

Wetland and Stream Delineation Report

Addendum

Heritage Wind Project

Town of Barre

Orleans County, New York

Prepared for:



Heritage Wind, LLC
120 Garrett St, Suite 700
Charlottesville, VA 22902
(585) 563-5137
<https://www.heritagewindpower.com/>

Prepared by:



Environmental Design & Research, D.P.C.
217 Montgomery Street, Suite 1100
Syracuse, New York 13202
www.edrdpc.com

May 2022

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1.0 INTRODUCTION

1.1 PROJECT LOCATION AND DESCRIPTION

In February 2020, Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) prepared a Wetland Delineation Report for the proposed Heritage Wind Project (the Facility) in Orleans County, New York. The report was submitted to the New York State Department of Public Service (DPS) as a part of Exhibit 22 of the Application for a Certificate of Environmental Compatibility and Public Need, in accordance with Article 10 of the Public Service Law (Article 10 Application) on March 13, 2020. The report addressed potentially jurisdictional wetlands that were formally delineated within 500 feet of areas to be potentially disturbed by construction of the Facility. Additionally, an addendum to this report was submitted in August 2020 that addressed updates to the design of the Facility – namely the relocation of the laydown yard.

This report addendum addresses an additional wetland and stream delineation effort that was conducted to include proposed updates to the design of the Facility – namely the removal of six turbines, the relocation of four of those turbines and the associated rerouting of collection lines and access roads, the addition of temporary power performance towers, and the addition of a new laydown yard (see Figure 1). Information provided herein is meant to serve as an addendum to the previously submitted February 2020 Wetland Delineation Report and August 2020 addendum.

EDR completed a desktop review using the National Wetland Inventory (NWI) and New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands mapping prior to conducting field delineations of wetlands within 500 feet of the new proposed Facility infrastructure ("Study Area"). The field delineations were conducted in April 2022 and herein referred to as the Study Area which used the methodology described in Section 4.1 of the February 2020 Wetland Delineation Report.

2.0 FEDERAL AND STATE MAPPED WETLANDS AND STREAMS

NWI mapping indicates the presence of 19 wetland communities within the Study Area, totaling 104.4 acres (Figure 2). Forested and shrub wetland are the dominant wetland community types mapped on site, totaling approximately 89.7 acres. Other NWI-mapped wetland communities within the Study Area include farmed palustrine wetlands (12.2 acres), and riverine wetlands (2.5 acres).

Review of New York State (NYS) Freshwater Wetlands mapping indicates that there is one wetland (AL-18) that is regulated under Article 24 of the Environmental Conservation Law (ECL) intersecting the Study Area. There are two additional NYSDEC regulated wetlands directly adjacent to the Study Area; HO-22 and HO-19 (see Figure 2). Based on available NYSDEC stream classification mapping, the Study Area includes two Class C streams. There are no State protected streams and tributaries mapped within the Study Area (see Table 1 and Figure 2).

2.1 MAPPED FLOODPLAINS

According to Federal Emergency Management Agency (FEMA) map services, no portion of the Study Area is located within a mapped floodplain.

3.0 REGULATORY AUTHORITIES AND PERMITS

3.1 WATERS OF THE UNITED STATES

In accordance with Section 404 of the Clean Water Act (CWA), the USACE has regulatory jurisdiction over Waters of the United States (WOTUS). As defined by the USACE, WOTUS include lakes, ponds, streams (intermittent and perennial), tidal waters, and wetlands. Wetlands are defined as *“those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”* (USEPA, 2001). Such areas are indicated by the presence of three conditions: 1) a dominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) evidence of wetland hydrology during the growing season (Environmental Laboratory, 1987).

The Clean Water Rule (the “2015 Rule”), effective August 28, 2015, was adopted to provide a clearer and more consistent approach to defining the scope of the CWA and WOTUS. However, in February 2017, an Executive Order was issued directing the United States Environmental Protection Agency (USEPA) and USACE to review and rescind or revise the 2015 Rule. On April 21, 2020, the USEPA and USACE published The Navigable Waters Protection Rule: Definition of “Waters of the United States” (USACE and USEPA, 2020) as a replacement for the 2015 Rule. However, on August 30, 2021, the US District Court threw out the 2020 replacement rule due to procedural errors in its issuance, noting that implementation of the rule could lead to “serious environmental harm” (Pasqua Yaqui Tribe v. USEPA, 2021), thereby restoring the definition of regulated WOTUS to the pre-2015 Rule (i.e., *Rapanos v. United States*, 2006 and *Carabell v. United States*, 2006). Four major elements of the 2015 Rule that define jurisdictional waters are summarized below:

1. **Traditional navigable waters (TNW).** The agencies will assert jurisdiction over TNW, interstate waters, territorial seas, and impoundments of jurisdictional waters consistent with existing regulations.
2. **Wetlands adjacent to TNW.** The agencies will assert jurisdiction over wetlands adjacent to TNW. Regulations define “adjacent” as “bordering, contiguous, or neighboring, including waters separated from other ‘waters of the United States’ by constructed dikes or barriers, natural river berms, beach dunes and the like” (USEPA, 2022).
3. **Non-navigable tributaries.** The agencies will assert jurisdiction over non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally.

4. **Wetlands that directly abut such tributaries.** The agencies will assert jurisdiction over wetlands adjacent to jurisdictional non-navigable tributaries, using the same definition of “adjacent” provided above.

Where waters cannot be categorized as jurisdictional as listed above, the agencies will conduct a significant nexus analysis to determine jurisdiction on a case-by-case basis. The significant nexus analysis considers waters that are similarly situated to known jurisdictional waters based on their flow characteristics and functions, to determine if they significantly affect the chemical, physical, and/or biological integrity of downstream TNWs. The following waters may be regulated based on the results of the significant nexus analysis:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

Agencies will typically not assert jurisdiction over swales or erosional features, or ditches excavated wholly in and draining only uplands and that do not carry a relative permanent flow of water.

For the purposes of this investigation, the initial presumption is that all delineated wetlands and streams within the Study Area could be jurisdictional under Section 404 of the CWA. A Section 404 permit from the USACE is required for activities that result in the placement of dredged or fill materials in WOTUS. In addition to Section 404 of the CWA, Section 10 of the Rivers and Harbor Act requires a permit from the USACE to construct any structure in or over any traditional navigable waters of the United States, as well as any proposed action that would alter or disturb these waters (such as excavation/dredging or deposition of materials). The Study Area does not include any navigable waters, and therefore, Section 10 is not applicable to the proposed Project.

3.2 NEW YORK STATE FRESHWATER WETLANDS AND PROTECTED STREAMS

The Freshwater Wetlands Act (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law [ECL]) gives the NYSDEC jurisdiction over state-protected wetlands and adjacent areas. The Freshwater Wetlands Act requires the NYSDEC to map all state-protected wetlands to allow landowners and other interested parties a means of determining where state-jurisdictional wetlands exist. To implement the policy established by this Act, regulations were promulgated by the state under 6 NYCRR Parts 663 and 664. Part 664 of the regulations designates wetlands into four class ratings, with Class I being the highest or best quality wetland, and Class IV being the lowest. In general, wetlands regulated by the state are those 12.4 acres in size or larger. Smaller wetlands can also be regulated if they are considered of unusual local importance. A 100-foot adjacent area around the delineated boundary of any state regulated wetland is also under NYSDEC jurisdiction. An Article 24 permit is typically required from the NYSDEC for any disturbance to a state-protected wetland or adjacent area. However, under Section 94-c of the New York Executive Law (Section 94-c) this permitting authority has been delegated to the ORES.

Under Article 15 of the ECL (Protection of Waters), the NYSDEC has regulatory jurisdiction over any activity that disturbs the bed or banks of protected streams or other watercourse. In addition, small lakes and ponds with a surface area of 10 acres or less, located within the course of a stream, are considered to be part of a stream and are subject to regulation under the stream protection category of Article 15. According to 6 NYCRR Part 608.1(aa), protected streams include any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, A, B, or C(T) or C(TS). A classification of AA or A indicates that the best use of the stream is as a source of water supply for drinking, culinary or food processing purposes, primary and secondary contact recreation, and fishing. The best usages of Class B waters are primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing. Streams designated (T) indicate that they support trout, while those designated (TS) support trout spawning. An Article 15 permit is typically required from the NYSDEC for any disturbance to the bed and banks of protected streams, with special requirements applied to streams designated as supporting trout or trout spawning. Where banks are not clearly defined, the NYSDEC may extend permitting jurisdiction to 50 feet beyond the stream. As with Article 24, under Section 94-c, permitting authority Article 15 permitting has been delegated to the ORES.

In addition to the protection of waters permit required to change, modify, or disturb protected streams, Article 15 also requires a permit to construct any structure in or above any navigable WOTUS, as well as any proposed action that would alter or disturb these waters (such as excavation/dredging or deposition of materials). The Study Area does not include any navigable waters. Therefore, these sections of Article 15 are not applicable to the proposed Facility.

4.0 ON-SITE WETLAND AND STREAM DELINEATION

EDR environmental scientists Bennett Amberger and Joshua Bean conducted field delineations of wetlands and streams in the Study Area on April 18-20, 2022, using the same methodology as described in the February 2020 Wetland Delineation Report. The methodology is outlined as follows:

The identification of wetland boundaries was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). Determination of wetland boundaries was also guided by the methodologies presented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (USACE, 2012). Attention was given to the identification of potential hydrologic connections between wetlands and areas that could influence their jurisdictional status.

Wetland boundaries were defined in the field with sequentially numbered pink surveyor's flagging and mapped using a GPS unit with reported sub-meter accuracy. Data were collected from sample plots in representative wetland cover types and recorded on U.S. Army Corps of Engineers (USACE) Routine Wetland Determination forms (see Appendix B). The data collected at each delineated wetland included dominant vegetation, hydrology indicators, and soil characteristics.

The Regional Supplement lists the following primary indicators of wetland hydrology: (A1) surface water, (A2) high water table, (A3) saturation, (B1) water marks, (B2) sediment deposits, (B3) drift deposits, (B4) algal

mat or crust, (B5) iron deposits, (B7) inundation visible on aerial imagery, (B8) sparsely vegetated concave surface, (B9) water-stained leaves, (B13) aquatic fauna, (B15) marl deposits, (C1) hydrogen sulfide odor, (C3) oxidized rhizospheres on living roots, (C4) presence of reduced iron, (C6) recent iron reduction in tilled soils, and (C7) thick muck surface. Per the Regional Supplement, the presence of any one of these "primary" indicators are sufficient evidence that wetland hydrology is present. In addition, the Regional Supplement identifies the following secondary indicators which were also used by EDR environmental scientists to determine wetland hydrology: (B6) surface soil cracks, (B10) drainage patterns, (B16) moss trim lines, (C2) dry-season water table, (C8) crayfish burrows, (C9) saturation visible on aerial imagery, (D1) stunted or stressed plants, (D2) geomorphic position, (D3) shallow aquitard, (D4) microtopographic relief, and (D5) FAC-neutral test. In accordance with the Regional Supplement, in the absence of a primary indicator, the presence of any two of these "secondary" indicators is considered a suitable indication of wetland hydrology.

Assessment of vegetation focused on the identification of dominant plant species in four categories: trees (greater than 3 inches diameter at breast height), saplings/shrubs (less than 3.0 inches diameter at breast height and greater than 3.2 feet tall), herbs (all vegetation less than 3.2 feet tall), and woody vines. Dominance was determined by visually estimating those species having the greatest absolute percent cover within each stratum. Wetland indicator status for dominant plant species was determined by reference to the National Wetland Plant List (USACE, 2018; USDA NRCS, 2021). Wetlands are indicated by a dominance of hydrophytic plant species.

Hydric soils are those that are poorly drained and are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. The presence of hydric soils is indicative of the presence of wetlands (Environmental Laboratory, 1987). Hydric soil conditions were determined in the field through observation of soils composition, color, and morphology. Soils data were collected by using a Dutch auger and tiling spade to examine the soil profile. Soil colors were determined using Munsell Soil Charts (Munsell Color, 2009). Information concerning soil series, color, texture, and matrix and redoximorphic feature color was recorded for each delineated wetland and used to determine whether the soils displayed hydric characteristics.

Streams were classified as perennial, intermittent or ephemeral according to the Cowardin Classification System (2013), and stream boundaries were determined based on the presence of ordinary high water line characteristics, including a *"clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris"* (33 CFR Part 329.11). Stream boundaries were defined and mapped in the field using the same method as described above for wetlands. Stream flow regime (i.e., perennial, intermittent, or ephemeral) was determined through evaluation of hydrologic, geomorphic, and biological characteristics (NC DWQ, 2010). Data regarding stream gradient (gentle, moderate, or steep), stream bank and channel width, water depth, stream bed substrate, in-stream cover, and biological indicators were collected and recorded on stream inventory forms (see Appendix B).

