmyIndia, contributors, and the GIS User Community

0 300 Feet
1 inch = 800 feet



Project Location Map
Hudson Valley Airport Environmental Assessment
Town of Wappinger Falls, Dutchess County, New York

Figure 1

2.0 METHODS

2.1 Desktop Evaluation

Prior to the field survey, C&S reviewed various maps and other sources of information to determine onsite areas that contain aquatic resources. These include:

- United States Geological Survey (USGS) topographic maps
- National Wetlands Inventory (NWI) Maps prepared by the U.S. Fish and Wildlife Service (USFWS)
- Freshwater Wetland Maps prepared by the NYSDEC
- Stream Classification Maps prepared by the NYSDEC
- Soil Survey Geographic Database (SSURGO) Soils Map prepared using U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey Geographic Database
- Federal Emergency Management Agency (FEMA) Floodplain Maps

The above references are used initially to identify areas with potential to contain wetlands and streams.

2.2 Field Surveys

2.2.1 Wetlands

C&S completed wetland delineations within the AOI on March 9, 2021. During field surveys, dominant flora species, hydrologic features, and soil conditions are recorded.

Wetlands boundaries are delineated using criteria for vegetation, soils, and hydrology as specified in the *1987 Corps of Engineers Wetland Delineation Manual* (USACE 1987) (hereinafter referred to as the USACE Manual) and the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (Regional Supplement) (USACE 2012). New York State regulated wetlands are not mapped within the AOI, therefore the aquatic resource delineation is not completed consistent with the *1995 NYSDEC Freshwater Wetlands Delineation Manual* (NYSDEC 1995).

Locations of wetland delineation flags are mapped in the field using a Trimble Global Positioning System (GPS). Wetland flags/points are placed and coordinates are recorded via GPS along the wetland boundaries based on observations of hydrophytic vegetation, hydric soils, and hydrology conditions. These observations are made throughout the hydrologic condition continuum to verify the wetland boundary is sufficiently identified. Each wetland is assigned a letter designation, and each wetland flag is labeled with the letter assigned to the wetland and numbered consecutively. All GPS code phase data captured in the field are post-processed (differential correction) using Trimble's Pathfinder Office software. Wetland polygons are created in Geographic Information System (GIS) shapefiles and incorporated on

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Project base maps for the preparation of report figures. Wetland areas are calculated using Environmental Systems Research Institute ARCGIS ARCView.

Formal wetland determination data forms are completed in the field to document justification for the wetland boundary as delineated (Appendix A). These forms are prepared consistent with the Regional Supplement, and include information pertaining to hydrology, vegetation, and soils for each wetland within the Project AOI.

Vegetation is characterized consistent with the Regional Supplement, and recorded in plots as required by the USACE. Scientific nomenclature for plant species and the indicator status for each plant species occurring within the wetland sampling plot is determined using National Wetland Plant List: 2016 Update of Wetland Ratings (Lichvar et al. 2016). Soil characteristics and hydrology data are observed and collected at test pits within the vegetative plots. The pits are excavated by hand to a depth of 20 inches below grade consistent with the USACE Manual. The presence of hydric soil indicators is determined by describing pertinent characteristics of the soil sample. Soil colors are determined using the Munsell® soil color charts (2000 Edition, Gretag Macbeth, Division of Kollmorgen Instruments Corporation, New Windsor, New York). Hydric soil characteristics such as organic soil layers, reducing conditions, gleying, low-chroma mottles, and concretions are noted. Primary and secondary indicators of hydrology are also noted at each sample plot.

A wetland determination is made at each sample plot after characterizing vegetation, hydrology, and soil. If the vegetation, hydrology, and hydric soil criteria are met, the area is deemed a wetland. If one or more of the criteria are not met, the area is determined to be non-wetland. Completed wetland determination sheets for each representative soil pit are included in Appendix A.

Wetlands identified are further classified consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). The jurisdictional status of delineated features consistent with the 2015 Clean Water Rule as described in 40 Code of Federal Regulation Parts 110, 112, 116, et al.

2.2.2 Streams

Stream delineations were completed within and immediately adjacent the AOI. The federally regulated Ordinary High Water (OHW) mark of streams within the Project AOI are delineated using the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328, and the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary High Water Mark Identification. Each stream is categorized in regard to its flow regime as perennial, intermittent, or ephemeral, as defined by the USACE. The OHW mark for each stream is mapped using the Trimble GPS.

Streams in the State of New York are protected by Article 15 Use and Protection of Waters. Streams are given classifications that designate the level of protection afforded to each waterbody. Each waterbody identified within the AOI is classified according to Article 15. The waterbody classification categories are AA, A, B, C or D depending on their designated level of protection. Waters with classifications A, B, and C may also have a standard of (T),

indicating that it may support a trout population, or (TS), indicating that it may support trout spawning (TS). Streams with a designation of C (T) or higher are considered “protected” waters of New York State.

Stream boundaries are mapped using Trimble GPS units with sub-meter accuracy. Stream lengths are calculated in linear feet using Environmental Systems Research Institute ARCGIS ARCView. The jurisdictional status of delineated features consistent with the 2015 Clean Water Rule.

