



HORSE CREEK WIND FARM

WETLAND DELINEATION REPORT

Horse Creek Wind Farm Project
Town of Clayton
Jefferson County, New York

Prepared for:

Atlantic Wind, LLC (Iberdrola Renewables, Inc.)

201 King of Prussia Road, Suite 500
Radnor, Pennsylvania 19087

Prepared by:

edr Companies

217 Montgomery Street, Suite 1000
Syracuse, New York 13202
P. 315.471.0688
F. 315.471.1061



December 2010

WETLAND DELINEATION REPORT

Horse Creek Wind Farm Project
Town of Clayton
Jefferson County, New York

Prepared For: Atlantic Wind, LLC (Iberdrola Renewables, Inc.)
201 Kink of Prussia Road, Suite 500
Radnor, Pennsylvania 19087

Prepared By: **edr** Companies (**edr**)
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

Date: December 2010

TABLE OF CONTENTS

| | | |
|-----|---|----|
| 1.0 | INTRODUCTION..... | 1 |
| 1.1 | PROJECT DESCRIPTION | 1 |
| 1.2 | PURPOSE..... | 1 |
| 1.3 | RESOURCES | 2 |
| 1.4 | QUALIFICATIONS | 2 |
| 2.0 | PHYSICAL CHARACTERISTICS AND RESOURCES..... | 3 |
| 2.1 | PHYSIOGRAPHY AND SOILS..... | 3 |
| 2.2 | HYDROLOGY | 8 |
| 3.0 | JURISDICTIONAL AREA MAPPING | 9 |
| 3.1 | WATERS OF THE UNITED STATES | 9 |
| 3.2 | NEW YORK STATE FRESHWATER WETLANDS & PROTECTED STREAMS..... | 9 |
| 4.0 | JURISDICTIONAL AREA DELINEATION | 10 |
| 4.1 | METHODOLOGY | 10 |
| 5.0 | RESULTS..... | 12 |
| 5.1 | WETLANDS..... | 14 |
| 5.2 | STREAMS..... | 16 |
| 6.0 | CONCLUSIONS..... | 16 |
| 7.0 | REFERENCES | 18 |

LIST OF FIGURES

| | |
|-----------|------------------------------------|
| Figure 1. | Project Location |
| Figure 2. | USGS Topographic Mapping |
| Figure 3. | Project Area Soils |
| Figure 4. | Surface Waters |
| Figure 5. | NWI Wetlands Mapping |
| Figure 6. | NYSDEC Freshwater Wetlands Mapping |
| Figure 7. | Delineated Wetlands |

LIST OF TABLES

| | |
|----------|---------------------------------|
| Table 1. | Project Area Soils |
| Table 2. | Delineated Wetlands and Streams |

LIST OF APPENDICES

| | |
|------------|--|
| Appendix A | Figures |
| Appendix B | Routine Wetland Determination Forms |
| Appendix C | Photos of Representative Wetland Communities |

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

Atlantic Wind, LLC (Project Sponsor), a wholly-owned subsidiary of Iberdrola Renewables, Inc. (Iberdrola), is currently developing an approximately 100 megawatt (MW) wind-powered generating facility, the Horse Creek Wind Farm, on 10,420 acres of leased private land in the Town of Clayton, Jefferson County New York (Project). **edr Companies (edr)** was retained by the Project Sponsor to identify and delineate all wetlands and streams within or adjacent to the proposed footprint of Project components, as well as alternative Project component locations. As currently conceived, the Project is anticipated to include up to 50 wind turbines, each with a generating capacity of 2.0 MW located in the Town of Clayton. This Wetland Delineation Report includes all wetlands surveyed during the 2007 and 2010 growing seasons for the various Project component locations considered in the Towns of Clayton and Orleans. A wetland survey area (Survey Area) was created for wetland delineation fieldwork that included various project component layout alternatives that were investigated as a part of the wetland delineation fieldwork. The term "Project Area", described in this Wetland Delineation Report is comprehensive of all alternative layouts considered during the 2007 and 2010 field efforts.

1.2 PURPOSE

This wetland delineation report has been prepared in support of the Draft Environmental Impact Statement (DEIS) currently being prepared by **edr** in accordance with the requirements of the New York State Environmental Quality Review Act (SEQRA). Specific tasks performed for this report included a field delineation of all potential state and federal jurisdictional areas proximate to the Project footprint, a subsequent instrument survey of jurisdictional area boundaries utilizing a Global Positioning System (GPS) with sub-meter accuracy, and a detailed description of jurisdictional areas based on hydrology, vegetation, and soils data collected in the field.

This report describes the results of both the delineation and data collection efforts conducted by **edr** as well as a description of the wetlands and waterbodies that were identified and delineated. This document is intended to provide all the necessary information for an agency jurisdictional determination, and to support a Joint Application for Permit, which will be submitted to the United States Army Corps of Engineers (Corps) and the New York State Department of Environmental Conservation (NYSDEC).

1.3 RESOURCES

Materials and literature supporting this investigation have been derived from a number of sources including United States Geological Survey (USGS) topographic mapping (Clayton, Lafargeville, Dexter and Brownville, NY 7.5 minute quadrangles), United States Fish and Wildlife Service (FWS) National Wetlands Inventory (NWI) mapping, NYSDEC freshwater wetlands mapping, United States Department of Agriculture (USDA) Soil Conservation Service (SCS) (currently the Natural Resources Conservation Service [NRCS]) Jefferson County Soil Survey, the NRCS List of Hydric Soils of the State of New York, the NRCS List of New York Soils with potential hydric inclusions, and recent aerial photography.

Vascular plant names follow nomenclature found in Gleason and Cronquist (1991), and wetland indicator status for vegetative species was determined by reference to Reed (1988).

1.4 QUALIFICATIONS

edr ecologists, James Pippin, William Trembath, Brian Schwabenbauer, Sara Stebbins, Nate Butera, and Eric Lockard performed the wetland delineations and data inventories.

Mr. Pippin is a project manager with over 15 years of experience in the environmental field. He received a bachelor's degree in Natural Resources Management from the University of Maryland at College Park. Professional expertise includes SEQRA compliance, local, state, and federal permitting, wetland delineations, wetland mitigation monitoring, stream restoration and monitoring, forest conservation management, global positioning system (GPS) mapping, and geographic information system (GIS) data analysis.

Mr. Trembath is a project manager with over 18 years experience in the environmental field. He received a bachelor's degree in biological sciences from SUNY Fredonia. His professional expertise includes environmental impact analyses and monitoring, wetland delineations, federal and state permitting, SEQRA and National Environmental Policy Act (NEPA) compliance, hazardous waste operations, industrial health and safety, emergency response, and wildlife damage management.

Mr. Schwabenbauer is a senior ecological resource specialist with over 7 years of experience in the environmental field. He received a bachelor's degree in environmental studies from Hobart College, and a master's degree in environmental policy from SUNY College of Environmental Science and Forestry. His professional expertise includes GPS surveying and mapping, GIS analysis, wetland delineations and

permitting, Phase 1 environmental site assessments, environmental compliance/construction monitoring, and SEQRA and NEPA documentation.