Photographs were taken of each wetland and stream delineated within the Study Area. Representative photographs of each feature delineated are included in Appendix C.

4.1 HYDROLOGY

Total annual precipitation averages 49.80 inches in nearby Albion, New York for the 2001-2021 period. (USDA, 2022). Wetland and stream delineations occurred in May 2022. Average precipitation for the preceding month of April was 2.18 inches which is lower than the average monthly climate normal for the area of 3.25 inches of rain in April from 1991 – 2020 (USDA, 2022).

5.0 RESULTS

Results of the field delineation identified nine wetlands and nine streams within the Study Area (see Figure 3). The data collected at each delineated wetland and stream are summarized below in Table 1. In accordance with the Cowardin et al. (1979) classification system, the waters delineated within the Study Area were classified into the following community types: palustrine emergent wetland (PEM), palustrine forested wetland (PFO), perennial stream (R3), intermittent stream (R4) and ephemeral stream (R6).

Table 1. Delineated Wetlands and Streams within the Study Area

Delineation ID ¹	Latitude of Centroid	Longitude of Centroid	Delineated Wetland Acreage Within Study Area by Type ²				Stream Type ³	Linear Feet of Stream Within Study Area	Anticipated Federal CWA Jurisdiction ⁴	Anticipated NYSDEC Jurisdiction ⁵
			PEM	PSS	PFO	Total				
66W01	43.2082	-78.1236	5.70	--	0.55	6.25	--	--	Yes	Yes
66W04	43.1453	-78.1725	0.07	--	--	0.07	--	--	Yes	No
66W06	43.1463	-78.1721	0.12	--	--	0.12	--	--	Yes	No
66W07	43.1472	-78.1655	--	--	0.27	0.27	--	--	Yes	No
66W08	43.1499	-78.1675	--	--	6.15	6.15	--	--	Yes	No
66W09	43.1509	-78.1678	0.15	--	1.95	2.1	--	--	Yes	No
66W10	43.1525	-78.1651	0.25	--	11.6	11.88	--	--	Yes	Yes
66W11	43.1537	-78.1677	0.06	--	--	0.06	--	--	Yes	No
66W14	43.16114	-78.22243	0.27	--	--	0.27	--	--	Yes	No
66ST01	43.1469	-78.1803	--	--	--	--	R4	1,654	Yes	No
66ST02	43.1479	-78.1785	--	--	--	--	R6	129	Yes	No
66ST03	43.1449	-78.1693	--	--	--	--	R3	61	Yes	No
66ST04	43.1458	-78.1718	--	--	--	--	R4	496	Yes	No
66ST05	43.1475	-78.1667	--	--	--	--	R6	826	Yes	No
66ST06	43.1529	-78.1655	--	--	--	--	R3	2,778	Yes	No
66ST07	43.1521	-78.1666	--	--	--	--	R6	1,817	Yes	No
66ST08	43.1491	-78.1703	--	--	--	--	R6	54	Yes	No
66ST10	43.151	-78.1663	--	--	--	--	R6	906	Yes	No

¹ Field ID assigned by EDR.

² Wetland community types are based upon the Cowardin et al. (1979) classification system: palustrine emergent wetland (PEM), palustrine forested wetland (PFO).

³ Stream type is based upon the Cowardin et al. (1979) classification system: perennial stream (R3), intermittent stream (R4), ephemeral stream (R6)

⁴ Based on visual observation of hydrologic connectivity in the field and review of available spatial data. Final jurisdictional determination to be made by the USACE.

⁵ Based on existing NYSDEC mapping of freshwater wetlands and streams.

All of the delineated wetlands and streams included in Table 1 are likely to be considered jurisdictional by the USACE under Section 404 of the Clean Water Act. Two delineated wetlands (66W01 and 66W10) appear to be under New York State jurisdiction because they overlap or are hydrologically connected with the mapped locations of NYS Freshwater Wetlands HO-22 and AL-18. No delineated streams within the Study Area appear to be protected under Article 15 of the ECL based on NYSDEC stream classification/mapping.

Descriptions of the delineated wetlands within the Study Area are provided below in Sections 5.1, while Section 5.2 provides descriptions of the delineated streams within the Study Area.

5.1 WETLANDS

Within the Study Area, the field delineation identified nine wetlands totaling 27.2 acres. Descriptions of each wetland community type are presented below. Note that three wetlands identified contained more than one Cowardin Classification System (2013) community type. For all nine delineated wetlands within the Study Area, Table 1 indicates the area occupied by each community type.

Emergent Wetlands (PEM) – (See Photos 1, 2, 3, 8, and 9 in Appendix C).

A total of seven wetlands identified within the Study Area contained persistent emergent vegetation. These wetlands were typically located in depressional areas within or adjacent to active agricultural fields, where sheet flow run-off precipitation from the open fields accumulates. The emergent wetlands on site were characterized by the dominance of erect rooted herbaceous wetland plants, including reed canary grass (*Phalaris arundinacea*), soft rush (*Juncus effusus*), spring beauty (*Montia chamissoi*), cursed crowfoot (*Ranunculus scleratus*), blackberry (*Rubus sp.*), narrow leaf cattail (*Typha angustifolia*), red seeded dandelion (*Taraxacum officinale*), silky dogwood (*Cornus amomum*), timothy grass (*Phleum alpinum*) wintercress (*Barbarea verna*), and red osier dogwood (*Cornus alba*). Indicators of wetland hydrology in the emergent wetlands included surface water (A1), a high-water table (A2), saturation (A3), oxidized rhizospheres on living roots (C3), algal mat or crust (B4), presence of reduced iron (C4), thin muck surface (C7), iron deposits (B5), stunted or stressed plants (D1), and FAC-neutral test (D5). Soils sampled within the emergent wetlands exhibited hydric soil indicators of depleted matrix (F3), redox dark surface (F6), and depleted dark surface (F7). The texture of soils in the emergent wetlands was generally characterized as clay loam, with some silt loam and silty clay loam in actively farmed and disturbed wetlands. The wetland-upland transitions were mostly very abrupt, with the adjacent uplands consisting of actively cultivated agricultural fields planted with corn (*Zea mays*) or soybeans (*Glycine max*).

Forested Wetlands (PFO) – (See Photos 4 to 7 in Appendix C)

Five of the wetlands identified within the Study Area were characterized by broad-leaved deciduous forest vegetation, with tree species greater than 20 feet tall. These wetlands were most often encountered adjacent to active agricultural fields, with their source of hydrology being water discharged from drainage tiling installed underneath the adjacent fields. Dominant overstory species included green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), swamp white oak (*Quercus bicolor*), and American elm (*Ulmus americana*). Common shrub and sapling species in these wetlands included northern spicebush (*Lindera benzoin*), gray dogwood (*Cornus racemosa*), silky dogwood (*Cornus amomum*), European buckthorn (*Rhamnus cathartica*), American elm, and green ash. Herbaceous species in the forested wetlands included reed canary grass, white avens (*Geum canadense*), rough avens (*geum laciniatum*), yellow trout-lily (*Erythronium rostratum*), and Norwegian cinquefoil (*Potentilla norvegica*). Indicators of wetland hydrology included surface water (A1), a high-water table (A2), saturation (A3), water marks (B1), iron deposits (B5), water-stained leaves (B9), FAC-neutral test (D5), and drainage patterns (B10). The soils within these wetlands generally exhibited hydric soil indicators of depleted matrix (F3), depleted dark surface (F7), and redox dark surface (F6). Texture of the forested wetland soils were generally characterized as clay loam. The wetland-upland transition was relatively abrupt and followed site topography. Adjacent uplands consisted of

deciduous forests or agricultural fields planted with corn, soybeans, or hay. Overstories in adjacent upland deciduous forests were dominated by white oak (*Quercus alba*), black walnut (*Juglans nigra*), and green ash; a shrub layer dominated by gray dogwood and boxelder (*Acer negundo*); and a ground layer of Small's groundsel (*Packera anonyma*), blackberry (*Rubus* sp.), garlic mustard (*Alliaria petiolata*), yellow trout-lily, cow vetch (*Vicia cracca*), white avens, and Kentucky blue grass (*Poa pratensis*). Hydric soil indicators such as a redox dark surface (F6) were observed in some of the adjacent uplands.

5.2 STREAMS

Within the Study Area, the field delineation identified nine streams totaling 8,721 linear feet. Descriptions of each stream feature are presented below. Table 1 indicates the flow regime and linear footage occupied by each stream feature delineated within the Study Area.

Stream 66ST01 is mapped as an unnamed, manmade NYSDEC-mapped class C stream. It is an intermittent stream that flows through Wetland C at the southern end of the Study Area. During the site visit, Stream 66ST01 had a well-developed channel with continuous banks, ranging in width from 5 to 7 feet, and water depth of up to 8 inches. This stream was characterized by a gentle gradient, overhanging vegetation, and a substrate consisting of gravel and sand (see Photo 12 in Appendix C). Biological indicators included observations of macroinvertebrates.

Stream 66ST02 is an ephemeral feature that connects to part of an unnamed NYSDEC-mapped class C stream. The channel appears to have formed from the installation of drainage tile in the adjacent active agriculture field. Stream 66ST02 had a moderately defined channel with an average width of 2 feet and an approximate water depth of 1 inch. The channel was characterized by a gentle gradient, poorly developed pool and riffle structure, and a substrate consisting of silt and clay (see Photo 13 in Appendix C). The particle size of the substrate was similar to the finer-textured clay loam soils in the adjacent uplands. Benthic algae were observed growing within the channel.

Stream 66ST03 is a perennial stream that is mapped as an unnamed NYSDEC-mapped class C stream. The stream exhibited an average width of 15 feet with moderate sinuosity. Stream 66ST03 had strongly defined channel continuity, and an average water depth of 14 inches at the thalweg. The stream channel was characterized by a gentle gradient, moderately developed pool and riffle structure, and substrate dominated by silt and clay, with some gravel and cobbles. Filamentous algae and macroinvertebrates were observed within the stream. Due to an equipment malfunction, there is no photo available for this feature.

Stream 66ST04 is a perennial stream that connects to part of an unnamed NYSDEC-mapped class C stream. The channel has formed from the installation of drainage tile in the adjacent active agriculture field. Stream 66ST04 has a well-defined channel with an average width of 6 feet and, at the time of delineation, an approximate water depth of 6 inches. The stream channel is characterized by a gentle gradient, poorly developed pool and riffle structure, and a substrate consisting of sand and silt/clay (see Photo 14 in Appendix C). Particle size of the stream substrate materials was similar to the finer-textured clay loam soils in the adjacent uplands. Benthic algae, amphibians, and aquatic macroinvertebrates were observed within the stream.

Stream 66ST05 is an ephemeral channel that connects to an unnamed NYSDEC-mapped class C stream. The channel is a man-made drainage ditch adjacent to an active agriculture field. Stream 66ST05 has a well-defined channel with an average width of 4 feet and, at the time of delineation, an approximate water depth of 4 inches. The channel is characterized by a gentle gradient, poorly developed pool and riffle structure, and a substrate consisting of sand and silty clay (see Photo 15 in Appendix C). Particle size of the stream substrate materials was similar to the finer-textured clay loam soils in the adjacent uplands. Benthic algae and some macroinvertebrates were observed within the stream.

Stream 66ST06 is a perennial stream that connects to an unnamed NYSDEC-mapped class C stream. The channel is a man-made drainage ditch adjacent to an active agriculture field. Stream 66ST06 has a well-defined channel with an average width of 4 feet and, at the time of delineation, an approximate water depth of 6 inches. The stream channel is characterized by a gentle gradient, moderately developed pool and riffle structure, and a dominant substrate consisting of silt/clay and sand, with some gravel and cobble (see Photo 16 in Appendix C). Benthic algae and some macroinvertebrates were observed within the stream.

Stream 66ST07 is an ephemeral stream that connects to an unnamed NYSDEC-mapped class C stream. The channel is a man-made drainage ditch along a service road adjacent to an active agriculture field. Stream 66ST07 has a well-defined channel with an average width of 3 feet and, at the time of delineation, an approximate water depth of 2 inches. The stream channel is characterized by a gentle gradient, undeveloped pool and riffle structure, and a substrate consisting of silt and clay (see Photo 17 in Appendix C). Particle size of the stream substrate materials was similar to the finer-textured clay loam soils in the adjacent uplands. Benthic algae and some macroinvertebrates were observed within the stream.

Stream 66ST08 is an ephemeral stream that connects to an unnamed NYSDEC-mapped class C stream. The channel runs through a shrubland hedgerow connecting two active agriculture fields. Stream 66ST08 has a well-defined channel with an average width of 3 feet and, at the time of delineation, an approximate water depth of 2 inches. The stream channel is characterized by a gentle gradient, poorly developed pool and riffle structure, and a substrate consisting of silt and clay (see Photo 18 in Appendix C). Particle size of the stream substrate materials was similar to the finer-textured clay loam soils in the adjacent uplands. There was a general lack of biological indicators, as well as the presence of rooted upland plants and leaf litter within the channel.