2.2.3 Ditches – Federal Jurisdiction

Ditches were delineated within and immediately adjacent the AOI. For ditches to be protected under the Navigable Waters Protection Rule, they must meet the definition of a tributary, having a bed and banks, an ordinary high water mark and contribute flow directly or indirectly through another water to a traditional navigable water, or are constructed in a wetland and meet the definition of an adjacent wetland per the rule. The Navigable Waters Protection Rule excludes certain ditches if specific criteria are met; the following ditch types are not considered waters of the US:

- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations.

The federally regulated OHW mark of ditches within the AOI are delineated using the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328, 40 CFR Parts 110, 112, 116, et al. Clean Water Rule: Definition of “Waters of the United States” Final Rule and the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary High Water Mark Identification. In the event ditches occur in wetlands, the ditches are delineated consistent with the USACE manual and applicable regional supplement. Ditch boundaries are mapped using Trimble GPS units with sub-meter accuracy; lengths are calculated in linear feet using Environmental Systems Research Institute ARCGIS ARCView.

3.0 RESULTS

3.1 Desktop Evaluation

Resource mapping used during the desktop review are provided in Figures 1 through 5. Figure 1 depicts the AOI on USGS topographic mapping. Figure 2 provides NYSDEC mapped resources within the AOI. Figure 3 provides NWI mapping, and Figure 4 provides soil survey information. Figure 5 depicts FEMA mapped floodplains within the vicinity of the AOI. A summary of information gathered during the desktop analysis is provided herein.

3.2 Topography and Drainage

The Project site appears on the U.S. Geological Survey (USGS) 7.5-minute Poughkeepsie and Wappinger Falls topographic quadrangle map (See Figure 1). The AOI is on New Hackensack Road in the Town of Wappinger Falls, Dutchess County within the USGS topographic map. Elevations range from 160 to 100 feet (North American Vertical Datum of 1988 [NAVD 88]).

3.3 New York State Mapped Resources

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Article 24 of the Environmental Conservation Law requires the NYSDEC to map freshwater wetlands subject to jurisdiction of the law. Article 24 Freshwater Wetland Maps show the approximate location of the wetland boundary and the unique alpha numeric wetland identification number assigned to each resource. Due to the scale of the mapping and aerial photography used to produce the wetland boundaries, they are suitable for general planning purposes only. Based on the Freshwater Wetland Maps and the field review, there are no NYSDEC mapped wetlands within the AOI (See Figure 2). There are two NYSDEC streams, tributaries to Wappinger Creek, within and/or adjacent to the AOI, listed with Class C standards (Figure 2).

3.4 National Wetlands Inventory Map

Based on the NWI map there are NWI mapped resources within or adjacent to the AOI (See Figure 3). Note that NWI maps were derived from aerial photo interpretation and are suitable for general planning purposes only; they typically do not show all the wetland or watercourse resources within any given area. Three wetlands are identified within the AOI, labeled PSS1E, R3UBH, R4SBC and R5UBH. PSS1E are seasonally flooded palustrine scrub/shrub resources dominated by woody vegetation less than 6 meters tall. R3UBH are upper perennial permanently flooded riverine systems with unconsolidated bottoms. R4SBC are intermittent seasonally flooded riverine systems with streambeds. R5UBH are permanently flooded riverine systems with unconsolidated bottoms. R2UBH are lower perennial permanently flooded riverine systems with unconsolidated bottoms.

3.5 Soil Survey

Four unique soil series are mapped within the AOI as depicted in Figure 4, three of which contain hydric components. Table 1 provides the hydric rating, and acreage of the soils mapped on site. The hydric rating by map unit provided by the USDA NRCS Web Soil Survey is provided as Appendix B.

Table 1. Web Soil Summary in the AOI

Soil map unit	Hydric rating	Acres of soil within AOI	Percent of soil within AOI
Dutchess-Cardigan complex, undulating, rocky	1	0.1	1.3%
Haven loam, nearly level	5	0.2	1.8%
Udorthents, smoothed	0	6.7	79.7%
Wayland silt loam	88	1.4	17.1%







Project Location Map
Hudson Valley Airport Environmental Assessment
 Town of Wappinger Falls, Dutchess County, New York