Ms. Stebbins is a senior ecological resource specialist with 10 years of experience in the environmental field. She received a bachelor's degree in forest biology and a master's degree in forest resource management from SUNY College of Environmental Science and Forestry. Professional expertise includes rare plant surveys, floristic inventories, environmental impact analysis, habitat assessments, wetland delineations, and GIS mapping and analysis.

Mr. Butera is an ecological resource analyst with three years of experience in the environmental field. He received a bachelor's degree in renewable resources from Morrisville State College. Professional expertise includes GIS mapping and analysis, GPS surveying and mapping, wetland delineations, environmental compliance construction monitoring and SEQRA documentation.

Mr. Lockard is a regulatory compliance specialist with over three years of experience in the environmental field. He received a bachelor's degree in biology from the Virginia Military Institute. Professional expertise includes GIS and computer aided drafting (CAD) analysis and mapping, GPS surveying and mapping, state and federal permitting, wetland delineations, and SEQR compliance.

2.0 PHYSICAL CHARACTERISTICS AND RESOURCES

2.1 PHYSIOGRAPHY AND SOILS

The proposed Project is located in the Erie Ontario Lowlands physiographic province of Jefferson County (USDA, 1989). The topography of this physiographic area ranges from nearly level to gently rolling. The Project Area is located within the clay plains portion of this lowland area, characterized by nearly level, prairie-like areas of clayey soils (USDA, 1989). The greatest topographic relief in the Project Area occurs in the northwestern portion where there is a relatively abrupt descent to the broad valley of the Chaumont River. Elsewhere, there is very little topographic relief generally consisting of shallow valleys associated with Horse Creek, Buttermilk Creek, and tributaries to Stone Mills Creek and the Chaumont River. Slopes range from 0 to 25 percent but are predominantly 0 to 8 percent. Elevations range from approximately 280 feet above mean sea level (amsl) along the Chaumont River in the northwestern portion of the Project Area to approximately 470 feet amsl near the intersection of Overbluff Road (CR 12) and Wilder Road. Excluding the Chaumont River valley, the lowest elevation is approximately 350 feet amsl in the southern portion of the

Project Area. Land use within the Project Area is dominated by active agriculture, with farms and single-family rural residences generally occurring along road frontage (Figure 2).

The Soil Survey of Jefferson County, New York (USDA, 1989) has mapped general soil associations and soil types within the Project Area (see Tables 4 and 5). This soil survey indicates that three soil associations, and 30 soil map units, are present within the Project Area. The dominant soil map units within the Project Area (as defined by coverage of greater than 1,000 acres) are Chaumont silty clay 0-3 percent slopes, Chaumont silty clay 3-8 percent slopes, Galoo-Rock outcrop complex 0-8 percent slopes, and Wilpoint silty clay loam 3-8 percent slopes. Soils in the Project Area are variable, with drainage ranging from excessively drained to very poorly drained, depths ranging from rock outcrops to greater than 5 feet, and parent materials including glacial lake deposits and glacial till. Soil textures in the Project Area range from clay to very rocky but are primarily silty clay, silty clay loam, and silt loam. Table 1 lists the soil associations found within the Project Area and their characteristics.

A review of the National Hydric Soil List for New York State indicates that portions of the Project Area contain hydric soils, as determined by the USDA Natural Resources Conservation Service (NRCS) (NRCS, 2006). Hydric soils covering approximately 13% of the Project Area include Covington silty clay, Guffin clay, Livingston mucky silty clay, and Fluvaquents-Udifluvents complex (see Figure 3). These soils are found in relatively narrow, linear stretches throughout the Project Area (generally southwest/northeast oriented) and are commonly associated with stream channels, NWI mapped wetlands, and/or wetlands approximated by **edr**. An additional 53% of the Project Area contains the following soil series with potential for hydric inclusions: Chaumont, Kingsbury, Minoa, Newstead, Niagara, Rhinebeck, and Udorthents (NRCS, 1989)

Table 1. Project Area Soils¹

| Series | Subgroup | Mapping Unit | Slope (%) | Drainage ² | Landscape Position | Noted Hydrology | Depth to Seasonal High Water Table (ft) | Hydric Soil ³ |
|---------------------------------|----------------------------|--------------|-----------|-----------------------|---|-----------------------------------|---|--------------------------|
| Benson channery silt loam | Lithic Eutrochrepts | BfF | 25-50 | sed-ed | Linear areas on ridges and terrace fronts | Surface runoff is medium or rapid | >6.0 | - |
| Benson-Galoo complex | - | BgB | 0-8 | sed-ed | Broad, undulating areas interspersed with rock outcrops on ridges | Surface runoff is medium | >6.0 | - |
| Bombay loam | Glossoboric Hapludalfs | BoB | 3-8 | mwd | Oblong, concave areas on the top and lower sides of hills and ridges | Surface runoff is medium | 1.5 - 2.0 | - |
| Chaumont silty clay | Aeric Ochraqualfs | CIA | 0-3 | spd | Slightly convex, broad flats on lowland plains | Surface runoff is slow | 0.5 - 1.5 | B |
| Chaumont silty clay | Aeric Ochraqualfs | CIB | 3-8 | spd | Concave, sloping areas on lowland plains | Surface runoff is medium or slow | 0.5 - 1.5 | B |
| Covington silty clay | Mollic Ochraqualfs | Cp | 0-3 | pd | Smooth, broad, mostly level areas and partly depressional areas of lowland plains | Surface runoff is slow | 0.5 - 1.0 | A |
| Elmridge fine sandy loam | Aquic Dystric Eutrochrepts | EIB | 3-8 | mwd | Smooth, irregular areas and on concave slopes on plains or terraces | Surface runoff is medium | 1.5 - 3.0 | - |
| Farmington loam | Lithic Eutrochrepts | FaB | 0-8 | wd-sed | Broad or oblong, undulating areas on upland till plains | Surface runoff is slow or medium | >6.0 | - |
| Fluvaquents-Udifluvents complex | - | Fu | 0-8 | wd-vpd | Adjacent to streams | - | - | A |
| Galoo-Rock outcrop complex | Lithic Udorthents | GbB | 0-8 | ed-sed | Undulating ridges and knolls | Surface runoff is slow or medium | >6.0 | - |
| Galway silt loam | Typic Eutrochrepts | GIA | 0-3 | wd-mwd | Smooth oblong flat areas on uplands | Surface runoff is slow | 1.5 - 3.0 | - |
| Galway silt loam | Typic Eutrochrepts | GIB | 3-8 | wd-mwd | Convex sloping areas on uplands | Surface runoff is slow or medium | 1.5 - 3.0 | - |
| Galway silt loam | Typic Eutrochrepts | GIC | 8-15 | wd-mwd | Convex sloping areas on uplands | Surface runoff is medium | 1.5 - 3.0 | - |