Stream 66ST10 is an ephemeral stream that connects to an unnamed NYSDEC-mapped class C stream. The channel is a man-made drainage ditch along a service road adjacent to an active agriculture field. Stream 66ST05 has a well-defined channel with an average width of 3 feet and, at the time of delineation, an approximate water depth of 2 inches. The stream channel is characterized by a gentle gradient and a substrate consisting of silt/clay (see Photo 19 in Appendix C). Particle size of the stream substrate materials was similar to the finer-textured clay loam soils in the adjacent uplands. Benthic algae and some macroinvertebrates were observed within the stream.

6.0 CONCLUSIONS

Within the Study Area, the field delineation identified nine wetlands totaling 27.2 acres, and nine streams totaling 8,721 linear feet. All of the wetlands and streams within the Study Area appear to have surface water connections to other regulated waters, and therefore, are likely to be considered jurisdictional by the USACE under Section 404 of the Clean Water Act.

Two delineated wetlands are expected to fall under state jurisdiction pursuant to Article 24 due to their occurrence within, or hydrologic connection to, wetlands included on the NYSDEC Freshwater Wetlands Maps. The nine streams field delineated in the Study Area are not mapped as protected streams, and therefore are presumed not jurisdictional pursuant to Article 15 of the ECL. However, final determination of jurisdictional status of all waters delineated within the Study Area must be made by the USACE and NYSDEC.

7.0 REFERENCES

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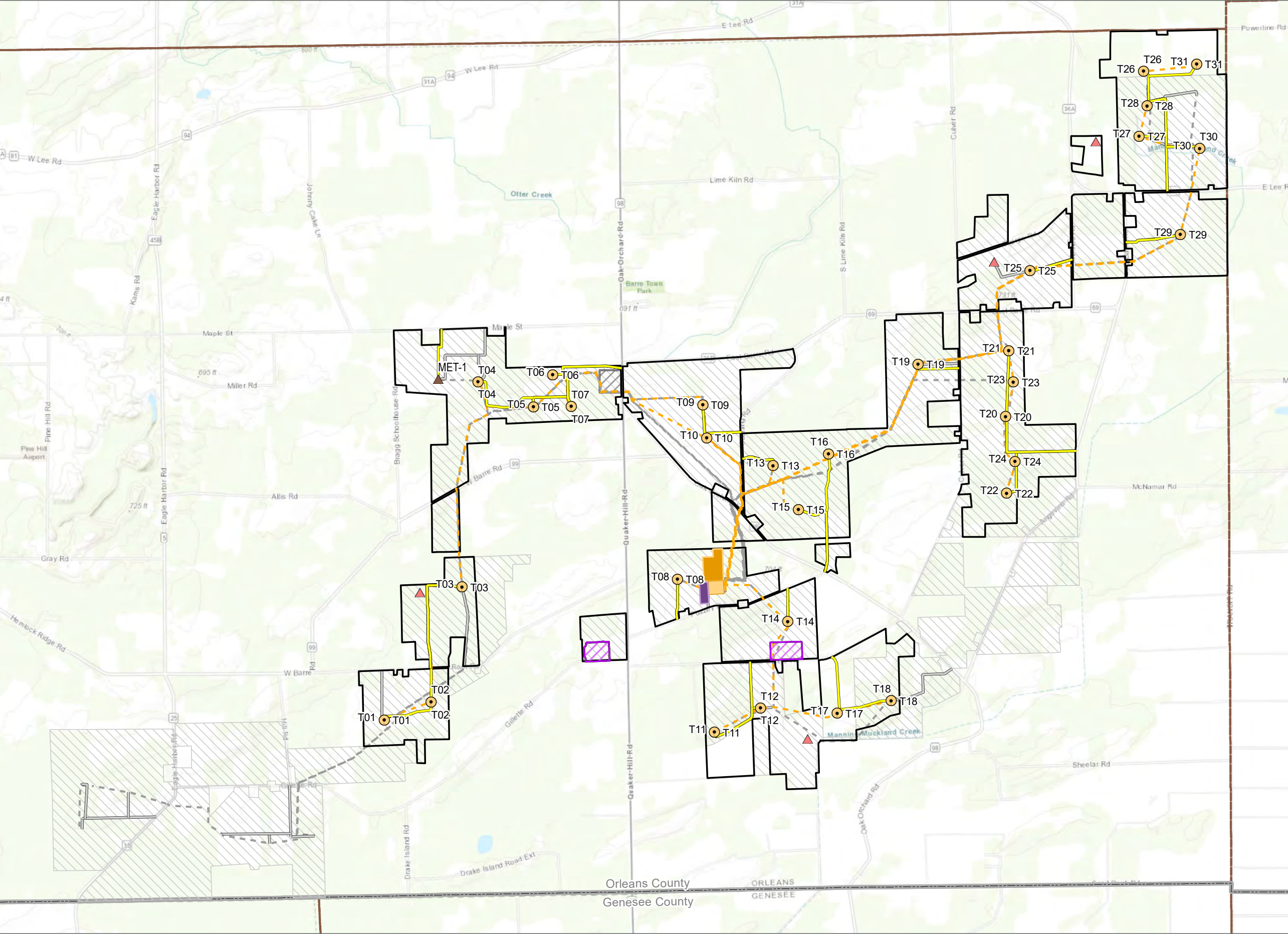
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APPENDIX A

Figures

Figure 1. Facility Layout Comparison



Heritage Wind Project

Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

Components Not Affected by the
Application Supplement

- Met Tower
- Potential Power Performance Tower
- O&M Facility
- Collection Substation
- POI Substation
- Laydown Yard

Application Supplement Layout

- Wind Turbine
- Access Road
- Collection Line
- New Proposed Facility Site

Application Layout

- Access Road
- Collection Line
- Laydown Yard
- Facility Site



0 1,000 2,000 4,000
Feet

Prepared May 20, 2022
Basemap: ESRI ArcGIS Online "World Topographic Map"
map service.

Figure 2. Mapped Wetlands And Streams



Heritage Wind Project

Town of Barre, Orleans
County, New York

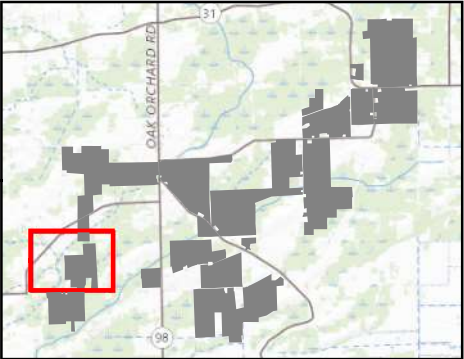
Wetland Delineation Report
Addendum 2022

NYSDEC Stream Classification

- Class C
- NYSDEC Mapped Wetland
- NWI Mapped Palustrine Wetland
- NWI Mapped Riverine Wetland/Water

Project Components

- Wind Turbine
- Access Road
- Collection Line
- Study Area
- Facility Site



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Feet

Prepared May 20, 2022
Basemap: NYS DOP "2020" orthoimagery map service

Figure 2. Mapped Wetlands And Streams

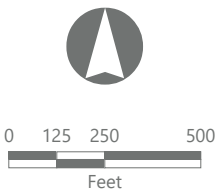
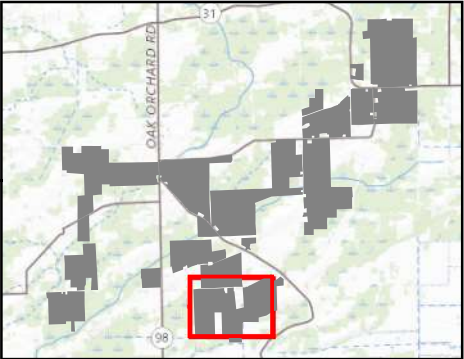


Heritage Wind Project

Town of Barre, Orleans
County, New York

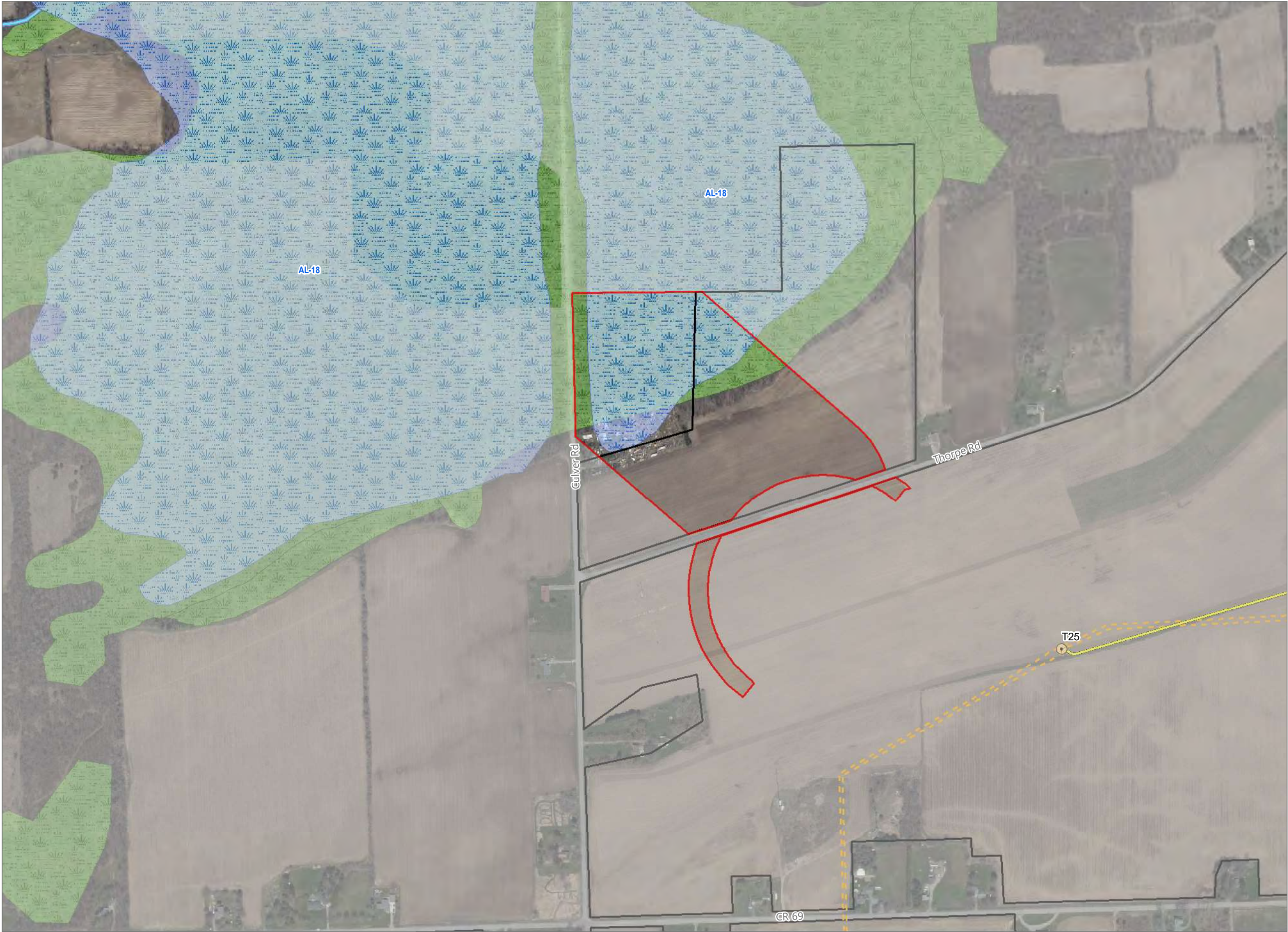
Wetland Delineation Report
Addendum 2022

- NYSDEC Stream Classification
- Class C
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Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service

Figure 2. Mapped Wetlands And Streams



Heritage Wind Project

Town of Barre, Orleans
County, New York

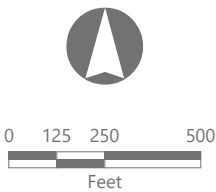
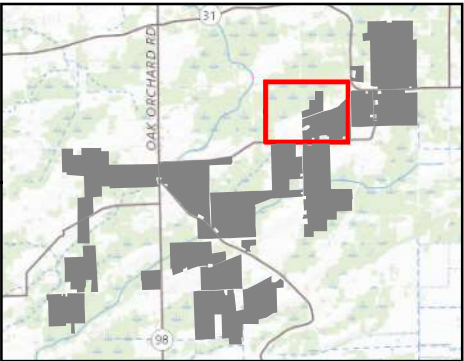
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Addendum 2022