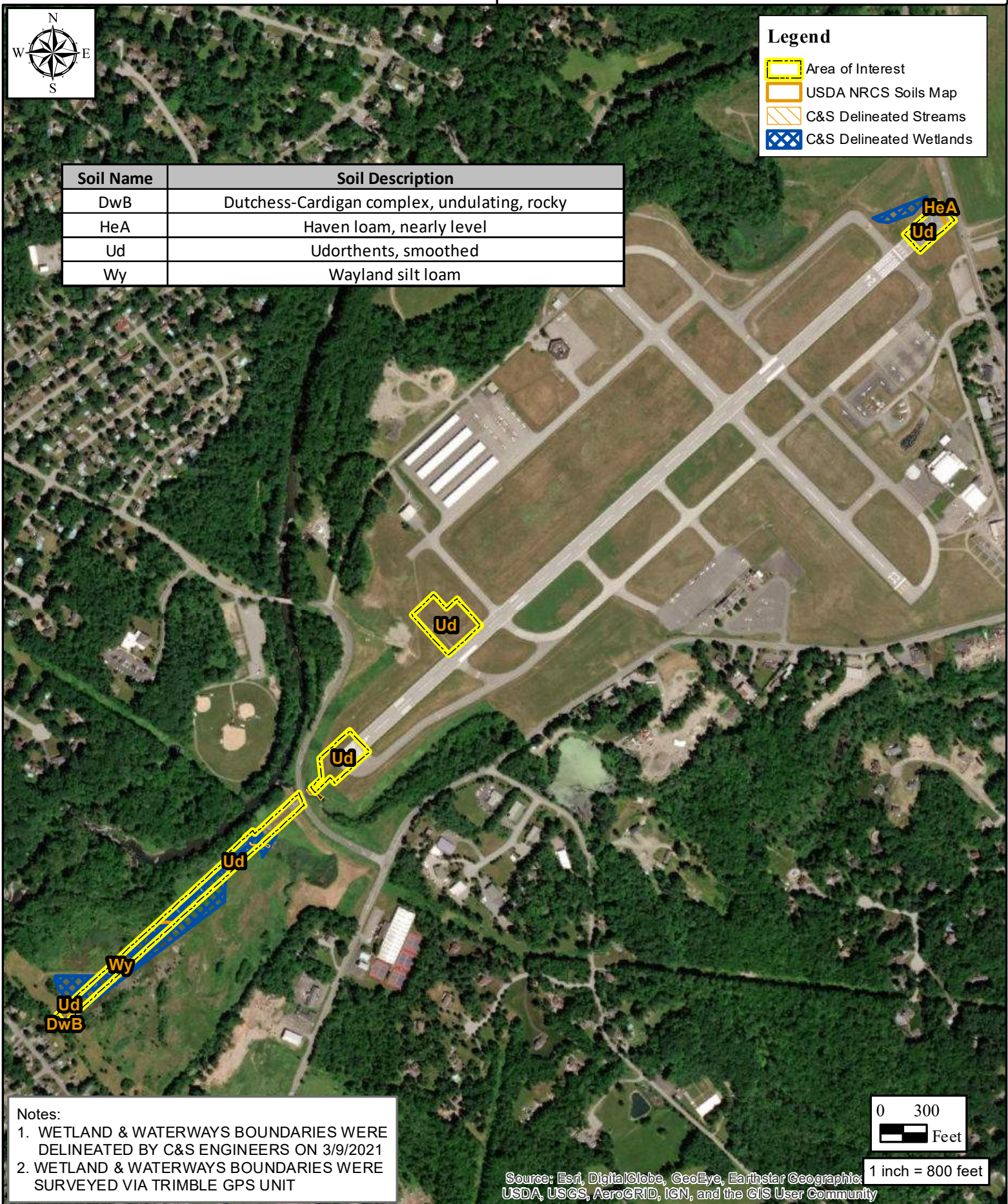
Figure 2



Legend

-  Area of Interest
-  USDA NRCS Soils Map
-  C&S Delineated Streams
-  C&S Delineated Wetlands

Soil Name	Soil Description
DwB	Dutchess-Cardigan complex, undulating, rocky
HeA	Haven loam, nearly level
Ud	Udorthents, smoothed
Wy	Wayland silt loam



Notes:
 1. WETLAND & WATERWAYS BOUNDARIES WERE DELINEATED BY C&S ENGINEERS ON 3/9/2021
 2. WETLAND & WATERWAYS BOUNDARIES WERE SURVEYED VIA TRIMBLE GPS UNIT

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, USDA, USGS, AeroGRID, IGN, and the GIS User Community



USDA NRCS Soils Map
Hudson Valley Airport Environmental Assessment
Town of Wappinger Falls, Dutchess County, New York

Figure 4

3.6 FEMA Floodplain Map

Based on the FEMA floodplain map (See Figure 5) the AOI is within a 100-year flood zone.

3.7 Field Surveys

3.7.1 Wetlands

C&S delineated four wetlands within the AOI referred to as Wetland B, C, D and E. The boundaries of the delineated wetlands are included in Figure 6. Wetlands B, C, and D are categorized as palustrine emergent wetlands (PEM) consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) (hereinafter referred to as Cowardin). Wetland E is categorized as a palustrine scrub/shrub wetland (PSS). The boundaries of on-site wetlands within the AOI are delineated consistent with the USACE and NYSDEC (as applicable) manual. Table 2 provides a summary of the wetland identified during the field investigation. Photographs of the wetland identified is provided in Appendix C.