| Series | Subgroup | Mapping Unit | Slope (%) | Drainage ² | Landscape Position | Noted Hydrology | Depth to Seasonal High Water Table (ft) | Hydric Soil ³ |
|-----------------------------|----------------------------|--------------|-----------|-----------------------|--|---------------------------------------|---|--------------------------|
| Galway very stony silt loam | Typic Eutrochrepts | GmC | 0-15 | wd | Broad, irregularly shaped, undulating and rolling areas on bedrock | Surface runoff is slow or medium | 1.5 - 3.0 | - |
| Guffin clay | Mollic Haplaquepts | Gv | 0-3 | pd | Irregularly shaped flats and in small, round, marsh-like depressions | Surface runoff is slow | 0 - 0.5 | A |
| Hudson silt loam | Glossaquic Hapludalfs | HuB | 3-8 | mwd | Smooth, irregularly shaped areas and on convex slopes | Surface runoff is medium | 1.5 - 2.0 | - |
| Hudson silt loam | Glossaquic Hapludalfs | HuC | 8-15 | mwd | Long and narrow, or irregularly shaped areas on convex slopes | Surface runoff is medium | 1.5 - 2.0 | - |
| Kingsbury silty clay | Aeric Ochraqualfs | KgA | 0-2 | spd | Smooth, broad, irregularly shaped areas on plains | Surface runoff is slow | 0.5 - 1.5 | B |
| Kingsbury silty clay | Aeric Ochraqualfs | KgB | 2-6 | spd | Concave, sloping areas on plains | Surface runoff is slow | 0.5 - 1.5 | B |
| Livingston mucky silty clay | Mollic Haplaquepts | Lc | 0-3 | vpd | Smooth, broad, flat or depressional areas on plains | Surface runoff is very slow or ponded | 0 - 1.0 | A |
| Minoa fine sandy loam | Aquic Dystric Eutrochrepts | Mv | 0-3 | spd | Smooth, broad or irregularly shaped areas | Surface runoff is slow | 0.5 - 1.5 | - |
| Newstead silt loam | Aeric Haplaquepts | Nn | 0-3 | spd-pd | Long, narrow or large, irregularly shaped areas on uplands | Surface runoff is slow | 0.5 - 1.0 | A |
| Niagara silt loam | Aeric Ochraqualfs | NoA | 0-3 | spd | Smooth, broad, irregularly shaped areas on lowland plains | Surface runoff is slow | 0.5 - 1.5 | - |
| Rhinebeck silt loam | Aeric Ochraqualfs | RhA | 0-3 | spd | Smooth, broad, irregularly shaped areas on lake plains and at the margins of uplands | Surface runoff is slow | 0.5 - 1.5 | B |

| Series | Subgroup | Mapping Unit | Slope (%) | Drainage ² | Landscape Position | Noted Hydrology | Depth to Seasonal High Water Table (ft) | Hydric Soil ³ |
|---------------------------|-----------------------|--------------|-----------|-----------------------|---|--------------------------|---|--------------------------|
| Udorthents | - | Ub | - | ed-mwd | Cut and fill areas made by human activities | - | - | B |
| Vergennes silty clay loam | Glossaquic Hapludalfs | VeB | 3-8 | mwd | Convex slopes on lake plains | Surface runoff is medium | 1.0 - 3.0 | - |
| Vergennes silty clay loam | Glossaquic Hapludalfs | VeC | 8-15 | mwd | Short, convex slopes on lake plains | Surface runoff is medium | 1.0 - 3.0 | - |
| Water | N/A | W | NA | Wet | N/A | N/A | N/A | N/A |
| Wilpoint silty clay loam | Aquic Hapludalfs | WnB | 3-8 | mwd | Convex slopes | Surface runoff is medium | 1.5 - 2.0 | - |
| Wilpoint silty clay loam | Aquic Hapludalfs | WnC | 8-15 | mwd | Convex, narrow ridges and knolls | Surface runoff is rapid | 1.5 - 2.0 | - |

¹Unless otherwise noted information derived from the Jefferson County, New York soil survey (1989).

²Soil drainage is represented by the following abbreviations: "ed" = excessively drained, "sed" = somewhat excessively drained, "wd" = well drained, "mwd" = moderately well drained, "spd" = somewhat poorly drained, and "vpd" = very poorly drained.

³"A" indicates this soil is considered hydric in New York State, and "B" has the potential for hydric inclusions in New York State (NRCS, 1989, NRCS, 1995).

2.2 HYDROLOGY

The Project Area is located in the Chaumont-Perch drainage basin (USGS Hydrologic Unit 04150102) of the Great Lakes Region, which ultimately drains to the Lake Ontario and the St. Lawrence River. Project Area surface waters, wetlands, and groundwater resources are described below.

The Chaumont River, Perch River, and Perch Lake are the dominant hydrologic features in the vicinity of the Project Area. The Chaumont River, which intersects the northwest corner of the Project Area, flows southwest into Chaumont Bay of Lake Ontario. Perch Lake and its outlet, the Perch River, lie approximately 1 mile southeast of the Project Area. The Perch River also flows southwest, parallel to the Chaumont River, and enters Lake Ontario at Black River Bay. Chaumont Bay and Black River Bay are approximately 4 miles and 6 miles southwest of the Project Area, respectively. Lake Ontario's outlet is the St. Lawrence River, which is approximately 6 miles northwest of the Project Area at the nearest point, ultimately draining into the Atlantic Ocean.

The Project Area contains a number of small ponds and streams. USGS mapping indicates that the Chaumont River (and unnamed tributaries thereof), Buttermilk Creek, Three Mile Creek/Horse Creek, and unnamed tributaries to Stone Mills Creek occur within the Project Area (Figure 4). Buttermilk Creek is tributary to the Chaumont River, Three Mile Creek/Horse Creek flows into Chaumont Bay, and Stone Mills Creek flows into Perch Lake. All of these streams ultimately flow southwest toward Lake Ontario.

Streams in the Project Area, both named and unnamed, are primarily low-gradient drainage features that meander through wetlands, agricultural fields, and pastures. Most of these streams are less than 10 feet wide with variable substrates, and vegetative cover characteristics. Some Project Area streams have well-defined and abrupt banks, while the banks of others transition into adjacent wetland vegetation, and thus are essentially indiscernible. Small farm ponds/open water areas are also interspersed throughout the area. Generally, they are found in open field settings, adjacent to houses and barns, or within wetlands. Water depths, although not verified, are anticipated to be 4 feet or more. They may be used as a source of water for livestock as well as for fishing and aesthetic purposes.

3.0 JURISDICTIONAL AREA MAPPING

3.1 WATERS OF THE UNITED STATES

Waters of the United States as defined by the Corps, include all lakes, ponds, streams, (intermittent and perennial), and wetlands. Wetlands, as referenced in this narrative, are defined in Section 404 of the *Clean Water Act* as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support a relevance of vegetation typically adapted for life in saturated soil conditions” (EPA, 2001). Jurisdictional wetlands are defined by the presence of three criteria: hydrophytic vegetation, hydric soils, and evidence of wetland hydrology during the growing season (Environmental Laboratory, 1987). However, as a result of the *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* Supreme Court case (No. 99-1178; January 9, 2001), it has been determined that the Corps does not have jurisdictional authority over waters that are “non-navigable, isolated, and intrastate” (EPA, 2001). Ultimately, the jurisdictional status of all delineated waters will be determined during a field visit with a Buffalo District Corps representative.