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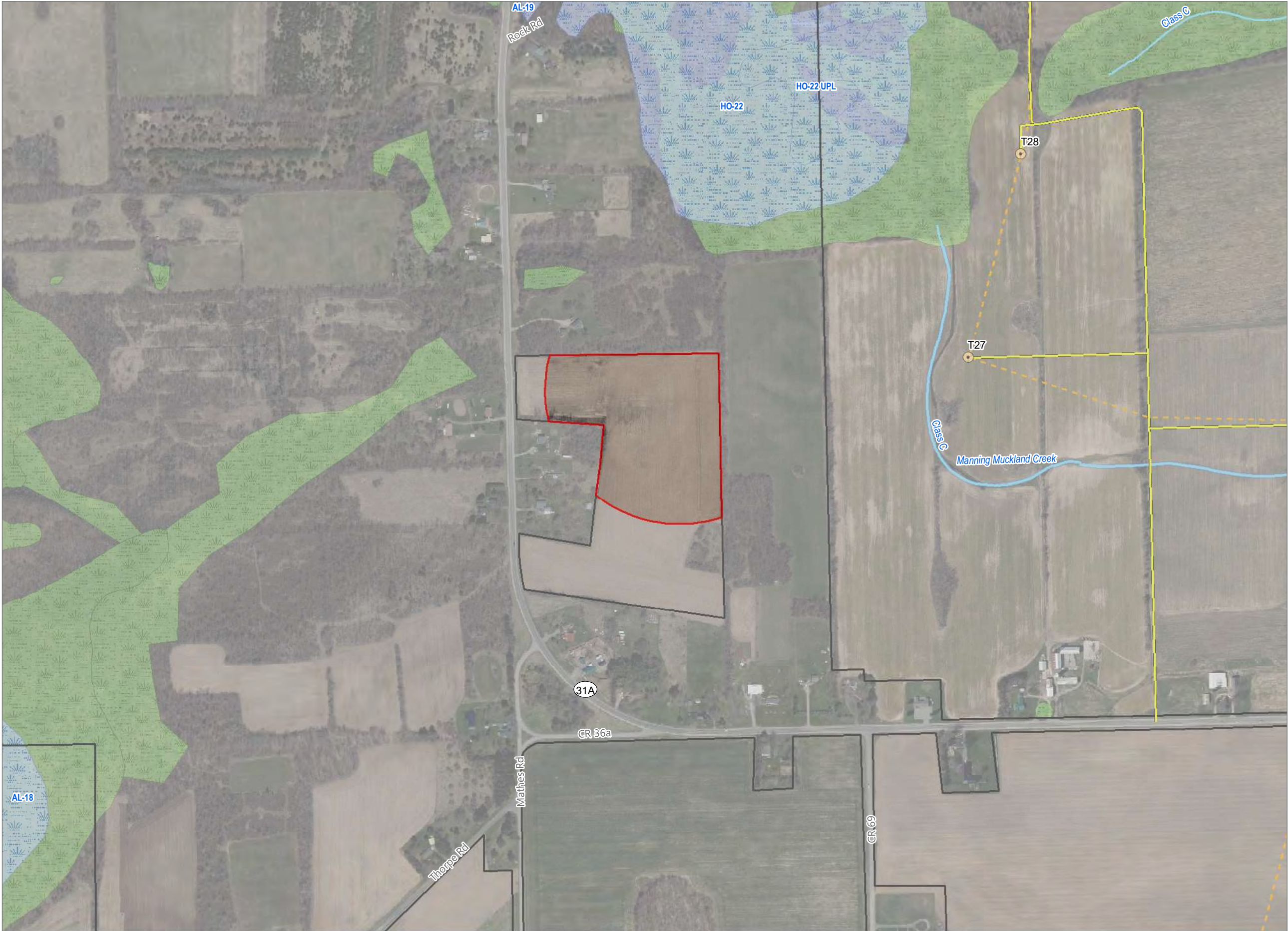
Project Components

- Wind Turbine
- Access Road
- Collection Line
- Study Area
- Facility Site



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Figure 2. Mapped Wetlands And Streams

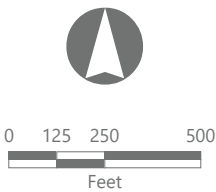
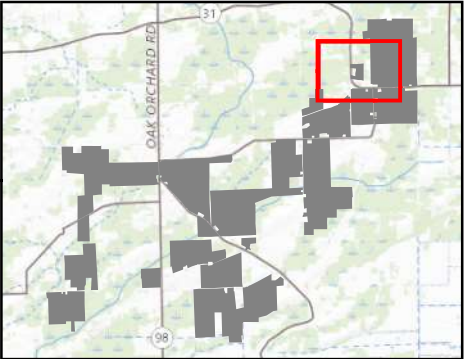


Heritage Wind Project

Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- NYSDEC Stream Classification
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Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service

Figure 2. Mapped Wetlands And Streams



Heritage Wind Project

Town of Barre, Orleans
County, New York

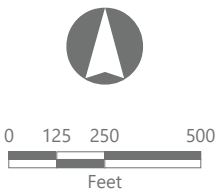
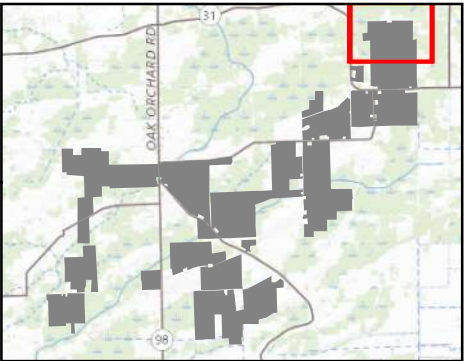
Wetland Delineation Report
Addendum 2022

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- Access Road
- Collection Line
- Study Area
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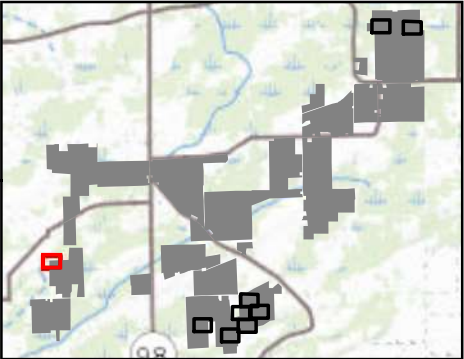
Prepared May 20, 2022
Basemap: NYSDEC "2020" orthoimagery map service

Heritage Wind Project

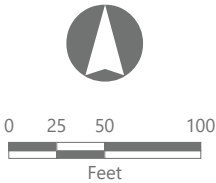
Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- Datapoint Wetland
- Wetland Continues
- Delineated Wetland w/
Federal Jurisdiction
- Study Area



Sheet 1 of 9



Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service.

Figure 3. Delineated Wetlands and Streams

Heritage Wind Project

Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- ▲ Stream Flag
- ⊕ Datapoint Stream
- ➡ Culvert
- ▨ Delineated Stream w/
Federal Jurisdiction
- ▭ Study Area

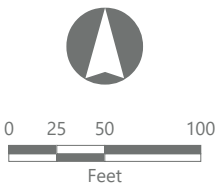
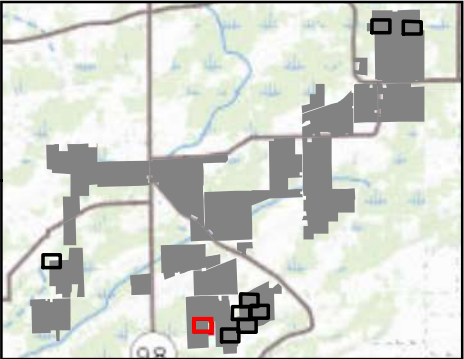


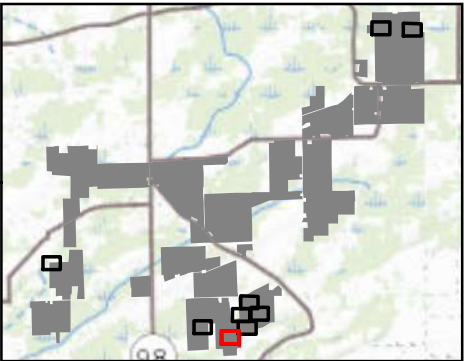
Figure 3. Delineated Wetlands and Streams

Heritage Wind Project

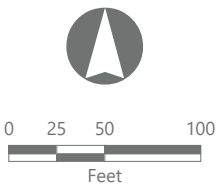
Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- ▲ Stream Flag
- ⊕ Datapoint Stream
- ⊕ Datapoint Wetland
- Delineated Wetland w/
Federal Jurisdiction
- Delineated Stream w/
Federal Jurisdiction
- Study Area



Sheet 3 of 9



Prepared May 20, 2022
Basemap: NYSODP "2020" orthoimagery map service.



Figure 3. Delineated Wetlands and Streams

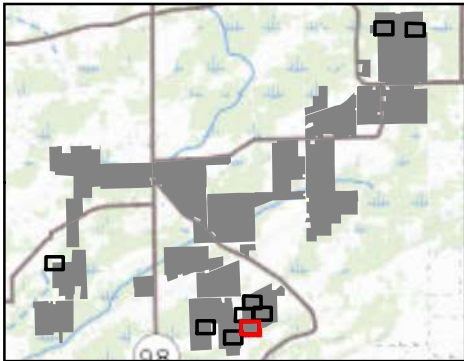


Heritage Wind Project

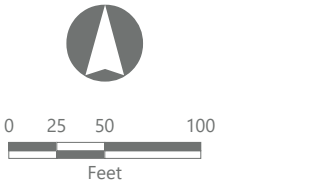
Town of Barre, Orleans
County, New York

Wetland Delineation Report Addendum 2022

- Wetland Flag
- ▲ Stream Flag
- ⊕ Datapoint Stream
- ⊕ Datapoint Wetland
- ➡ Culvert
- Wetland Continues
- ▨ Delineated Wetland w/
Federal Jurisdiction
- ▨ Delineated Stream w/
Federal Jurisdiction
- ▭ Study Area

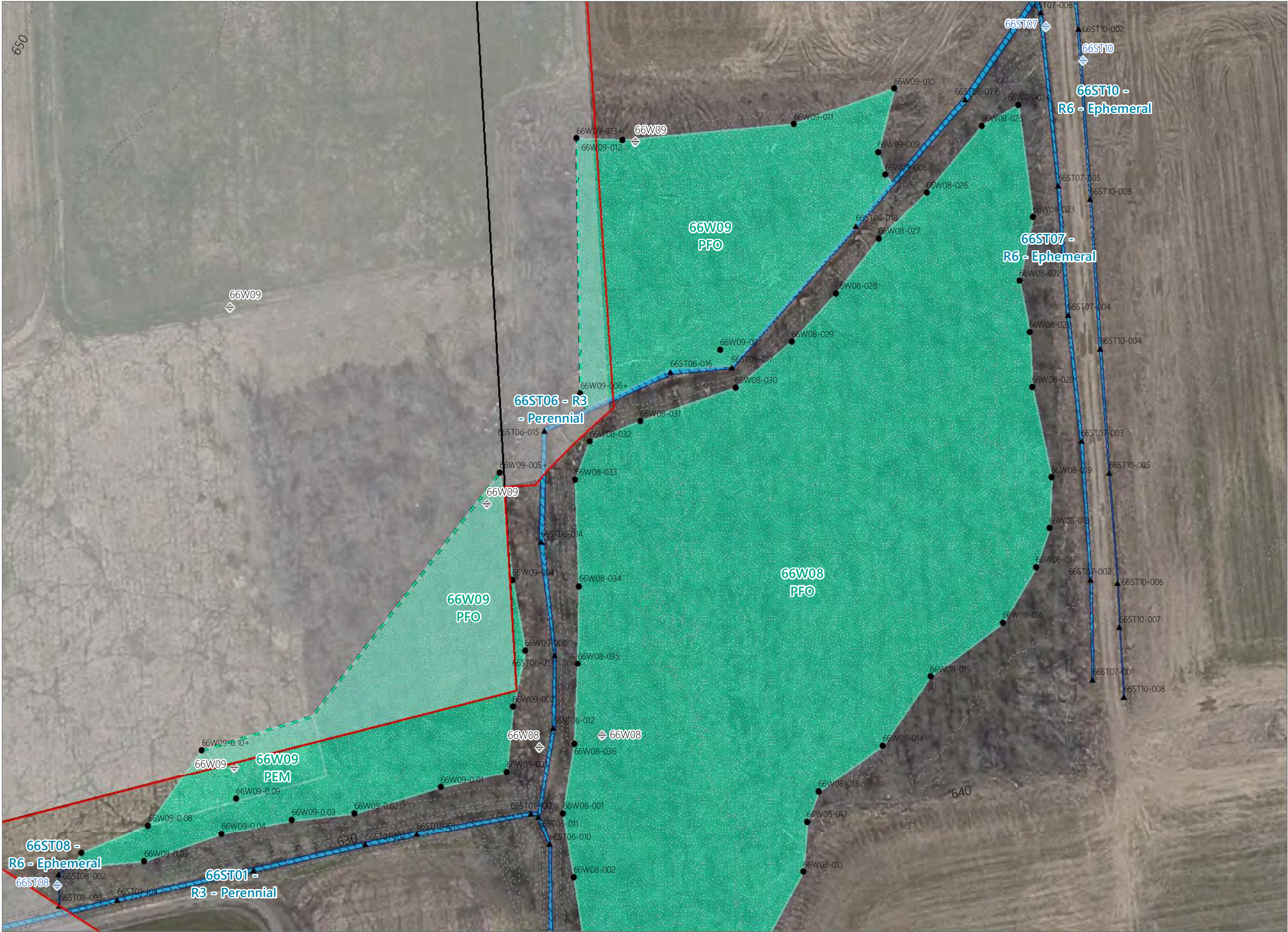


Sheet 4 of 9



Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service.