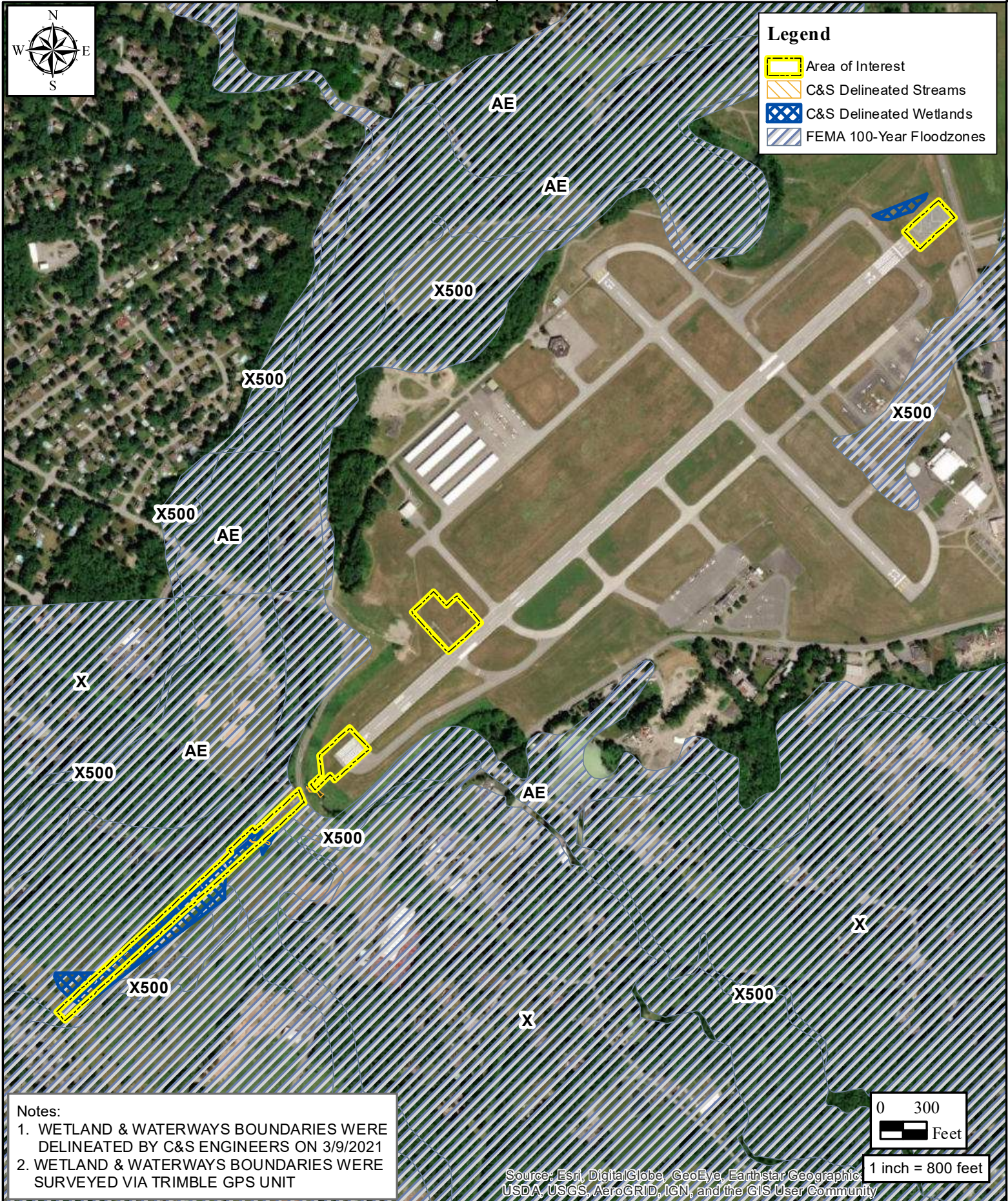
Table 2. Wetland Delineation Summary in the AOI

Wetland Id	Cowardin Community Type	Agency Jurisdiction	Latitude/ Longitude Coordinates	Acreage in AOI
B	PEM	USACE	41°37'52.107"N 73°52'40.945"W	0.43
C	PEM	USACE	41°37'9.917"N 73°53'45.626"W	4.16
D	PEM	USACE	41°37'14.096"N 73°53'37.865"W	0.28
E	PSS	USACE	41°37'14.737"N 73°53'38.235"W	0.11
TOTAL				4.98

The PEM and PSS Cowardin classes is defined below:

PEM - This aquatic resource is a palustrine emergent wetland. Vegetation is comprised of erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

PSS - This aquatic resource is a palustrine scrub/shrub wetland. The wetland is characterized by tree, shrubs, mosses or lichens and erect, rooted, herbaceous hydrophytes. These areas are dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.



FEMA 100-Year Flood Map
Hudson Valley Airport Environmental Assessment
Town of Wappinger Falls, Dutchess County, New York

Figure 5

Name	Acreage	Length	OHWB (av.)
Stream A	0.01	180 ft.	2-4 ft.
Stream B	0.03	145 ft.	6-8 ft.

Legend

- Area of Interest
- Soil Test Pits
- C&S Wetland Flags
- C&S Delineated Streams
- C&S Delineated Wetlands