Review of NWI mapping indicates that there are 116 federally-mapped wetlands located within and adjacent to the Project Area. The federally mapped wetlands are identified in Figure 5. While many of these wetlands occur along streams and rivers, a number of them occur in depression areas scattered throughout the Project Area. The NWI maps indicate that emergent wetlands are the dominant wetland type within the Project Area, totaling approximately 88 acres. Broad-leaved forested wetlands and broad-leaved deciduous scrub-shrub wetlands are also prevalent totaling approximately 51 acres and 15 acres respectively. Less common wetland types (in terms of acreage within the Project Area) include but are not limited to unconsolidated bottom impoundments (farm ponds), scrub-shrub/forested wetlands, and the Chaumont River is mapped as a riverine unconsolidated bottom wetland. Altogether, the NWI mapping indicates approximately 240 acres of wetlands located within the Project Area.

3.2 NEW YORK STATE FRESHWATER WETLANDS & PROTECTED STREAMS

The Freshwater Wetlands Act (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law) gives the NYSDEC jurisdiction over state-protected wetlands and adjacent areas (100-foot upland buffer). The Freshwater Wetlands Act requires the NYSDEC to map all state-protected wetlands (typically over 12.4 acres in size) to allow landowners and other interested parties a means to determine where state jurisdictional wetlands exist. Review of NYSDEC mapping indicates that there are a number of wetlands located within river valleys in the vicinity of the Project Area that are regulated under Article 24 of the Environmental Conservation Law. The state-regulated wetlands are identified in Figure 6. State-regulated

wetland L-14, associated with a tributary of Stone Mills Creek, is designated as a Class III wetland by the NYSDEC. While this wetland totals 94 acres in size, only 35.6 acres occur within the Project Area. State-regulated wetland complex BV-1 is also noteworthy due to its large size and adjacency to the Project Area (approximately 1,000 feet away at the nearest point). This Class I wetland includes Perch Lake and a portion of the Perch River and is approximately 5,800 acres in size.

Under Article 15 of the Environmental Conservation Law (Protection of Waters), the NYSDEC has regulatory jurisdiction over any activity that disturbs the bed or banks of protected streams. 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. Protected stream means any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, AA(t), A, A(t), B, B(t) or C(t) (6 NYCRR Part 701). 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, and also include those more specifically designated (ts) which support trout spawning. State water quality classifications of watercourses within the Project Area fall into two categories of unprotected streams, Class C and Class D streams. Classification D is unprotected waters and suitable for fishing and non-contact recreation. These streams, along with all other perennial and intermittent streams in the Project Area, are also protected by the Corps under Section 404 of the Clean Water Act. No streams occur within the Project Area that are regulated by Section 10 of the Rivers and Harbors Act of 1899 (navigable waters). All Project Area streams are classified by the NYSDEC as Class C waters, indicating that they are suitable for non-contact activities and supporting fisheries. Class C waters are not subject to regulation under the stream protection category of the Environmental Conservation Law, Article 15 (Protection of Waters) (See Figure 4).

4.0 JURISDICTIONAL AREA DELINEATION

4.1 METHODOLOGY

edr personnel performed identification and delineation of wetlands and streams in areas proposed for wind power development during the fall 2007 and 2010 growing seasons. Field investigations were performed only on wetlands and streams with proposed impacts resulting from Project components; including turbines, turbine workspaces, access roads, substation, O&M building, potential laydown areas, public road

intersections (for potential widening/improvements), and buried electrical interconnect. The Survey Area was created for wetland delineation fieldwork that focused on specific areas that included a 200 foot corridor for the buried interconnect, 100 foot offset from the edges of access roads, a 200 foot radius for turbines, a 200 foot radius for potential existing road intersections, the proposed disturbance area of associated facilities such as the O&M Building, and the interconnect switch station. The Survey Area also includes various project component alternatives that were investigated as a part of the wetland delineation fieldwork.

In 2007, the determination of wetland boundaries was made by **edr** personnel according to the three-parameter methodology presented in the *1987 Corps of Engineers Wetland Delineation Manual* (hereafter referred to as the 1987 Manual) (Environmental Laboratory, 1987). During the 2010 field surveys, methodologies presented in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (hereafter referred to as the Regional Supplement) (2009) were utilized in the determination of wetland boundaries. Attention was also 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, which was subsequently mapped using a Trimble Pathfinder® Pro XR GPS unit with reported sub-meter accuracy. Data was collected from one or more sample plots in each delineated wetland (depending on the size of the delineated area), and was recorded on Corps *Routine Wetland Determination Forms* (during the 2007 surveys) and the *Regional Supplement Routine Wetland Determination Forms* (during the 2010 surveys) (Appendix B). The data collected for each of the wetlands delineated by **edr** personnel included vegetation, hydrology indicators, and soils characteristics. This methodology was applied to all wetlands and streams delineated within the Survey Area.

The wetland vegetative community data collection process focused on dominant plant species in four categories: trees (>3" diameter at breast height), saplings/shrubs (<3.0" diameter at breast height and >3.2' tall), herbs (<3.2' tall), and woody vines. Dominance was measured by visually estimating those species having the largest relative basal area (trees), greatest height (saplings/shrubs), greatest number of stems (woody vines), and greatest percentage of aerial coverage (herbaceous) by species. Dominant species for each stratum in the plant community were identified for all wetland delineations within the Project Area. The dominant species from each category are defined as those plants with the highest ranking which, when cumulatively totaled, exceeds 50 percent of the total dominance measure for that category, plus any

additional plant species comprising 20 percent or more of the total dominance measure for the category. The species were rank ordered for each category by decreasing value of percent cover.

Soils data were collected by **edr** personnel using a Dutch soil auger. Information concerning soil series, subgroup, drainage classification, texture, and matrix and mottle color was obtained for each delineated wetland. This information was used to determine whether the soils displayed hydric characteristics. Hydric soils are those that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. Hydric soils are poorly drained, and their presence is indicative of the likely occurrence of wetlands (Environmental Laboratory, 1987). Hydric soils were determined in the field through observation of composition, color, and morphology. Soil colors were determined using *Munsell Soil Charts* (Kollmorgen Corp., 1988).

As stated, the 2007 delineation effort was based on the 1987 manual which the following indicators as evidence of wetland hydrology (in order of decreasing reliability): (1) visual observation of inundation, (2) visual observation of soil saturation, (3) water marks, (4) drift lines, (5) sediment deposits, and (6) drainage patterns. The Regional Supplement includes a number of additional "primary indicators" of wetland hydrology and any one of these indicators is sufficient evidence that wetland hydrology is present when combined with a hydrophytic plant community and hydric soils. Hydrologic characteristics (inundation and soil saturation) were visually assessed to a depth of 12 inches. In addition, a number of "secondary indicators" were used by **edr** personnel including (from the 1987 Manual): (1) oxidized root channels in the upper 12 inches of soil, (2) water-stained leaves, (3) local soil survey data, and (4) morphological plant adaptations. Examples of secondary indicators noted in the Regional Supplement include surface soil cracks, geomorphic position, and saturation visible on aerial imagery. Any two of these indicates the presence of wetland hydrology.

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

5.0 RESULTS

edr personnel delineated a total of 61 wetlands and 22 streams within the Survey Area. Information pertaining to individual wetlands is summarized in Table 2.