Figure 3. Delineated Wetlands and Streams



Heritage Wind Project

Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- ▲ Stream Flag
- ⊕ Datapoint Stream
- ⊕ Datapoint Wetland
- Wetland Continues
- Delineated Wetland w/
Federal Jurisdiction
- Delineated Stream w/
Federal Jurisdiction
- Study Area

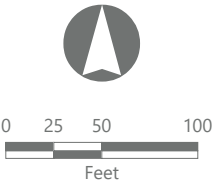
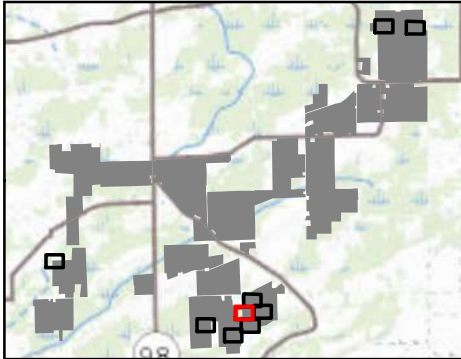


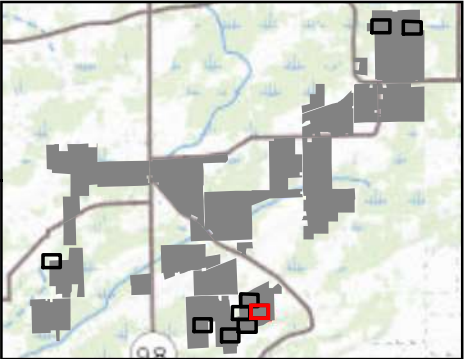
Figure 3. Delineated Wetlands and Streams

Heritage Wind Project

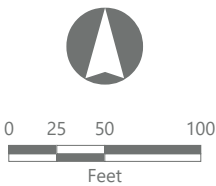
Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- Datapoint Wetland
- Wetland Continues
- Delineated Wetland w/
Federal Jurisdiction
- Delineated Wetland w/
State & Federal Jurisdiction
- Study Area



Sheet 6 of 9



Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service.



Figure 3. Delineated Wetlands and Streams

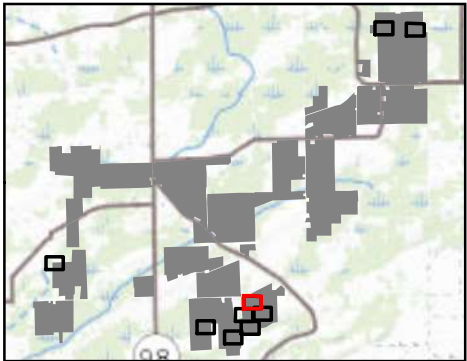


Heritage Wind Project

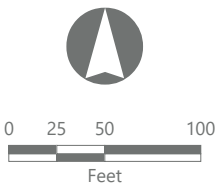
Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- ▲ Stream Flag
- ⊕ Datapoint Wetland
- ➡ Culvert
- Wetland Continues
- ▨ Delineated Wetland w/
Federal Jurisdiction
- ▩ Delineated Wetland w/
State & Federal Jurisdiction
- ▨ Delineated Stream w/
Federal Jurisdiction
- ▭ Study Area



Sheet 7 of 9



Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service.

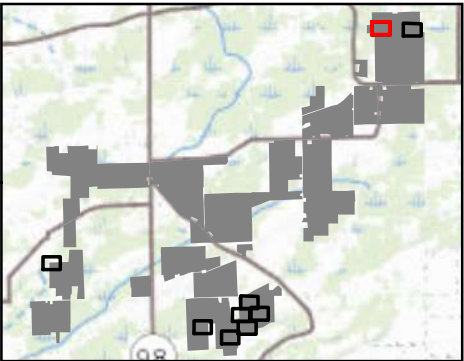
Figure 3. Delineated Wetlands and Streams

Heritage Wind Project

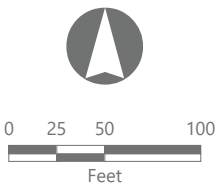
Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- Datapoint Wetland
- Wetland Continues
- Delineated Wetland w/
State & Federal Jurisdiction
- Study Area



Sheet 8 of 9



Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service.

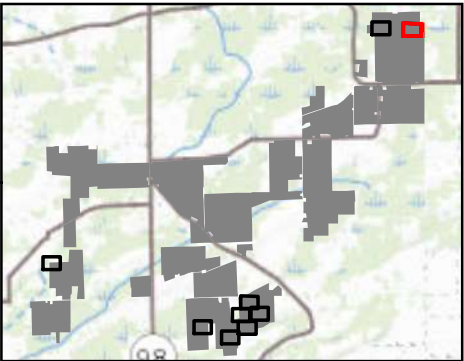
Figure 3. Delineated Wetlands and Streams

Heritage Wind Project

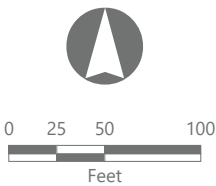
Town of Barre, Orleans
County, New York

Wetland Delineation Report
Addendum 2022

- Wetland Flag
- Datapoint Wetland
- Wetland Continues
- Delineated Wetland w/
State & Federal Jurisdiction
- Study Area



Sheet 9 of 9



Prepared May 20, 2022
Basemap: NYSDOP "2020" orthoimagery map service.



APPENDIX B

Routine Wetland Determination Data Sheets and Stream Inventory Forms

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/18/2022	
Applicant/Owner:	Heritage Wind, LLC			State:	New York		Sampling Point:	66W01-01U
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre				
Landform (hillslope, terrace, etc):	Flat		Local relief (concave, convex, none):	concave			Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.209875		Long:	-78.12004167	
Datum:	WGS 1984							
Soil Map Unit Name:	Kaa: Kendaia and Appleton soils, 0 to 3 percent slopes, bedrock substratum (294043)					NWI classification:	N/A	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)								
Are Vegetation ☒ , Soil ☐ , or Hydrology ☐ significantly disturbed?				Are "Normal Circumstances" present? Yes ☒ No ☐				
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?				(If needed, explain any answers in Remarks.)				

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

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W01-01U

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Barbarea verna</i> / Wintercress, Early winter cress	5	Yes	NI	
2. <i>Potentilla norvegica</i> / Norwegian cinquefoil, Norwegian or ro	5	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	10	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	5	x 3 =	15	
FACU species	0	x 4 =	0	
UPL species	5	x 5 =	25	
Column Totals:	10	(A)	40	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W01-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/18/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W01-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.209865 Long: -78.11984833 Datum: WGS 1984
 Soil Map Unit Name: Kendaia and Appleton soils, 0 to 3 percent slopes, bedrock substratum NWI classification: PFO1B

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>66W01</u>
Remarks: (Explain alternative procedures here or in a separate report.) PEM sample point. Wetland occurs adjacent to agriculture field and was farmed at one point, but has been left to fallow for at least one year.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☒ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>9</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>7</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: Surface water observed in depressions		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W01-01W

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 15 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 5 Feet)			
1. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary grass	90	Yes	FACW
2. <i>Juncus effusus</i> / Common bog rush, Soft or lamp rush	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (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>10</u>	x 1 = <u>10</u>
FACW species <u>90</u>	x 2 = <u>180</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>190</u> (B)

Prevalence Index = B/A = 1.9

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W01-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/18/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W02-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Lowland Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.20987833 Long: -78.12754167 Datum: WGS 1984
 Soil Map Unit Name: Kendaia and Appleton soils, 0 to 3 percent slopes, bedrock substratum NWI classification: PFO1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, 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>PEM data point for 66W02</u>
Remarks: (Explain alternative procedures here or in a separate report.) Vegetation maintained during farming practices	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>10</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: 66W02-01W

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30 Feet)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary gras	90	Yes		FACW
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	90	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____				
2. _____				
3. _____				
4. _____				
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (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 0	x 1 = 0
FACW species 90	x 2 = 180
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 90 (A)	180 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W02-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/18/2022				
Applicant/Owner:	Heritage Wind, LLC			State:	New York		Sampling Point:	66W02/03-01U			
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre							
Landform (hillslope, terrace, etc):	Lowland		Local relief (concave, convex, none):	convex			Slope (%):	0-5			
Subregion (LRR or MLRA):	LRR L		Lat:	43.20993667		Long:	-78.12714167		Datum:	WGS 1984	
Soil Map Unit Name:	Hilton loam, 0 to 3 percent slopes, bedrock substratum					NWI classification:	N/A				

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X , 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.)

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W02/03-01U

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Barbarea verna</i> / Wintercress, Early winter cress	5	Yes	NI	
2. <i>Plantago major</i> / Common plantain	5	Yes	FACU	
3. <i>Trifolium repens</i> / White clover	5	Yes	FACU	
4. <i>Potentilla norvegica</i> / Norwegian cinquefoil, Norwegian or ro	5	Yes	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	20	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

 Total Number of Dominant Species Across All Strata: 4 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	5	x 3 =	15	
FACU species	10	x 4 =	40	
UPL species	5	x 5 =	25	
Column Totals:	20	(A)	80	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W02/03-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No ☒ X

Remarks:

Auger refusal at 5" from gravel in multiple locations.

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/18/2022
Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W03-01U
Investigator(s): JB BA Section, Township, Range: Town of Barre
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): convex Slope (%): 0-5
Subregion (LRR or MLRA): LRR L Lat: 43.20993667 Long: -78.12714167 Datum: WGS 1984
Soil Map Unit Name: Hilton loam, 0 to 3 percent slopes, bedrock substratum NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, 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 _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Active agriculture field, disturbed vegetation.			

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W03-01U

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30 Feet)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Plantago major</i> / Common plantain	5	Yes	FACU	
2. <i>Trifolium repens</i> / White clover	5	Yes	FACU	
3. <i>Barbarea verna</i> / Wintercress, Early winter cress	5	Yes	NI	
4. <i>Potentilla norvegica</i> / Norwegian cinquefoil, Norwegian or ro	5	Yes	FAC	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	20	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1.				
2.				
3.				
4.				
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 10	x 4 = 40
UPL species 5	x 5 = 25
Column Totals: 20 (A)	80 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W03-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

Auger refusal at 12" due to gravel.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/18/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W03-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.21025667 Long: -78.126805 Datum: WGS 1984
 Soil Map Unit Name: Kendaia and Appleton soils, 0 to 3 percent slopes, bedrock substratum NWI classification: N/A

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>PFO</u>
Remarks: (Explain alternative procedures here or in a separate report.) PFO/PEM wetland complex within forested area along edge of soybean field.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☒ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</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: Surface water collecting in low areas		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W03-01W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. <i>Acer saccharinum</i> / Silver maple	40	Yes	FACW
2. <i>Fraxinus pennsylvanica</i> / Green ash	25	Yes	FACW
3. <i>Acer rubrum</i> / Red maple	10	No	FAC
4. <i>Ulmus americana</i> / American elm	10	No	FACW
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. <i>Fraxinus pennsylvanica</i> / Green ash	35	Yes	FACW
2. <i>Lindera benzoin</i> / Northern spicebush	10	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	45	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Rosa multiflora</i> / Multiflora rose, Multiflora rosa	10	Yes	FACU
2. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary gras	5	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	0	= Total Cover	

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

 Total Number of Dominant Species Across All Strata: 6 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	125	x 2 =	250	
FAC species	10	x 3 =	30	
FACU species	10	x 4 =	40	
UPL species	0	x 5 =	0	
Column Totals:	145	(A)	320	(B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 X 2 - Dominance Test is >50%
 X 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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 X No

Remarks: (Explain alternative procedures here or in a separate report.)
 10% Carex Sp. also present in herbaceous stratum, too early in season to identify

SOIL

Sampling Point: 66W03-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/18/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W03-02W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.210135 Long: -78.12678 Datum: WGS 1984
 Soil Map Unit Name: Kendaia and Appleton soils, 0 to 3 percent slopes, bedrock substratum NWI classification: N/A

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>PEM</u>
Remarks: (Explain alternative procedures here or in a separate report.) PEM data point for 66W03. Connected to NWI PFO1/4E	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</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>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W03-02W

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary gras	40	Yes		FACW
2. <i>Juncus effusus</i> / Common bog rush, Soft or lamp rush	20	Yes		OBL
3. <i>Rosa multiflora</i> / Multiflora rose, Multiflora rosa	10	No		FACU
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	70	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= 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	20	x 1 =	20	
FACW species	40	x 2 =	80	
FAC species	0	x 3 =	0	
FACU species	10	x 4 =	40	
UPL species	0	x 5 =	0	
Column Totals:	70	(A)	140	(B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:
☒ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W03-02W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches): _____

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/19/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W04-01U
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre			
Landform (hillslope, terrace, etc):	Flat		Local relief (concave, convex, none):	none		Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.14559		Long:	-78.17247833
Soil Map Unit Name:	Palms muck		NWI classification:	N/A			

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

Hydrophytic Vegetation Present?	Yes _____	No <u> X </u>	Is the Sampled Area within a Wetland? Yes _____ No <u> X </u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u> X </u>	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	

Remarks: (Explain alternative procedures here or in a separate report.)
Area within actively tilled and farmed field. Vegetation is disturbed regularly by farming.