Wetland Continues Offsite

Wetland B

Stream B

UP-B-1

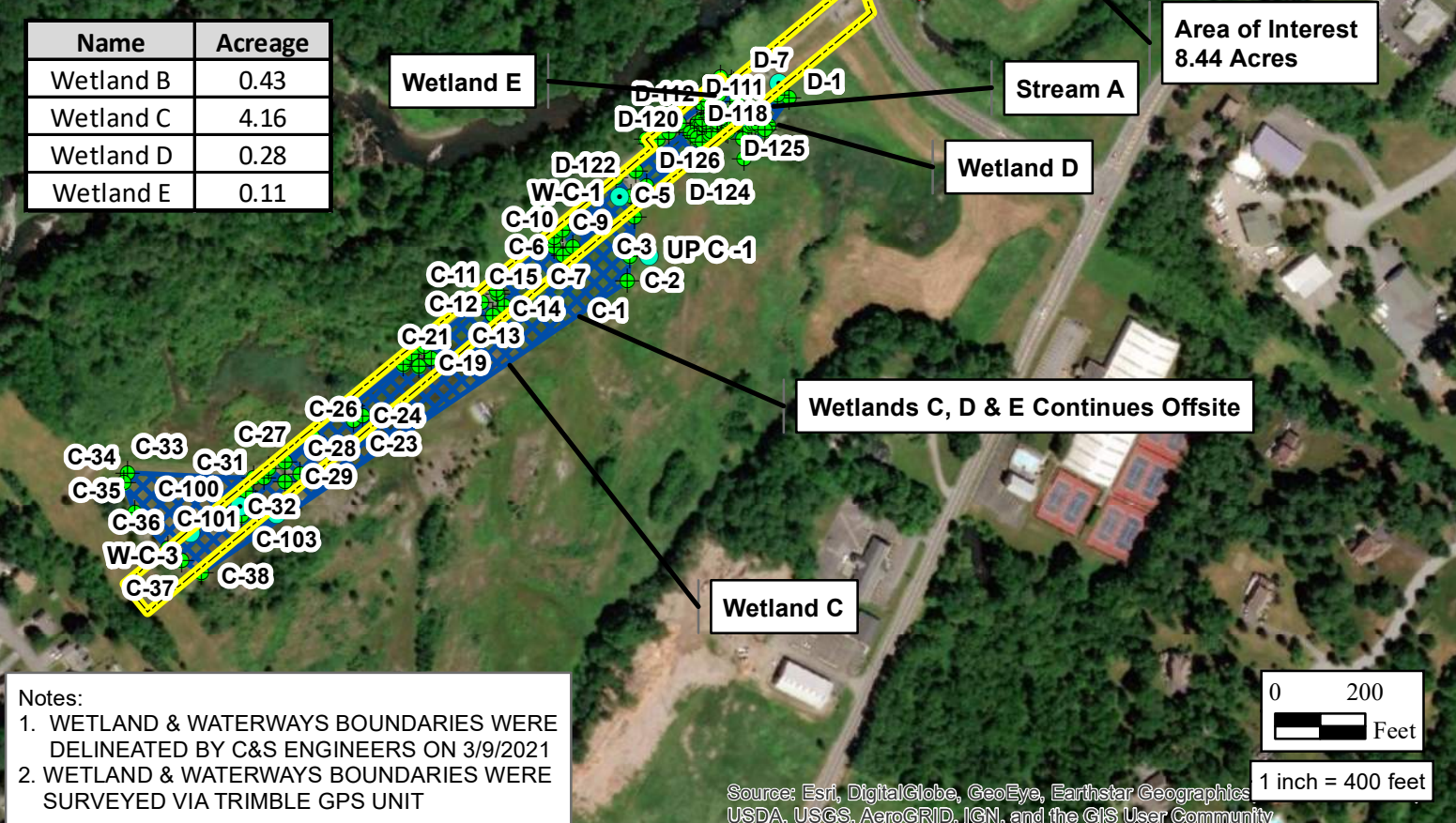
UP-B-2

W-B-1

B-1, B-2, B-3, B-4, B-5, B-6, B-7, B-8, B-9

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Name	Acreage
Wetland B	0.43
Wetland C	4.16
Wetland D	0.28
Wetland E	0.11



Notes:

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2. WETLAND & WATERWAYS BOUNDARIES WERE SURVEYED VIA TRIMBLE GPS UNIT

Below are a description of wetlands that occur within the AOI:

Wetland B (PEM): The herbaceous stratum is dominated by reed canary grass (*Phalaris arundinacea*), soft rush (*Juncus effuses*) and perennial rye grass (*Lolium perenne*). Primary hydrologic indicators observed include surface water, high water table, saturation and presence of oxidized rhizospheres on living roots. Secondary hydrologic indicators observed include saturation visible on aerial imagery and FAC-Neutral test. The soil indicator S5 was observed in this wetland.

Wetland C (PEM): The herbaceous stratum is dominated by reed canary grass, cottongrass bulrush (*Scirpus cyperinus*), red osier dogwood (*Cornus sericea*), common reed (*Phragmites australis*), soft rush, and broadleaf cattail (*Typha angustifolia*). Primary hydrologic indicators observed include surface water, high water table, saturation, inundation visible on aerial imagery and presence of oxidized rhizospheres on living roots. Secondary hydrologic indicators observed include presence of saturation visible on aerial imagery and FAC-Neutral test. The soil indicators F1, F3 and F6 were observed in this wetland.

Wetland D (PEM): The herbaceous stratum is dominated by reed canary grass, soft rush, broadleaf cattail and purple loosestrife (*Lythrum salicaria*). Primary hydrologic indicators observed include surface water, high water table, saturation, inundation visible on aerial imagery and presence of oxidized rhizospheres on living roots. Secondary hydrologic indicators observed include presence of saturation visible on aerial imagery, geomorphic position and FAC-Neutral test. The soil indicators A11 was observed in this wetland.

Wetland E (PSS): The tree stratum is dominated by silver maple (*Acer saccharinum*). The shrub stratum is dominated by red osier dogwood. The herbaceous stratum is dominated by reed canary grass. Primary hydrologic indicators observed include high water table, saturation and presence of oxidized rhizospheres on living roots. Secondary hydrologic indicators observed include presence of saturation visible on aerial imagery and FAC-Neutral test. The soil indicators F6 was observed in this wetland.