In general, delineated wetlands and streams can be categorized as one or a combination of the following six types: 1) emergent wetland, 2) scrub-shrub wetland, 3) forested wetland, or 4) streams (ephemeral, intermittent and perennial). Wetland types were classified according to the Cowardin classification (Cowardin, L.M., V. Carter, F.C. Goblet and E.T. LaRoae, 1979). All delineated wetlands and streams are depicted in Figure 7, and descriptions of each of the communities are described in Section 5.1 below.

Table 2. Delineated Wetlands and Streams

| Wetland/Stream ID | Community Type | Federal Jurisdiction (Yes/No/Undetermined) ¹ | Reference Sheet # |
|-------------------|---------------------------------------|---|-------------------|
| A | Emergent/Intermittent Stream | Yes | 8 |
| B | Scrub Shrub/Intermittent Stream | Yes | 6 |
| C | Emergent | No | 5 |
| D | Emergent/Scrub Shrub | Yes | 1 |
| E | Forested | Yes | 1 |
| F | Emergent (Active Pasture) | No | 1 |
| G | Intermittent Stream | Yes | 1 |
| H | Forested | No | 1 |
| I | Scrub Shrub | Yes | 1 |
| J | Emergent | No | 8 |
| K | Emergent | Yes | 8 |
| L | Scrub Shrub | Yes | 3 |
| M | Emergent | No | 10 |
| N | Emergent | Yes | 10 |
| O | Intermittent Stream | Yes | 6 |
| P | Emergent | No | 7 |
| Q | Intermittent Stream | Yes | 3 |
| R | Emergent/Intermittent Stream | Yes | 5 |
| S | Forested/Farm Pond/Perennial Stream | Yes | 6 |
| SA | Perennial Stream | Yes | 6 |
| SB | Scrub Shrub | Yes | 6 |
| T | Emergent/Forested/Intermittent Stream | Yes | 3 |
| U | Intermittent Stream | Yes | 2 |
| V | Emergent | Yes | 8 |
| W | Scrub Shrub | No | 8 |
| X | Intermittent Stream | Yes | 8 |
| Y | Emergent/Forested/Perennial Stream | Yes | 8 |
| Z | Emergent | Yes | 9 |
| AA | Emergent | Yes | 2 |
| BB | Scrub Shrub | No | 2 |
| CC | Scrub Shrub | Yes | 3 |
| DD | Emergent | Yes | 10 |
| EE | Emergent/Scrub Shrub | No | 10 |
| FF | Emergent/Scrub Shrub | No | 10 |
| GG | Intermittent Stream | Yes | 6 |
| HH | Intermittent Stream | Yes | 6 |
| II | Scrub Shrub | Yes | 7 |

| Wetland/Stream ID | Community Type | Federal Jurisdiction (Yes/No/Undetermined) ¹ | Reference Sheet # |
|-------------------|---|---|-------------------|
| JJ | Emergent/Scrub Shrub/Ephemeral stream | Yes | 2 |
| KK | Emergent | Yes | 7 |
| LL | Scrub Shrub | Yes | 7 |
| MM | Emergent/Scrub Shrub | Yes | 7 |
| NN | Forested/Scrub Shrub | Yes | 7 |
| OO | Emergent | No | 6 |
| PP | Scrub Shrub | No | 3 |
| QQ | Scrub Shrub | Yes | 3 |
| RR | Scrub Shrub | Yes | 4 |
| SS | Scrub Shrub | Yes | 6 |
| TT | Emergent/Scrub Shrub | Yes | 1 |
| UU | Forested | No | 1 |
| VV | Scrub Shrub/Forested/Perennial Stream | Yes | 7 |
| WW | Emergent | Yes | 11 |
| XX | Emergent | Yes | 9 |
| YY | Intermittent Stream | Yes | 5 |
| ZZ | Emergent/Farm Pond | Yes | 6 |
| AAA | Forested/Scrub Shrub | No | 4 |
| BBB | Forested | Yes | 3 |
| CCC | Intermittent Stream | Yes | 3 |
| DDD | Scrub Shrub/Intermittent Stream | Yes | 3 |
| EEE | Emergent/Intermittent Stream | Yes | 6 |
| FFF | Scrub Shrub/Intermittent Stream | Yes | 7 |
| GGG | Forested | Yes | 1 |
| HHH | Forested | Yes | 1 |
| III | Emergent/Scrub Shrub | Yes | 1 |
| JJJ | Scrub Shrub/Emergent | No | 1 |
| KKK | Scrub Shrub/Emergent | No | 1 |
| LLL | Emergent/Scrub Shrub | Yes | 1 |
| MMM | Emergent | Yes | 1 |
| NNN | Forested/Scrub Shrub | Yes | 4 |
| OOO | Emergent/Scrub Shrub/Forested/Intermittent Stream | Yes | 4 |

¹ Based on NWI mapping and visual observation of hydrologic connectivity in the field. Final jurisdictional determination to be made by Corps.

5.1 WETLANDS

Emergent wetland – The majority of wetlands delineated within the Survey Area are emergent (31) or are partially emergent. Emergent wetlands occur where surface water collects in shallow basins and/or adjacent to open water. These wetlands are characterized by more persistent and/or deeper inundation, often containing soils that remain inundated throughout the year. Although the Cowardin classification was used to classify wetlands, some of the emergent wetlands in this category could be best described

according to the Reschke definition as wet meadow (Reschke, C., 1990). Wet meadow wetlands are usually found in poorly drained, low-lying depressional areas. Wet meadow wetlands may resemble grasslands and are typically drier than other marshes, except during periods of seasonal high water. They generally lack standing water for most of the year, though snow melt, stormwater runoff, and/or a high water table allows the soil to remain saturated for a significant portion of the growing season.

Emergent wetlands within the Survey Area are dominated by herbaceous plants such as cattails (*Typha latifolia*), rushes (*Juncus sp.*), wetland grasses, asters, goldenrods (*Solidago sp.*), and sedges. The soils are unsaturated but moist within 16 inches with a silt clay texture and generally characterized by a low chroma value of 10YR 3/1 and 10YR 3/2. Evidence of oxidized root channels and morphological plant adaptations (hummocks) occur throughout the many of the emergent wetlands identified within the Survey Area.

Scrub-shrub wetland – A total of thirty (30) wetlands within the Survey Area were found to be completely or partially scrub shrub. Scrub-shrub wetlands within the Survey Area are characterized by dense stands of shrub species less than 20 feet tall, including willow (*Salix sp.*), red osier dogwood (*Cornus stolonifera*), gray dogwood (*Cornus racemosa*), and meadowsweet (*Spiraea sp.*). Herbaceous vegetation in these areas includes a mix of upland and wetland species, but is typically dominated by spotted jewelweed (*Impatiens capensis*), sensitive fern (*Onoclea sensibilis*), sedges (*Carex sp.*), canary reed grass (*Phalaris arundinacea*), wool grass (*Scirpus cyperinus*), green bulrush (*Scirpus atrovirens*), field horsetail (*Equisetum arvense*), sphagnum moss (*Sphagnum fallax*), and goldenrods (*solidago sp.*). The soils are unsaturated but moist within 16 inches with a clay texture and characterized by low chroma values of 10YR 3/1, 10YR 4/1, and 10YR 5/2. Evidence of water-stained leaves, oxidized root channels, and morphological plant adaptations (hummocks) occur throughout this wetland community.