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Fauna (B13) | ☐ Drainage Patterns (B10) |
| ☐ Saturation (A3) | ☐ Marl Deposits (B15) | ☐ Moss Trim Lines (B16) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ Crayfish Burrows (C8) |
| ☐ Drift Deposits (B3) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Algal Mat or Crust (B4) | ☐ Recent Iron Reduction in Tilled Soils (C6) | ☐ Stunted or Stressed Plants (D1) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☐ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Shallow Aquitard (D3) |
| ☐ Sparsely Vegetated Concave Surface (B8) | | ☐ Microtopographic Relief (D4) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒ X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W04-01U

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Lamium purpureum</i> / Purple dead nettle	15	Yes	NI
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= Total Cover	

Remarks: (Explain alternative procedures here or in a separate report.)
Remnant corn

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

 Total Number of Dominant Species Across All Strata: 1 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 15	x 5 = 75
Column Totals: 15 (A)	75 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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

SOIL

Sampling Point: 66W04-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
 ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 ___ Dark Surface (S7) (**LRR K, L**)
 ___ Polyvalue Below Surface (S8) (**LRR K, L**)
 ___ Thin Dark Surface (S9) (**LRR K, L**)
 ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
 ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 ___ Red Parent Material (F21)
 ___ Very Shallow Dark Surface (TF12)
 ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: compact clay

Depth (inches): 14

Hydric Soil Present? Yes No **X**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/19/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W04-01W
 Investigator(s): JB Ba Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.14541333 Long: -78.172545 Datum: WGS 1984
 Soil Map Unit Name: Palms muck NWI classification: Pf

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>66W4</u>
Remarks: (Explain alternative procedures here or in a separate report.) Low spot in ag field holding water.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☒ Algal Mat or Crust (B4) ☒ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☒ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</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: Standing water collecting in lower areas		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W04-01W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary gras	20	Yes	FACW
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= Total Cover	

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

 Total Number of Dominant Species Across All Strata: 1 (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>0</u>	x 1 = <u>0</u>
FACW species <u>20</u>	x 2 = <u>40</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>20</u> (A)	<u>40</u> (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:
☒ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)
 Remnant corn present

SOIL

Sampling Point: 66W04-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

X	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S7) (LRR K, L)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/19/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W06-01U
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre			
Landform (hillslope, terrace, etc):	Flat		Local relief (concave, convex, none):	convex		Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.14612		Long:	-78.17222
Soil Map Unit Name:	Bergen muck		NWI classification:	N/A			

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.)

Hydrophytic Vegetation Present? Yes _____ No <u> X </u> Hydric Soil Present? Yes <u> X </u> No _____ Wetland Hydrology Present? Yes _____ No <u> X </u>	Is the Sampled Area within a Wetland? Yes _____ No <u> X </u> If yes, optional Wetland Site ID: _____
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
Active agriculture field, planted with winter wheat cover crop.

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|---|--|---|
| ___ Surface Water (A1) | ___ Water-Stained Leaves (B9) | ___ Surface Soil Cracks (B6) |
| ___ High Water Table (A2) | ___ Aquatic Fauna (B13) | ___ Drainage Patterns (B10) |
| ___ Saturation (A3) | ___ Marl Deposits (B15) | ___ Moss Trim Lines (B16) |
| ___ Water Marks (B1) | ___ Hydrogen Sulfide Odor (C1) | ___ Dry-Season Water Table (C2) |
| ___ Sediment Deposits (B2) | ___ Oxidized Rhizospheres on Living Roots (C3) | ___ Crayfish Burrows (C8) |
| ___ Drift Deposits (B3) | ___ Presence of Reduced Iron (C4) | ___ Saturation Visible on Aerial Imagery (C9) |
| ___ Algal Mat or Crust (B4) | ___ Recent Iron Reduction in Tilled Soils (C6) | ___ Stunted or Stressed Plants (D1) |
| ___ Iron Deposits (B5) | ___ Thin Muck Surface (C7) | ___ Geomorphic Position (D2) |
| ___ Inundation Visible on Aerial Imagery (B7) | ___ Other (Explain in Remarks) | ___ Shallow Aquitard (D3) |
| ___ Sparsely Vegetated Concave Surface (B8) | | ___ Microtopographic Relief (D4) |
| | | ___ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒ X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W06-01U

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 15 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 5 Feet)			
1. <i>Triticum aestivum</i> / Common wheat	90	Yes	NI
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	= Total Cover	

Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

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>0</u>	x 4 = <u>0</u>
UPL species <u>90</u>	x 5 = <u>450</u>
Column Totals: <u>90</u> (A)	<u>450</u> (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W06-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Soils are adjacent to NWI palustrine farmed and consist of Bergen Muck. Area was likely historically drained to support agriculture.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/19/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W06-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.14541333 Long: -78.172545 Datum: WGS 1984
 Soil Map Unit Name: Bergen muck NWI classification: Pf

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 X, 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>66W06</u>
Remarks: (Explain alternative procedures here or in a separate report.) low spot in ag field holding water. stressed and stunted crops in areas holding water.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☒ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☒ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</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: Standing water in lower areas		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W06-01W

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 15 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 5 Feet)			
1. <i>Triticum aestivum</i> / Common wheat	60	Yes	NI
2. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary gras	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	

Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>60</u>	x 5 = <u>300</u>
Column Totals: <u>75</u> (A)	<u>330</u> (B)

Prevalence Index = B/A = 4.4

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting
- ☒ 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: (Explain alternative procedures here or in a separate report.)

Problematic vegetation. Wetland occurs in active agriculture field planted with cover crop. Planted vegetation occurring within the wetland is stunted and brown in color.

SOIL

Sampling Point: 66W06-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

X	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S7) (LRR K, L)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/19/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W07-01U
Investigator(s):	JB BA		Section, Township, Range:			Town of Barre	
Landform (hillslope, terrace, etc):	Flat		Local relief (concave, convex, none):	none		Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.147325		Long:	-78.16563
Soil Map Unit Name:	Canandaigua soils		NWI classification:			N/A	

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.)

Hydrophytic Vegetation Present? Yes _____ No <u> X </u> Hydric Soil Present? Yes _____ No <u> X </u> Wetland Hydrology Present? Yes _____ No <u> X </u>	Is the Sampled Area within a Wetland? Yes _____ No <u> X </u> If yes, optional Wetland Site ID: _____
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
Adjacent upland between forest edge and agricultural field. Depleted matrix was only observed 4 inches deep from 8-12 before there was a gravel refusal. If layer continues to 14 inches then soils would pass as depleted matrix

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Fauna (B13) | ☐ Drainage Patterns (B10) |
| ☐ Saturation (A3) | ☐ Marl Deposits (B15) | ☐ Moss Trim Lines (B16) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ Crayfish Burrows (C8) |
| ☐ Drift Deposits (B3) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Algal Mat or Crust (B4) | ☐ Recent Iron Reduction in Tilled Soils (C6) | ☐ Stunted or Stressed Plants (D1) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☐ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Shallow Aquitard (D3) |
| ☐ Sparsely Vegetated Concave Surface (B8) | | ☐ Microtopographic Relief (D4) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒ X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W07-01U

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. <i>Quercus alba</i> / White oak	15	Yes	FACU
2. <i>Fraxinus pennsylvanica</i> / Green ash	10	Yes	FACW
3. <i>Juglans nigra</i> / Black walnut	10	Yes	FACU
4. _____			
5. _____			
6. _____			
7. _____			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. <i>Cornus racemosa</i> / Gray dogwood	40	Yes	FAC
2. <i>Acer negundo</i> / Boxelder, Box elder	5	No	FAC
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	45	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Rubus allegheniensis</i> / Allegheny blackberry	10	Yes	FACU
2. <i>Alliaria petiolata</i> / Garlic-mustard	5	Yes	FACU
3. <i>Geum canadense</i> / White avens	5	Yes	FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 10	x 2 = 20
FAC species 50	x 3 = 150
FACU species 40	x 4 = 160
UPL species 0	x 5 = 0
Column Totals: 100 (A)	330 (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0¹

___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W07-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: gravel refusal at 12 but does not restrict water

Depth (inches): 12

Hydric Soil Present? Yes No **X**

Remarks:

Auger refusal at 12" due to gravel. If second soil layer continues another 2 inches it would qualify as a depleted matrix.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/19/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W07-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Lowland Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.14714667 Long: -78.16555 Datum: WGS 1984
 Soil Map Unit Name: Canandaigua soils NWI classification: N/A

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>66W07</u>
Remarks: (Explain alternative procedures here or in a separate report.) forested wetland complex. depressions in landscape are holding surface water.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<u>X</u> Surface Water (A1) <u>X</u> High Water Table (A2) <u>X</u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u>X</u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8)	<u>X</u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u> </u> Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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>2</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: 66W07-01W

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30 Feet)				
1. <i>Quercus bicolor</i> / Swamp white oak	40	Yes	FACW	
2. <i>Acer rubrum</i> / Red maple	25	Yes	FAC	
3. <i>Ulmus americana</i> / American elm	10	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	75	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. <i>Cornus racemosa</i> / Gray dogwood	30	Yes	FAC	
2. <i>Rhamnus cathartica</i> / European buckthorn	10	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	40	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Geum canadense</i> / White avens	10	Yes	FAC	
2. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary gras	5	Yes	FACW	
3. <i>Potentilla norvegica</i> / Norwegian cinquefoil, Norwegian or ro	5	Yes		
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	20	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 55	x 2 = 110
FAC species 75	x 3 = 225
FACU species 0	x 4 = 0
UPL species 5	x 5 = 25
Column Totals: 135 (A)	360 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation ☐

X 2 - Dominance Test is >50% ☒

X 3 - Prevalence Index ≤3.0¹ ☒

4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W07-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/19/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W08-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Lowland Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.149485 Long: -78.16823667 Datum: WGS 1984
 Soil Map Unit Name: Lakemont silty clay loam, 0 to 3 percent slopes NWI classification: PFO1/SS1Bd

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>66W08</u>
Remarks: (Explain alternative procedures here or in a separate report.) forested wetland. bordered by active agriculture fields. Man made berms have been created around wetland.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☒ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☒ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☒ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</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: 66W08-01W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. <i>Fraxinus pennsylvanica</i> / Green ash	35	Yes	FACW
2. <i>Ulmus americana</i> / American elm	25	Yes	FACW
3. <i>Acer rubrum</i> / Red maple	10	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. <i>Cornus amomum</i> / Silky dogwood	20	Yes	FACW
2. <i>Ulmus americana</i> / American elm	15	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	35	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Geum laciniatum</i> / Rough avens	5	Yes	FACW
2. <i>Erythronium rostratum</i> / Yellow trout-lily	5	Yes	NI
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 100	x 2 = 200
FAC species 10	x 3 = 30
FACU species 0	x 4 = 0
UPL species 5	x 5 = 25
Column Totals: 115 (A)	255 (B)

Prevalence Index = B/A = 2.22

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation ☒ X

2 - Dominance Test is >50% ☒ X

3 - Prevalence Index ≤3.0¹ ☒ X

4 - Morphological Adaptations¹ (Provide supporting 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 ☒ X No ☐

Remarks: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W08-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/Country:	Town of Barre, Orleans County		Sampling Date:	04/19/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W08/09-01U
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre			
Landform (hillslope, terrace, etc):	Berm		Local relief (concave, convex, none):	convex		Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.14944833		Long:	-78.16851833
Soil Map Unit Name:	Lakemont silty clay loam, 0 to 3 percent slopes		NWI classification:	N/A			

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

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

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Fauna (B13) | ☐ Drainage Patterns (B10) |
| ☐ Saturation (A3) | ☐ Marl Deposits (B15) | ☐ Moss Trim Lines (B16) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ Crayfish Burrows (C8) |
| ☐ Drift Deposits (B3) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Algal Mat or Crust (B4) | ☐ Recent Iron Reduction in Tilled Soils (C6) | ☐ Stunted or Stressed Plants (D1) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☐ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Shallow Aquitard (D3) |
| ☐ Sparsely Vegetated Concave Surface (B8) | | ☐ Microtopographic Relief (D4) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒ X

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

Remarks: Man made berm that separates wetland W09 from W08.