3.7.2 Streams and Open Waters

The field survey resulted in two streams (referred to as Stream A and B) identified within the AOI. Table 3 provides a summary of the stream identified during the field investigation. Photographs of the streams identified are provided in Appendix C. The boundary of the delineated stream is included in Figure 6.

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Table 3. Stream Delineation Summary in the AOI

Stream Id	Stream Classification	Agency Jurisdiction	NYSDEC Stream Class.	Length and Width in AOI (Feet)	Acreage in AOI
A	Intermittent	USACE	C	Length – 180 Width – 2-4	0.01
B	Perennial	USACE	C	Length – 145 Width – 6-8	0.03
TOTAL				325	0.04

No open waters were delineated during the field survey.

3.7.3 Ditches

No ditches were delineated during the field survey.

4.0 CONCLUSION

C&S was retained by Hudson Valley Regional Airport to complete a wetland and waterway survey for the proposed project. Wetland areas were assessed as waters of the U.S. subject to USACE jurisdiction, and as freshwater wetlands subject to NYSDEC regulation. These features are also classified consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

Four wetlands within the Wappinger Lake-Wappinger Creek (USGS Cataloging Unit: 020200080206) were delineated by C&S within the AOI. Wetland B, C and D are PEM features and Wetland E is a PSS feature. C&S delineated 4.98 acres of wetland in the AOI. These wetlands are potentially regulated waters of the United States afforded protection under Section 404 of the Clean Water Act. The wetlands described herein satisfy the criteria to be a wetland pursuant to the Army Corps of Engineers' 1987 Manual (and Regional Supplement) with subsequent clarification memoranda and pursuant to confirmation by the USACE. Wetlands B, C, D and E are not subject to jurisdiction by the NYSDEC under Article 24 of the Freshwater Wetlands Act.

Two streams, Stream A and B, were identified within the AOI boundary. Streams A and B are considered waters of the United States afforded protection under Section 404 of the Clean Water Act. Streams A and B are Class C(C) with C(C) water quality standards and are therefore not considered protected streams by New York State standards. No ditches or open waters were identified during the field survey.

The final boundary and jurisdictional status of on-site features is subject to approval by both the USACE and NYSDEC.

5.0 LITERATURE CITED

- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. (available at: Northern Prairie Wildlife Research Center, Jamestown, North Dakota website <http://www.npwrc.usgs.gov/resource/1998/classwet/classwet.htm>).
- NYSDEC. 1995. Freshwater wetlands delineation manual. New York State Department of Environmental Conservation.
- USACE. 1987. Corps of Engineers Wetlands Delineation Manual. Final Report. Wetlands Research Program Technical Report Y-87-1 (on-line edition), Waterways Experiment Station, Environmental Laboratory, Vicksburg, Mississippi. 143 pp.
- USACE. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, ERDC/EL TR-12-1 (Version 2.0). U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

APPENDIX A
USACE WETLAND DATA FORMS

VEGETATION – Use scientific names of plants.

Sampling Point: UP-A-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>0</u></td><td>x 2 = <u>0</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>75</u></td><td>x 4 = <u>300</u></td></tr> <tr><td>UPL species <u>15</u></td><td>x 5 = <u>75</u></td></tr> <tr><td>Column Totals: <u>90</u></td><td>(A) <u>375</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.17</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>75</u>	x 4 = <u>300</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>90</u>	(A) <u>375</u> (B)	Prevalence Index = B/A = <u>4.17</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>75</u>	x 4 = <u>300</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>90</u>	(A) <u>375</u> (B)																			
Prevalence Index = B/A = <u>4.17</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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 or equal to 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> </u> No <u> X </u>																
1. <u>Lolium perenne</u>	<u>55</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Plantago major</u>	<u>15</u>	<u>No</u>	<u>UPL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
<u>90</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP-A-2

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>355</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.18</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>85</u> (A)	<u>355</u> (B)	Prevalence Index = B/A = <u>4.18</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
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Column Totals: <u>85</u> (A)	<u>355</u> (B)																			
Prevalence Index = B/A = <u>4.18</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Lolium perenne</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Plantago major</u>	<u>15</u>	<u>No</u>	<u>UPL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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 No X

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hudson Valley Airport Runway 6-24 Improvements EA City/County: Wappinger Falls/Dutchess Sampling Date: 4/1/2020
 Applicant/Owner: Hudson Valley Airport State: NY Sampling Point: W-B-1
 Investigator(s): J. Strong Section, Township, Range: Wappinger Falls
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR L Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland B</u>
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> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-B-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>70</u></td> <td>x 2 = <u>140</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>215</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.15</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>70</u>	x 2 = <u>140</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u>	(A) <u>215</u> (B)	Prevalence Index = B/A = <u>2.15</u>	
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FACW species <u>70</u>	x 2 = <u>140</u>																			
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Column Totals: <u>100</u>	(A) <u>215</u> (B)																			
Prevalence Index = B/A = <u>2.15</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Phalaris arundinacea</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - 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>Juncus effusus</u>	<u>15</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Lolium perenne</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP-B-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>0</u></td><td>x 2 = <u>0</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>90</u></td><td>x 4 = <u>360</u></td></tr> <tr><td>UPL species <u>10</u></td><td>x 5 = <u>50</u></td></tr> <tr><td>Column Totals: <u>100</u> (A)</td><td><u>410</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.10</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u> (A)	<u>410</u> (B)	Prevalence Index = B/A = <u>4.10</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
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Prevalence Index = B/A = <u>4.10</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Lolium perenne</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Plantago major</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
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5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
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Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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 No X