Forested wetland – Forested wetland communities are dominated by trees that are 20 feet or taller, but also include an understory of shrub and herbaceous species. The thirteen (13) forested wetlands or partially forested wetlands within the Survey Area include a mix of hydrophytic trees such as American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), and red maple (*Acer rubrum*), and shrub species such as gray dogwood, red osier dogwood, meadowsweet, winterberry (*Ilex verticillata*), blackberry (*Rubus sp.*), and highbush blueberry (*Vaccinium corymbosum*). Herbaceous species include asters, wetland sedges, wetland grasses, green bulrush, wool grass, sphagnum moss, soft rush (*Juncus effusus*) and in some instances the state protected white turtlehead (*Chelone glabra*). The soils within forested wetlands have a silt loam to clay texture with an organic layer and are characterized by a low chroma value of 10YR 2/1 to

10YR 7/1. Evidence of saturated soils, water marks, drainage patterns, oxidized root channels, water-stained leaves, and morphological plant adaptations occur throughout these wetlands.

Farm Ponds - A few small farm ponds and recreation ponds are found within the Survey Area. Generally, they are found in open field settings or adjacent to houses and barns. Typically, these ponds are excavated or diked, and range in size from 0.07 to 0.94 acre. Banks are typically well defined and emergent wetland vegetation tends to be limited or lacking. Although not verified, water depths are expected to be consistent with excavated ponds that are used as a source of water for livestock as well as for fishing and aesthetic purposes. Such ponds are typically a minimum of 4 feet deep.

5.2 STREAMS

As indicated in Table 2, **edr** personnel delineated a total of twenty-two (22) streams (ephemeral, intermittent, and perennial) within the Survey Area. Identified streams are gentle gradient (0-3%) streams that are located amongst agricultural fields, white spruce forests, and old-field communities. Most of the delineated streams are intermittent, with a silt clay substrate. In some locations, stream channels have eroded into limestone bedrock due to the underlying karst topography. During the 2007 surveys, the majority of streambeds were dry at the time of the field investigation due to the lack of adequate precipitation. However, during the 2010 surveys, the majority of streambeds were wet at the time due to an abundance of precipitation prior to and during the investigations. Water depths within the channels with stream flow averaged 3-5 inches in 2007 and 3-8 inches in 2010. The ephemeral channel associated with wetland system JJ is considered jurisdictional due to the fact that it serves as a hydrological conveyance between two (2) wetlands.

6.0 CONCLUSIONS

A total of sixty-nine (69) wetlands and streams were delineated by **edr** personnel in areas within or immediately adjacent to the Survey Area. These wetlands were identified based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. The delineated areas include emergent, scrub-shrub, and forested wetlands, and streams (ephemeral, intermittent and perennial). The primary functions provided by these wetlands appear to include maintaining surface water flows, recharging groundwater supplies, storm water retention, flood protection and abatement, water quality improvement, wildlife habitat, and nutrient production and cycling. Several of the larger forested wetlands provide habitat for forest-nesting songbirds. Many of the delineated wetlands are portions of much larger systems, which may

provide significant functions and values. Additional detail relative to the functions and values of the delineated wetlands will be provided in the Joint Application for Permit, which will be submitted to the Corps and NYSDEC concurrent to this report.

Of the sixty-nine (69) wetlands and streams delineated within the Survey Area, it is likely that some of these may not be considered jurisdictional by the Corps due to the lack of a definable surface water connection to likely jurisdictional wetlands/waters. However, a final determination of jurisdictional status must be made by the Corps.

7.0 REFERENCES

Benyus, Janine M. 1989. *The Field Guide to Wildlife Habitats of the Eastern United States*. Simon & Schuster Inc., New York, NY.

Cowardin, L.M., V. Carter, F.C. Goblet and E.T. LaRoae. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, OBS-79/31, Washington, D.C.

Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers: Waterways Experiment Station; Vicksburg, MS.

Environmental Laboratory. 2009. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. Technical Report TR-09-19/ U.S. Army Corps of Engineers: Engineering Research and Development Center

Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. D. Van Nostrand Co., New York, NY.

Grimm, William Carey. 1993. *The Illustrated Book of Wildflowers and Shrubs: The Comprehensive Field Guide to More Than 1300 Plants of Eastern North America*. Stackpole Books. Mechanicsburg, PA.

Kollmorgen Corporation. 1988. *Munsell Soil Color Charts*. Macbeth Division of Kollmorgen Corporation, Baltimore, MD.

Natural Resources Conservation Service. 1989. *New York Soils With Potential Hydric Inclusions*.

Natural Resources Conservation Service. 1995. *Hydric Soils of New York*. Revised December 15, 1995.

Newcomb, L. 1977. *Newcomb's Wildflower Guide*. Little, Brown and Co., Boston, MA.

Reed, P.B., Jr. 1986. *Wetland Plants of the State of New York*. U.S. Fish & Wildlife Service, St. Petersburg, FL.

Reed, P.B., Jr. 1988. *National List of Plant Species That Occur in Wetlands: Northeast (Region 1)*. U.S. Fish & Wildlife Botanical Report, No. 88 (24). St. Petersburg, FL.

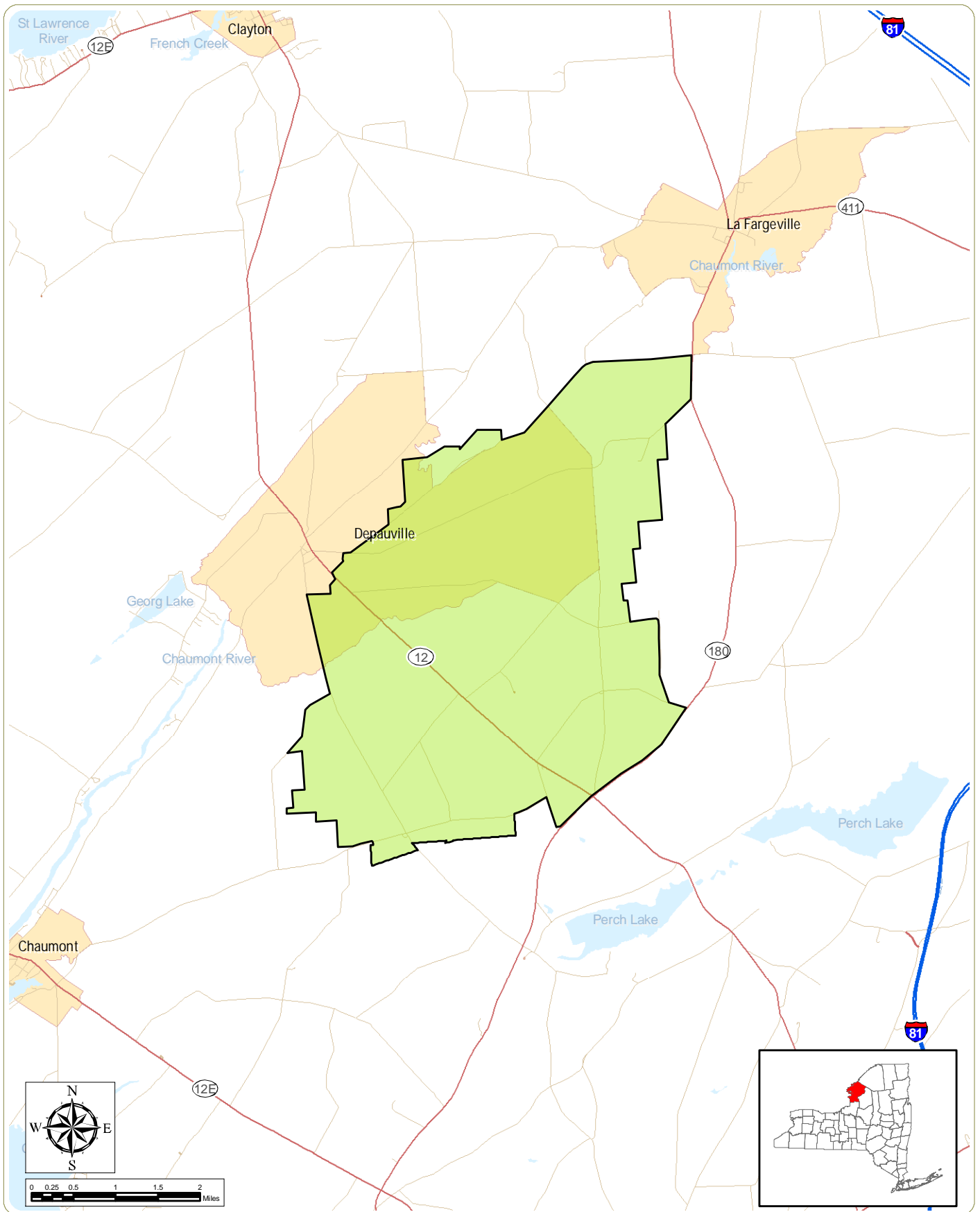
Reschke, C. 1990. *Ecological Communities of New York State*. New York Natural Heritage Program, New York State Department of Environmental Conservation, Latham, NY.