VEGETATION - Use scientific names of plants.

Sampling Point: 66W08/09-01U

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Securigera varia</i> / Crownvetch	30	Yes	NI	
2. <i>Alliaria petiolata</i> / Garlic-mustard	10	Yes	FACU	
3. <i>Erythronium rostratum</i> / Yellow trout-lily	5	No	NI	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	45	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	10	x 4 =	40	
UPL species	35	x 5 =	175	
Column Totals:	45	(A)	215	(B)

Prevalence Index = B/A = 4.78

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W08/09-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

Man-made berm with soil likely dredged from adjacent wetlands

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/19/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W09-01W
Investigator(s):	JBBA		Section, Township, Range:	Town of Barre			
Landform (hillslope, terrace, etc):	Depression		Local relief (concave, convex, none):	concave		Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.149485		Datum:	WGS 1984
Soil Map Unit Name:	Lakemont silty clay loam, 0 to 3 percent slopes		NWI classification:	PF01/SS1Bd			

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.)

Hydrophytic Vegetation 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: _____
Hydric Soil Present?	Yes	<u>X</u>	No	<u> </u>	
Wetland Hydrology Present?	Yes	<u>X</u>	No	<u> </u>	

Remarks: (Explain alternative procedures here or in a separate report.)
Forested Wetland. Bordered by active agriculture fields. Man made berms have been created surrounding wetland.

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

☒ Surface Water (A1)	☒ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)
☒ Saturation (A3)	☐ Marl Deposits (B15)	☐ Moss Trim Lines (B16)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)
☒ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)
		☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 3 </u>
Water Table Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 2 </u>
Saturation Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 0 </u>
(includes capillary fringe)						

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W09-01W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. <i>Fraxinus pennsylvanica</i> / Green ash	35	Yes	FACW
2. <i>Ulmus americana</i> / American elm	25	Yes	FACW
3. <i>Acer rubrum</i> / Red maple	10	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. <i>Ulmus americana</i> / American elm	15	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	15	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Erythronium rostratum</i> / Yellow trout-lily	5	Yes	NI
2. <i>Geum laciniatum</i> / Rough avens	5	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 80	x 2 = 160
FAC species 10	x 3 = 30
FACU species 0	x 4 = 0
UPL species 5	x 5 = 25
Column Totals: 95 (A)	215 (B)

Prevalence Index = B/A = 2.26

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W09-01W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 2/2	98	10YR 5/6	2	C	M	Clay Loam	
9-18	10YR 4/1	90	10YR 6/6	10	C	M	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Polyvalue Below Surface (S8) (LRR K, L)
☐ Thin Dark Surface (S9) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Project/Site:	16153 Heritage Wind	City/County:	Town of Barre, Orleans County	Sampling Date:	04/19/2022
Applicant/Owner:	Heritage Wind, LLC	State:	New York	Sampling Point:	66W09-02U
Investigator(s):	JB BA	Section, Township, Range:	Town of Barre		
Landform (hillslope, terrace, etc):	Flat	Local relief (concave, convex, none):	none	Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L	Lat:	43.15071167	Long:	-78.16966667
		Datum:	WGS 1984		
Soil Map Unit Name:	Lakemont silty clay loam, 0 to 3 percent slopes	NWI classification:	N/A		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)					
Are Vegetation ☒ , Soil ☐ , or Hydrology ☐ significantly disturbed?			Are "Normal Circumstances" present? Yes ☒ 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 _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Active Agriculture Field with remnant corn. Upland Point for 66W09-02W and 66W09-03W			

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W09-02U

<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Tree Stratum</th> <th style="text-align: left; border-bottom: 1px solid black;">(Plot size: 30 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;">Absolute % Cover</th> <th style="text-align: center; border-bottom: 1px solid black;">Dominant Species?</th> <th style="text-align: center; border-bottom: 1px solid black;">Indicator Status</th> </tr> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td><td></td></tr> <tr><td>5.</td><td></td><td></td><td></td><td></td></tr> <tr><td>6.</td><td></td><td></td><td></td><td></td></tr> <tr><td>7.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td style="text-align: center;">0</td> <td colspan="2">= Total Cover</td> </tr> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Sapling/Shrub Stratum</th> <th style="text-align: left; border-bottom: 1px solid black;">(Plot size: 15 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;"></th> <th style="text-align: center; border-bottom: 1px solid black;"></th> <th style="text-align: center; border-bottom: 1px solid black;"></th> </tr> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td><td></td></tr> <tr><td>5.</td><td></td><td></td><td></td><td></td></tr> <tr><td>6.</td><td></td><td></td><td></td><td></td></tr> <tr><td>7.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td style="text-align: center;">0</td> <td colspan="2">= Total Cover</td> </tr> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Herb Stratum</th> <th style="text-align: left; border-bottom: 1px solid black;">(Plot size: 5 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;"></th> <th style="text-align: center; border-bottom: 1px solid black;"></th> <th style="text-align: center; border-bottom: 1px solid black;"></th> </tr> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td><td></td></tr> <tr><td>5.</td><td></td><td></td><td></td><td></td></tr> <tr><td>6.</td><td></td><td></td><td></td><td></td></tr> <tr><td>7.</td><td></td><td></td><td></td><td></td></tr> <tr><td>8.</td><td></td><td></td><td></td><td></td></tr> <tr><td>9.</td><td></td><td></td><td></td><td></td></tr> <tr><td>10.</td><td></td><td></td><td></td><td></td></tr> <tr><td>11.</td><td></td><td></td><td></td><td></td></tr> <tr><td>12.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td style="text-align: center;">0</td> <td colspan="2">= Total Cover</td> </tr> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Woody Vine Stratum</th> <th style="text-align: left; border-bottom: 1px solid black;">(Plot size: 30 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;"></th> <th style="text-align: center; border-bottom: 1px solid black;"></th> <th style="text-align: center; border-bottom: 1px solid black;"></th> </tr> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td style="text-align: center;">0</td> <td colspan="2">= Total Cover</td> </tr> </table>	Tree Stratum	(Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	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Remarks: (Explain alternative procedures here or in a separate report.) no vegetation during time of sampling, only remnant corn.																																																																																																																																																																																																													

SOIL

Sampling Point: 66W09-02U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No ☒ X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/19/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W09-02W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Lowland Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.14938333 Long: -78.16966667 Datum: WGS 1984
 Soil Map Unit Name: Lk: Lakemont silty clay loam, 0 to 3 percent slopes (294045) NWI classification: PFO1/SS1Bd

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, 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>66W09</u>
Remarks: (Explain alternative procedures here or in a separate report.) PEM data point. Agriculture field, mowed/ maintained vegetation. Connected to NWI PFO1/SS1Bd	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W09-02W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Juncus effusus</i> / Common bog rush, Soft or lamp rush	5	Yes	OBL
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (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	5	x 1 =	5	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	5	(A)	5	(B)

Prevalence Index = B/A = 1.0

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

Additional grasses and other mowed vegetation that was unidentifiable given the time of the year.

SOIL

Sampling Point: 66W09-02W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/19/2022	
Applicant/Owner:	Heritage Wind, LLC			State:	New York		Sampling Point:	66W09-03W
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre				
Landform (hillslope, terrace, etc):	Lowland		Local relief (concave, convex, none):	concave			Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.15115		Long:	-78.168065	
			Datum:	WGS 1984				
Soil Map Unit Name:	Lakemont silty clay loam, 0 to 3 percent slopes				NWI classification:	PFO1/SS1Bd		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)								
Are Vegetation ☒ , Soil ☐ , or Hydrology ☐ significantly disturbed?				Are "Normal Circumstances" present? Yes ☐ No ☒				
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?				(If needed, explain any answers in Remarks.)				

Hydrophytic Vegetation Present?	Yes	X	No		Is the Sampled Area within a Wetland? If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes	X	No		
Remarks: (Explain alternative procedures here or in a separate report.) Area is heavily disturbed. Woody plants we cut down on edge of agriculture field and piled up on edge of Woodlot. Deep ruts from equipment created areas of ponding water and topographic relief for upland plants.					

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

Field Observations:			
Surface Water Present?	Yes ☒	No ☐	Depth (inches): <u>12</u>
Water Table Present?	Yes ☐	No ☒	Depth (inches): <u> </u>
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>0</u>
(includes capillary fringe)			

Wetland Hydrology Present?	
Yes ☒	No ☐

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W09-03W

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Ranunculus sceleratus</i> / Cursed crowfoot	10	Yes	OBL	
2. <i>Rubus</i> / Blackberry	10	Yes	NI	
3. <i>Typha angustifolia</i> / Narrow leaf cattail, Narrow-leaved cattail	10	Yes	OBL	
4. <i>Taraxacum officinale</i> / Red seeded dandelion, Common dandelion	5	No	FACU	
5. <i>Cornus amomum</i> / Silky dogwood	5	No	FACW	
6. <i>Phleum alpinum</i> / Timothy grass, Alpine timothy, Mountain timothy	5	No	FACW	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	45	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= 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: 3 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	20	x 1 =	20	
FACW species	10	x 2 =	20	
FAC species	0	x 3 =	0	
FACU species	5	x 4 =	20	
UPL species	10	x 5 =	50	
Column Totals:	45	(A)	110	(B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:
 _____ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index ≤3.0¹
 _____ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W09-03W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/20/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W10-01U
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre			
Landform (hillslope, terrace, etc):	Hillslope		Local relief (concave, convex, none):	concave		Slope (%):	3-8
Subregion (LRR or MLRA):	LRR L		Lat:	43.14978		Long:	-78.16463333
Soil Map Unit Name:	Hilton loam, 3 to 8 percent slopes		NWI classification:	N/A			

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, 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.)

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W10-01U

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
(Plot size: 30 Feet)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	0	= Total Cover		
(Plot size: 15 Feet)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	0	= Total Cover		
(Plot size: 5 Feet)				
1. <i>Lamium purpureum</i> / Purple dead nettle	20	Yes		NI
2. <i>Dipsacus fullonum</i> / Wild teasel	5	Yes		FACU
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	25	= Total Cover		
(Plot size: 30 Feet)				
1.				
2.				
3.				
4.				
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 5	x 4 = 20
UPL species 20	x 5 = 100
Column Totals: 25 (A)	120 (B)

Prevalence Index = B/A = 4.8

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W10-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

Auger Refusal at 15 inches from gravel in multiple locations

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/20/2022	
Applicant/Owner:	Heritage Wind, LLC			State:	New York		Sampling Point:	66W10-01W
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre				
Landform (hillslope, terrace, etc):	Lowland		Local relief (concave, convex, none):	concave			Slope (%):	0-5
Subregion (LRR or MLRA):	LRR L		Lat:	43.150355		Long:	-78.16421833	
Datum:	WGS 1984							
Soil Map Unit Name:	Odessa silt loam, 0 to 3 percent slope				NWI classification:	PFO1B		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)								
Are Vegetation ☒ , Soil ☐ , or Hydrology ☐ significantly disturbed?				Are "Normal Circumstances" present? Yes ☒ No ☐				
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?				(If needed, explain any answers in Remarks.)				

Hydrophytic Vegetation Present?	Yes	X	No		Is the Sampled Area within a Wetland? If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes	X	No		
Remarks: (Explain alternative procedures here or in a separate report.) Wetland occurs on the edge of agriculture field. Woody plants that once occurred here have been cut down and piled up using heavy equipment, deep ruts providing topographic relief for some upland plants.					

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

Field Observations:			
Surface Water Present?	Yes ☒	No ☐	Depth (inches): <u>4</u>
Water Table Present?	Yes ☒	No ☐	Depth (inches): <u>6</u>
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>0</u>
(includes capillary fringe)			

Wetland Hydrology Present?	Yes ☒	No ☐
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Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W10-01W

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Ranunculus sceleratus</i> / Cursed crowfoot	10	Yes	OBL	
2. <i>Taraxacum officinale</i> / Red seeded dandelion, Common dan	5	Yes	FACU	
3. <i>Barbarea verna</i> / Wintercress, Early winter cress	5	Yes	NI	
4. <i>Cornus alba</i> / Red osier	5	Yes	FACW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	25	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= 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: 4 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species 5	x 2 = 10
FAC species 0	x 3 = 0
FACU species 5	x 4 = 20
UPL species 5	x 5 = 25
Column Totals: 25 (A)	65 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:
 _____ 1 - Rapid Test for Hydrophytic Vegetation
 _____ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index ≤3.0¹
 _____ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W10-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/20/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W10-02W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.15331667 Long: -78.16624 Datum: WGS 1984
 Soil Map Unit Name: Appleton silt loam, 0 to 3 percent slopes NWI classification: PSS1Bd

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>66W10 - PFO</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W10-02W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. <i>Fraxinus pennsylvanica</i> / Green ash	35	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. <i>Lonicera morrowii</i> / Morrow's honeysuckle	30	Yes	FACU
2. <i>Cornus amomum</i> / Silky dogwood	30	Yes	FACW
3. <i>Rhamnus cathartica</i> / European buckthorn	15	No	FAC
4. <i>Cornus sericea</i> / American dogwood	5	No	NI
5.			
6.			
7.			
	80	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Geum canadense</i> / White avens	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

 Total Number of Dominant Species Across All Strata: 4 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	65	x 2 =	130	
FAC species	20	x 3 =	60	
FACU species	30	x 4 =	120	
UPL species	5	x 5 =	25	
Column Totals:	120	(A)	335	(B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)
 Tree stratum includes 10% malus sp. Herbaceous stratum also contains moss and Carex sp.