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP-B-2

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
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Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
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Column Totals: <u>90</u>	(A) <u>370</u> (B)																			
Prevalence Index = B/A = <u>4.11</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
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2. <u>Taraxacum officinale</u>	<u>15</u>	No	FACU																	
3. <u>Plantago major</u>	<u>10</u>	No	UPL																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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 No X

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hudson Valley Airport Runway 6-24 Improvements EA City/County: Wappinger Falls/Dutchess Sampling Date: 4/1/2020
 Applicant/Owner: Hudson Valley Airport State: NY Sampling Point: W-C-1
 Investigator(s): J. Strong Section, Township, Range: Wappinger Falls
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR L Lat: 41°37'12.836"N Long: 73°53'42.763"W Datum: NAD 1983
 Soil Map Unit Name: Udorthents, smoothed NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland C</u>
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> <input checked="" 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 checked="" 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 checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <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 checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-C-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ =Total Cover
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ =Total Cover
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>	35	Yes	FACW	
2. <u>Scirpus cyperinus</u>	15	No	OBL	
3. <u>Cornus alba</u>	10	No	FACW	
4. <u>Phragmites australis</u>	40	Yes	FACW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				_____ =Total Cover
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				_____ =Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>15</u>	x 1 = <u>15</u>
FACW species <u>85</u>	x 2 = <u>170</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>185</u> (B)
Prevalence Index = B/A = <u>1.85</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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 No

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP-C-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>345</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.63</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>345</u> (B)	Prevalence Index = B/A = <u>3.63</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>35</u>	x 3 = <u>105</u>																			
FACU species <u>60</u>	x 4 = <u>240</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>95</u> (A)	<u>345</u> (B)																			
Prevalence Index = B/A = <u>3.63</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</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 or equal to 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> </u> No <u> X </u>																
1. <u>Solidago canadensis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Daucus carota</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Rubus idaeus</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Cornus racemosa</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>95</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hudson Valley Airport Runway 6-24 Improvements EA City/County: Wappinger Falls/Dutchess Sampling Date: 4/1/2020
 Applicant/Owner: Hudson Valley Airport State: NY Sampling Point: W-C-2
 Investigator(s): J. Strong Section, Township, Range: Wappinger Falls
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR L Lat: 41°37'5.808"N Long: 73°53'52.01"W Datum: NAD 1983
 Soil Map Unit Name: Wayland silt loam NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland C</u>
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) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) <u>X</u> 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) <u>X</u> 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) <u>X</u> Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>0</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-C-2

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																				
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>175</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.75</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>75</u>	x 2 = <u>150</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u>	(A) <u>175</u> (B)	Prevalence Index = B/A = <u>1.75</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>25</u>	x 1 = <u>25</u>																			
FACW species <u>75</u>	x 2 = <u>150</u>																			
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UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u>	(A) <u>175</u> (B)																			
Prevalence Index = B/A = <u>1.75</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1.																				
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
_____ =Total Cover																				
Herb Stratum (Plot size: <u>5</u>)																				
1.	<u>Phalaris arundinacea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																
2.	<u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																
3.	<u>Typha angustifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																
4.	<u>Phragmites australis</u>	<u>55</u>	<u>Yes</u>	<u>FACW</u>																
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
_____ =Total Cover																				
Woody Vine Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - 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.																				
2.																				
3.																				
4.																				
_____ =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 or equal to 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

VEGETATION – Use scientific names of plants.

Sampling Point: UP-C-2

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>20</u></td> <td>(A) <u>60</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>20</u>	(A) <u>60</u> (B)	Prevalence Index = B/A = <u>3.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>10</u>	x 2 = <u>20</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>20</u>	(A) <u>60</u> (B)																			
Prevalence Index = B/A = <u>3.00</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Phragmites australis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Pinus strobus</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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 No X

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hudson Valley Airport Runway 6-24 Improvements EA City/County: Wappinger Falls/Dutchess Sampling Date: 4/1/2020
 Applicant/Owner: Hudson Valley Airport State: NY Sampling Point: W-C-3
 Investigator(s): J. Strong Section, Township, Range: Wappinger Falls
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR L Lat: 41°37'5.449"N Long: 73°53'55.074"W Datum: NAD 1983
 Soil Map Unit Name: Wayland silt loam NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland C</u>
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> <input checked="" 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 checked="" 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)	<u>Secondary Indicators (minimum of two required)</u> <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 checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.5</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-C-3