Tiner, Ralph W. 1999. *Wetland Indicators: A Guide to Wetland Identification, Delineation, Classification and Mapping*. Lewis Publishers, New York, NY.

USDA NRCS 1989. *Soil Survey of Jefferson County, New York*. USDA Soil Conservation Service in Cooperation with Cornell University Agricultural Experiment Station, Washington, D.C.

United States Environmental Protection Agency (EPA). 2001. Interagency Memorandum from Gary S. Guzy (General Counsel for the U.S. Environmental Protection Agency) and Robert M. Anderson (Chief Counsel for the U.S. Army Corps of Engineers). Memorandum Subject: *Supreme Court Ruling Concerning CWA Jurisdiction over Isolated Waters*.

APPENDIX A
FIGURES



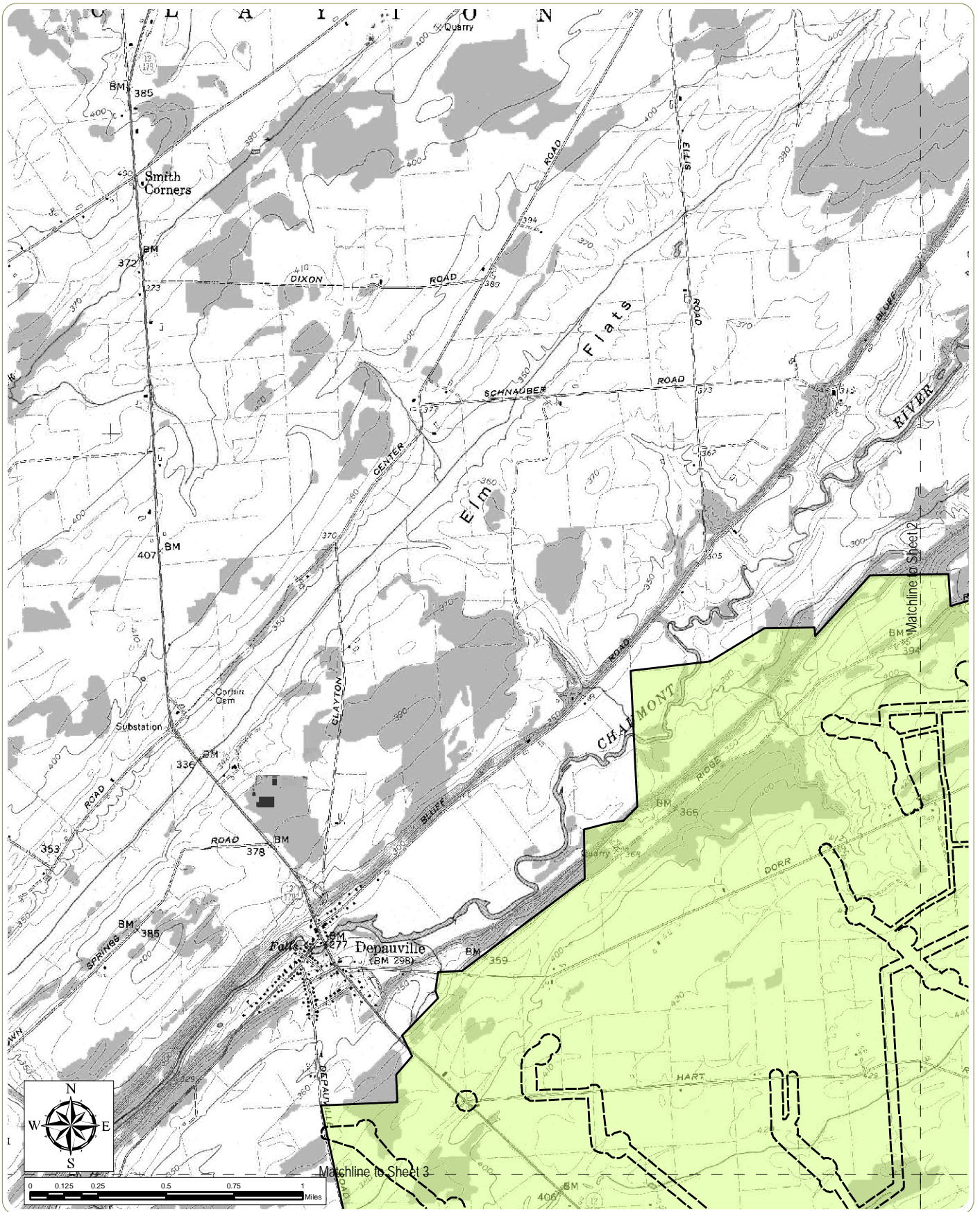
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 1: Project Location
 January 2011

Notes: Base Map: ESRI StreetMap North America 2008.