SOIL

Sampling Point: 66W10-02W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/20/2022						
Applicant/Owner:	Heritage Wind, LLC			State:	New York		Sampling Point:	66W10/11-02U					
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre									
Landform (hillslope, terrace, etc):	Flat		Local relief (concave, convex, none):	none			Slope (%):	0-5					
Subregion (LRR or MLRA):	LRR L		Lat:	43.15303		Long:	-78.16669167		Datum:	WGS 1984			
Soil Map Unit Name:	Appleton silt loam, 0 to 3 percent slopes				NWI classification:	N/A							
Are climatic / hydrologic conditions on the site typical for this time of year?			Yes	☒		No	☐ (If no, explain in Remarks.)						
Are Vegetation	☒	Soil	☐	or Hydrology		☐	significantly disturbed?		Are "Normal Circumstances" present?	Yes	☒	No	☐
Are Vegetation	☐	Soil	☐	or Hydrology		☐	naturally problematic? (If needed, explain any answers in Remarks.)						

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

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W10/11-02U

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Lamium purpureum</i> / Purple dead nettle	25	Yes	NI
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= Total Cover	

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

 Total Number of Dominant Species Across All Strata: 1 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	25	x 5 =	125	
Column Totals:	25	(A)	125	(B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)
 Grass sp. present, suspected Glyceria but unable to identify due to time of year

SOIL

Sampling Point: 66W10/11-02U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/20/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W11-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Toe of slope Local relief (concave, convex, none): concave Slope (%): 3-7
 Subregion (LRR or MLRA): LRR L Lat: 43.153705 Long: -78.16771833 Datum: WGS 1984
 Soil Map Unit Name: Hilton loam, 3 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, 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>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>66W011</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Active agriculture field. Deep ruts, standing water. Stunted vegetation, normally harvested.		

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<u>X</u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Moss Trim Lines (B16)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Crayfish Burrows (C8)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u>X</u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Stunted or Stressed Plants (D1)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Shallow Aquitard (D3)
<u> </u> Sparsely Vegetated Concave Surface (B8)		<u> </u> Microtopographic Relief (D4)
		<u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </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: 66W11-01W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	
Herb Stratum (Plot size: 5 Feet)			
1. <i>Ranunculus sceleratus</i> / Cursed crowfoot	5	Yes	OBL
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= Total Cover	

Remarks: (Explain alternative procedures here or in a separate report.)

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

 Total Number of Dominant Species Across All Strata: 1 (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	5	x 1 =	5	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	5	(A)	5	(B)

Prevalence Index = B/A = 1.0

Hydrophytic Vegetation Indicators:
☒ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting 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 ☐

SOIL

Sampling Point: 66W11-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: compacted clay
Depth (inches): 9

Hydric Soil Present? Yes X No

Remarks:

Compacted soil at 9"

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/20/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W12-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.205575 Long: -78.1523 Datum: WGS 1984
 Soil Map Unit Name: Sun silt loam NWI classification: PFO1E

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>66W12</u>
Remarks: (Explain alternative procedures here or in a separate report.) Forested wetland with hydrologic connection to DEC wetland complex AL-18 to the south and east connected by series of culverts.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☒ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☒ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</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: 66W12-01W

<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Tree Stratum (Plot size: 30 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;">Absolute % Cover</th> <th style="text-align: center; border-bottom: 1px solid black;">Dominant Species?</th> <th style="text-align: center; border-bottom: 1px solid black;">Indicator Status</th> </tr> <tr><td>1. <i>Acer rubrum</i> / Red maple</td><td style="text-align: center;">35</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <i>Fraxinus pennsylvanica</i> / Green ash</td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center; border-top: 1px solid black;">65</td> <td colspan="2" style="text-align: center; border-top: 1px solid black;">= Total Cover</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Sapling/Shrub Stratum (Plot size: 15 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;">Absolute % Cover</th> <th style="text-align: center; border-bottom: 1px solid black;">Dominant Species?</th> <th style="text-align: center; border-bottom: 1px solid black;">Indicator Status</th> </tr> <tr><td>1. <i>Fraxinus pennsylvanica</i> / Green ash</td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center; border-top: 1px solid black;">20</td> <td colspan="2" style="text-align: center; border-top: 1px solid black;">= Total Cover</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Herb Stratum (Plot size: 5 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;">Absolute % Cover</th> <th style="text-align: center; border-bottom: 1px solid black;">Dominant Species?</th> <th style="text-align: center; border-bottom: 1px solid black;">Indicator Status</th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr><td>12. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center; border-top: 1px solid black;">0</td> <td colspan="2" style="text-align: center; border-top: 1px solid black;">= Total Cover</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Woody Vine Stratum (Plot size: 30 Feet)</th> <th style="text-align: center; border-bottom: 1px solid black;">Absolute % Cover</th> <th style="text-align: center; border-bottom: 1px solid black;">Dominant Species?</th> <th style="text-align: center; border-bottom: 1px solid black;">Indicator Status</th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center; border-top: 1px solid black;">0</td> <td colspan="2" style="text-align: center; border-top: 1px solid black;">= Total Cover</td> </tr> </table>	Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	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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>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>35</u>	x 3 = <u>105</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>205</u> (B)
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SOIL

Sampling Point: 66W12-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/20/2022
Applicant/Owner:	Heritage Wind, LLC		State:	New York		Sampling Point:	66W12/13-01U
Investigator(s):	JB BA	Section, Township, Range:	Town of Barre				
Landform (hillslope, terrace, etc):	Foot slope	Local relief (concave, convex, none):	convex			Slope (%):	2-7
Subregion (LRR or MLRA):	LRR L	Lat:	43.20559667	Long:	-78.15275167	Datum:	WGS 1984
Soil Map Unit Name:	Ontario loam, 3 to 8 percent slopes			NWI classification:		N/A	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, 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.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
Active agriculture field, vegetation is harvested. Shared upland point for W12 and W13

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Fauna (B13) | ☐ Drainage Patterns (B10) |
| ☐ Saturation (A3) | ☐ Marl Deposits (B15) | ☐ Moss Trim Lines (B16) |
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| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☐ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Shallow Aquitard (D3) |
| ☐ Sparsely Vegetated Concave Surface (B8) | | ☐ Microtopographic Relief (D4) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒ X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 66W12/13-01U

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Poa pratensis</i> / Kentucky blue grass	50	Yes	FACU	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	50	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

 Total Number of Dominant Species Across All Strata: 1 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	50	x 4 =	200	
UPL species	0	x 5 =	0	
Column Totals:	50	(A)	200	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)
 remnant corn

SOIL

Sampling Point: 66W12/13-01U

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

Auger rock refusal at 9 inches in multiple locations.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/20/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W13-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Toe of slope Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.205525 Long: -78.153815 Datum: WGS 1984
 Soil Map Unit Name: Churchville silt loam, 0 to 2 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>66W13</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetland occurs in active agriculture field at bottom of slope. Compact soils keep water from draining effectively creating hydric conditions.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<u>X</u> Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Surface Soil Cracks (B6)
<u>X</u> High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)
<u>X</u> Saturation (A3)	_____ Marl Deposits (B15)	_____ Moss Trim Lines (B16)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	<u>X</u> Saturation Visible on Aerial Imagery (C9)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Stunted or Stressed Plants (D1)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Geomorphic Position (D2)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Shallow Aquitard (D3)
_____ Sparsely Vegetated Concave Surface (B8)		_____ Microtopographic Relief (D4)
		<u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>4</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 _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W13-01W

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0	= Total Cover		
Herb Stratum (Plot size: 5 Feet)				
1. <i>Ranunculus sceleratus</i> / Cursed crowfoot	5	Yes	OBL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	5	= Total Cover		
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (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>5</u>	x 1 =	<u>5</u>		
FACW species <u>0</u>	x 2 =	<u>0</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>5</u>	(A)	<u>5</u>	(B)	

Prevalence Index = B/A = 1.0

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W13-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Project/Site:	16153 Heritage Wind		City/County:	Town of Barre, Orleans County		Sampling Date:	04/20/2022	
Applicant/Owner:	Heritage Wind, LLC			State:	New York		Sampling Point:	66W14-01U
Investigator(s):	JB BA		Section, Township, Range:	Town of Barre				
Landform (hillslope, terrace, etc):	Hill slope		Local relief (concave, convex, none):	concave			Slope (%):	3-8
Subregion (LRR or MLRA):	LRR L		Lat:	43.14978		Long:	-78.16463333	
Datum:	WGS 1984							
Soil Map Unit Name:	Odessa silt loam, 0 to 3 percent slopes				NWI classification:	N/A		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)								
Are Vegetation ☒ , Soil ☐ , or Hydrology ☐ significantly disturbed?				Are "Normal Circumstances" present? Yes ☒ No ☐				
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?				(If needed, explain any answers in Remarks.)				

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

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

VEGETATION - Use scientific names of plants.

Sampling Point: 66W14-01U

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 15 Feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 5 Feet)			
1. <i>Lamium purpureum</i> / Purple dead nettle	20	Yes	NI
2. <i>Dipsacus fullonum</i> / Wild teasel	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25	= Total Cover	

Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

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>5</u>	x 4 = <u>20</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>25</u>	(A) <u>120</u> (B)

Prevalence Index = B/A = 4.8

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W14-01U

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No X

Remarks:

Auger rock refusal at 15"

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 16153 Heritage Wind City/County: Town of Barre, Orleans County Sampling Date: 04/20/2022
 Applicant/Owner: Heritage Wind, LLC State: New York Sampling Point: 66W14-01W
 Investigator(s): JB BA Section, Township, Range: Town of Barre
 Landform (hillslope, terrace, etc): Toe of Slope Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR L Lat: 43.16123333 Long: -78.22296833 Datum: WGS 1984
 Soil Map Unit Name: Odessa silt loam, 0 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, 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>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>66W14</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Wetland occurs in agriculture field. Compacted soils captures and retains overland sheet flow in low spot in field to inundate soils for a sufficient duration of time to creating hydric conditions. Vegetation impacting by farming practices. Wetland drains offsite to the north.		

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<u>X</u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Moss Trim Lines (B16)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u>X</u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Crayfish Burrows (C8)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Shallow Aquitard (D3)
<u> </u> Sparsely Vegetated Concave Surface (B8)		<u> </u> Microtopographic Relief (D4)
		<u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </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: Surface water collecting in low spots where clay retards infiltration		

VEGETATION - Use scientific names of plants.

Sampling Point: 66W14-01W

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 15 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	0	= Total Cover	

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 5 Feet)			
1. <i>Phalaris arundinacea</i> / Reed canarygrass, Reed canary grass	25	Yes	FACW
2. <i>Juncus effusus</i> / Common bog rush, Soft or lamp rush	10	Yes	OBL
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	35	= Total Cover	

Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30 Feet)			
1. _____			
2. _____			
3. _____			
4. _____			
	0	= 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>10</u>	x 1 = <u>10</u>
FACW species <u>25</u>	x 2 = <u>50</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>35</u> (A)	<u>60</u> (B)

Prevalence Index = B/A = 1.71

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting 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: (Explain alternative procedures here or in a separate report.)

SOIL

Sampling Point: 66W14-01W

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

APPENDIX C

Photo Documentation



Photo 1

Representative PEM Wetland
Community 66W01



Photo 2

Representative PEM Wetland
Community 66W04

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Photo 3

Representative PEM Wetland
Community 66W06



Photo 4

Representative PFO Wetland
Community 66W07

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Photo 5

Representative PFO Wetland
Community 66W08



Photo 6

Representative PFO Wetland
Community 66W09



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Photo 7

Representative PFO Wetland
Community 66W10



Photo 8

Representative PEM Wetland
Community 66W11



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Photo 9

Representative PEM Wetland
Community 66W14



Photo 10

Representative Upland
Community



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Photo 11

Representative Upland
Community Soil Pit



Photo 12

Representative Intermittent
Stream 66ST01

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Photo 13

Representative Ephemeral
Stream 66ST02



Photo 14

Representative Intermittent
Stream 66ST04



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Photo 15

Representative Ephemeral
Stream 66ST05



Photo 16

Representative Perennial Stream
66ST06



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Photo 17

Representative Ephemeral
Stream 66ST07



Photo 18

Representative Ephemeral
Stream 66ST08

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Photo 19

Representative Ephemeral
Stream 66ST10



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