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>92</u></td> <td>x 2 = <u>184</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>97</u></td> <td>(A) <u>189</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.95</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>92</u>	x 2 = <u>184</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>97</u>	(A) <u>189</u> (B)	Prevalence Index = B/A = <u>1.95</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5</u>	x 1 = <u>5</u>																			
FACW species <u>92</u>	x 2 = <u>184</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>97</u>	(A) <u>189</u> (B)																			
Prevalence Index = B/A = <u>1.95</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Phalaris arundinacea</u>	<u>55</u>	<u>Yes</u>	<u>FACW</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 or equal to 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>X</u> No <u> </u>																
2. <u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Phragmites australis</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Cornus alba</u>	<u>2</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>97</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hudson Valley Airport Runway 6-24 Improvements EA City/County: Wappinger Falls/Dutchess Sampling Date: 4/1/2020
 Applicant/Owner: Hudson Valley Airport State: NY Sampling Point: W-D-1
 Investigator(s): J. Strong Section, Township, Range: Wappinger Falls
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR L Lat: 41°37'14.407"N Long: 73°53'38.502"W Datum: NAD 1983
 Soil Map Unit Name: Udorthents smoothed NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland D</u>
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> <input checked="" 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 checked="" 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 checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-D-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>35</u></td><td>x 1 = <u>35</u></td></tr> <tr><td>FACW species <u>50</u></td><td>x 2 = <u>100</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>0</u></td><td>x 4 = <u>0</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>85</u></td><td>(A) <u>135</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.59</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u>	(A) <u>135</u> (B)	Prevalence Index = B/A = <u>1.59</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>35</u>	x 1 = <u>35</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>85</u>	(A) <u>135</u> (B)																			
Prevalence Index = B/A = <u>1.59</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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 or equal to 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>X</u> No _____																
1. <u>Phalaris arundinacea</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Lythrum salicaria</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
4. <u>Typha angustifolia</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP-D-1

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>95</u> (A) <u>400</u> (B) Prevalence Index = B/A = <u>4.21</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ =Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <u>Lolium perenne</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Taraxacum officinale</u>	<u>15</u>	<u>No</u>	<u>FACU</u>	
3. <u>Plantago major</u>	<u>15</u>	<u>No</u>	<u>FACU</u>	
4. <u>Trifolium ambiguum</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>95</u> =Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>5</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ =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 or equal to 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.

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hudson Valley Airport Runway 6-24 Improvements EA City/County: Wappinger Falls/Dutchess Sampling Date: 4/1/2020
 Applicant/Owner: Hudson Valley Airport State: NY Sampling Point: W-E-1
 Investigator(s): J. Strong Section, Township, Range: Wappinger Falls
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR L Lat: 41°37'14.925"N Long: 73°53'38.872"W Datum: NAD 1983
 Soil Map Unit Name: Udorthents smoothed NWI classification: PSS

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland D</u>
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) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) <u>X</u> 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) <u>X</u> FAC-Neutral Test (D5)
--	--

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>0</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>5</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
---	---

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-E-1

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u>Acer saccharinum</u>	<u>10</u>	<u>Yes</u>	<u>FACW</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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u></td> <td>(A) <u>220</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u>	(A) <u>220</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>110</u>	x 2 = <u>220</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>110</u>	(A) <u>220</u> (B)																			
Prevalence Index = B/A = <u>2.00</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>10</u> =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Cornus alba</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - 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. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>10</u> =Total Cover																				
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Yes</u>	<u>FACW</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 or equal to 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>X</u> No _____																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>90</u> =Total Cover																				
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____	_____ =Total Cover																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	

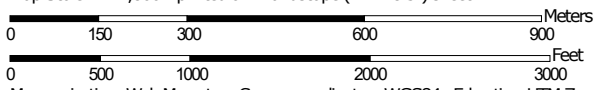
Remarks: (Include photo numbers here or on a separate sheet.)

APPENDIX B
WEB SOIL SURVEY

Hydric Rating by Map Unit—Dutchess County, New York
(AOI)



Map Scale: 1:12,800 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84









MAP LEGEND

Area of Interest (AOI)







Area of Interest (AOI)

Soils







Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Dutchess County, New York
Survey Area Data: Version 17, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	1	0.1	1.3%
HeA	Haven loam, nearly level	5	0.2	1.8%
Ud	Udorthents, smoothed	0	6.7	79.7%
Wy	Wayland silt loam	88	1.4	17.1%
Totals for Area of Interest			8.5	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

APPENDIX C
PHOTOGRAPHS

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 1 – Photo of Vegetation at UP-A-1



Photo 2 – Photo of Soil at UP-A-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 3 – Photo of Vegetation at UP-A-2



Photo 4 – Photo of Soil at UP-A-2.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 5 – Photo of Vegetation at W-B-1



Photo 6 – Photo of Soil at W-B-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 7 – Photo of Vegetation at UP-B-1



Photo 8 – Photo of Soil at UP-B-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 9 – Photo of Vegetation at UP-B-2



Photo 10 – Photo of Soil at UP-B-2.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 11 – Photo of Vegetation at W-C-1



Photo 12 – Photo of Soil at W-C-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 13 – Photo of Vegetation at UP-C-1



Photo 14 – Photo of Soil at UP-C-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 15 – Photo of Vegetation at W-C-2



Photo 16 – Photo of Soil at W-C-2.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 17 – Photo of Vegetation at UP-C-2



Photo 18 – Photo of Soil at UP-C-2.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 19 – Photo of Vegetation at W-C-3



Photo 20 – Photo of Soil at W-C-3.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 21 – Photo of Vegetation at W-D-1



Photo 22 – Photo of Soil at W-

L-75

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 23 – Photo of Vegetation at UP-D-1



Photo 24– Photo of Soil at UP-D-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 25 – Photo of Vegetation at W-E-1



Photo 26– Photo of Soil at W-E-1.

Photo Documentation

Project: Runway 6-26 Safety Improvements
Hudson Valley Airport



Photo 27 – Photo of Stream A



Photo 28– Photo of Stream B