■ Project Area Boundary







Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

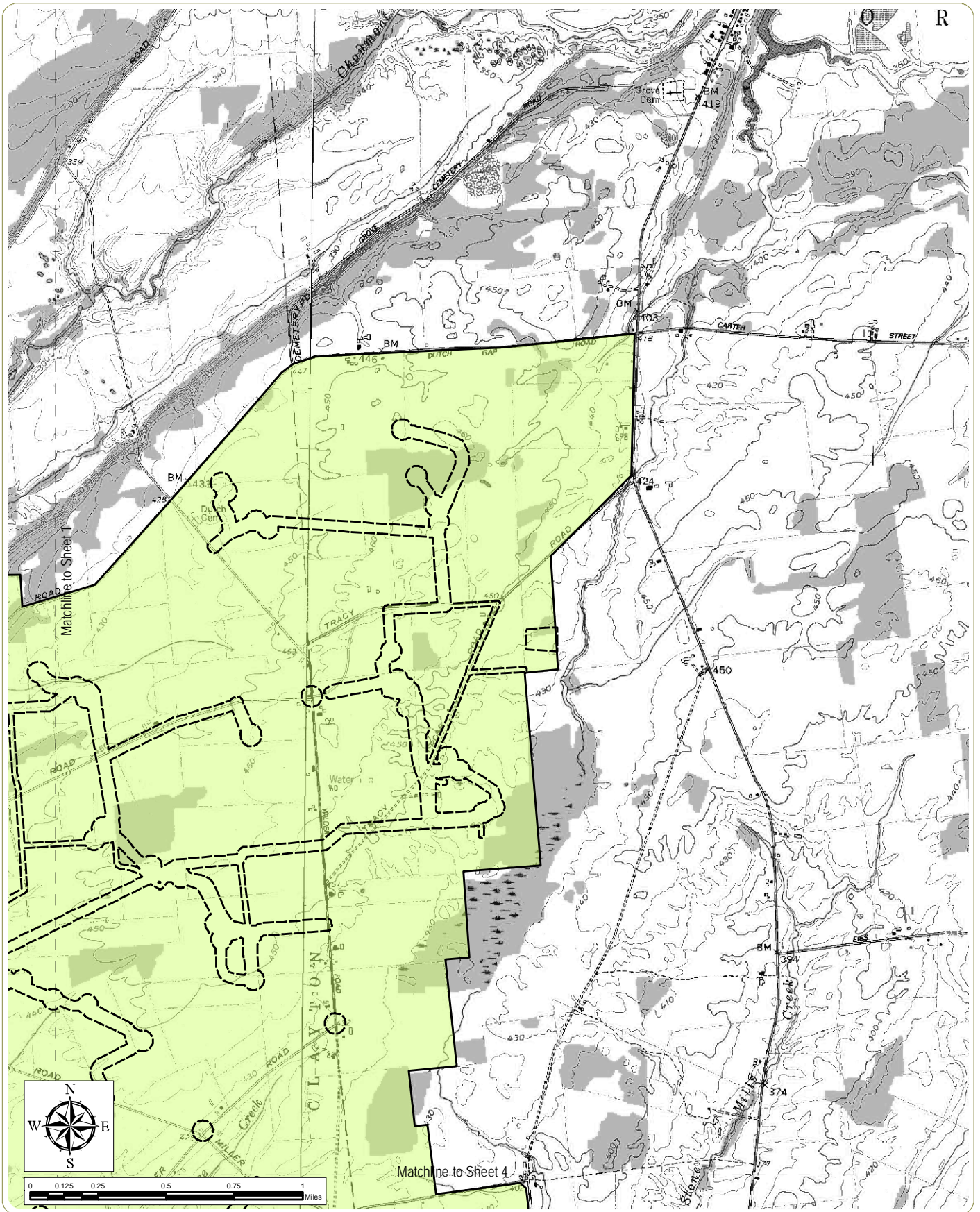
Figure 2: USGS Site Topography
 Sheet 1 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

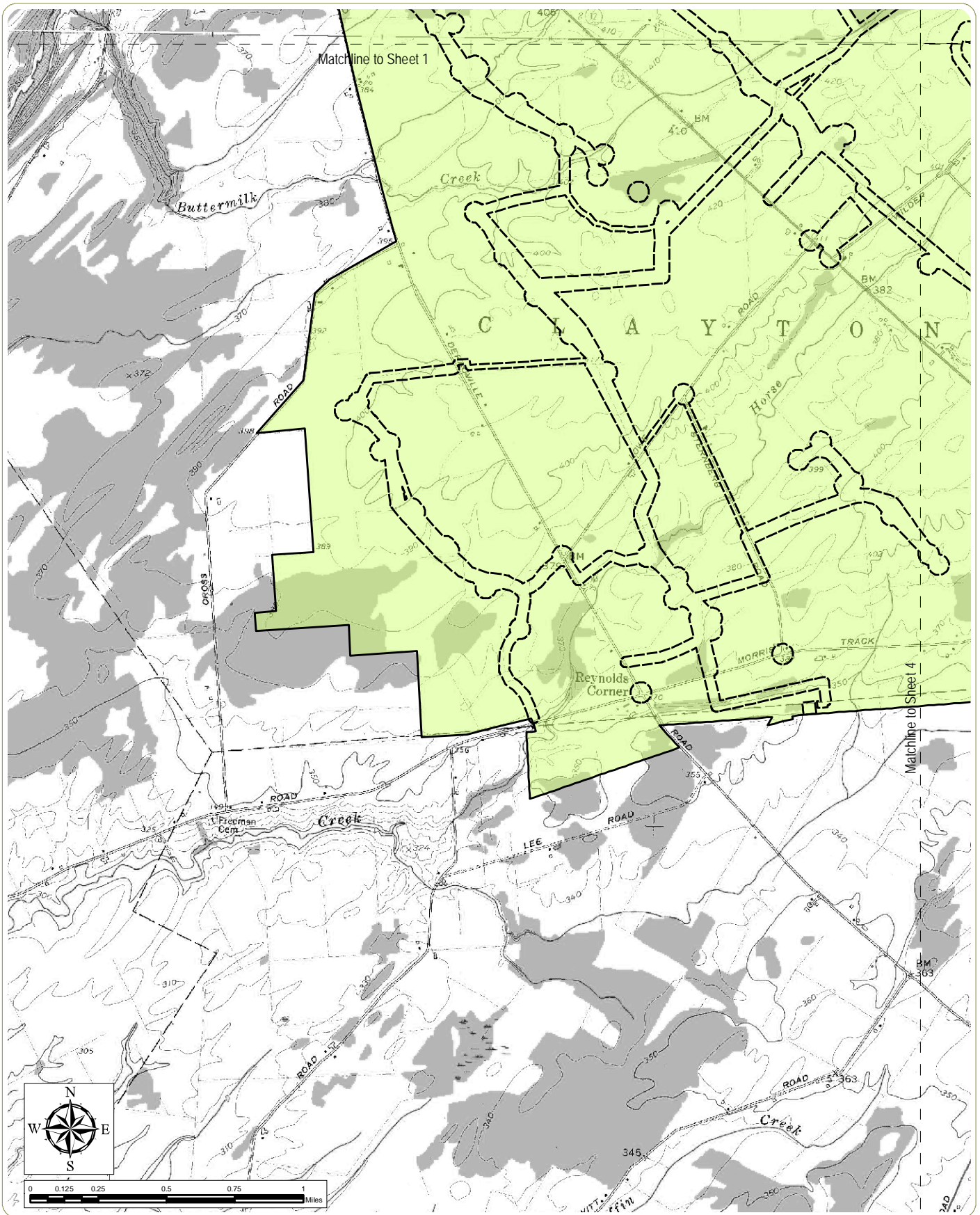
Figure 2: USGS Site Topography
 Sheet 2 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

- Wetland Survey Area
- Project Area Boundary







Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

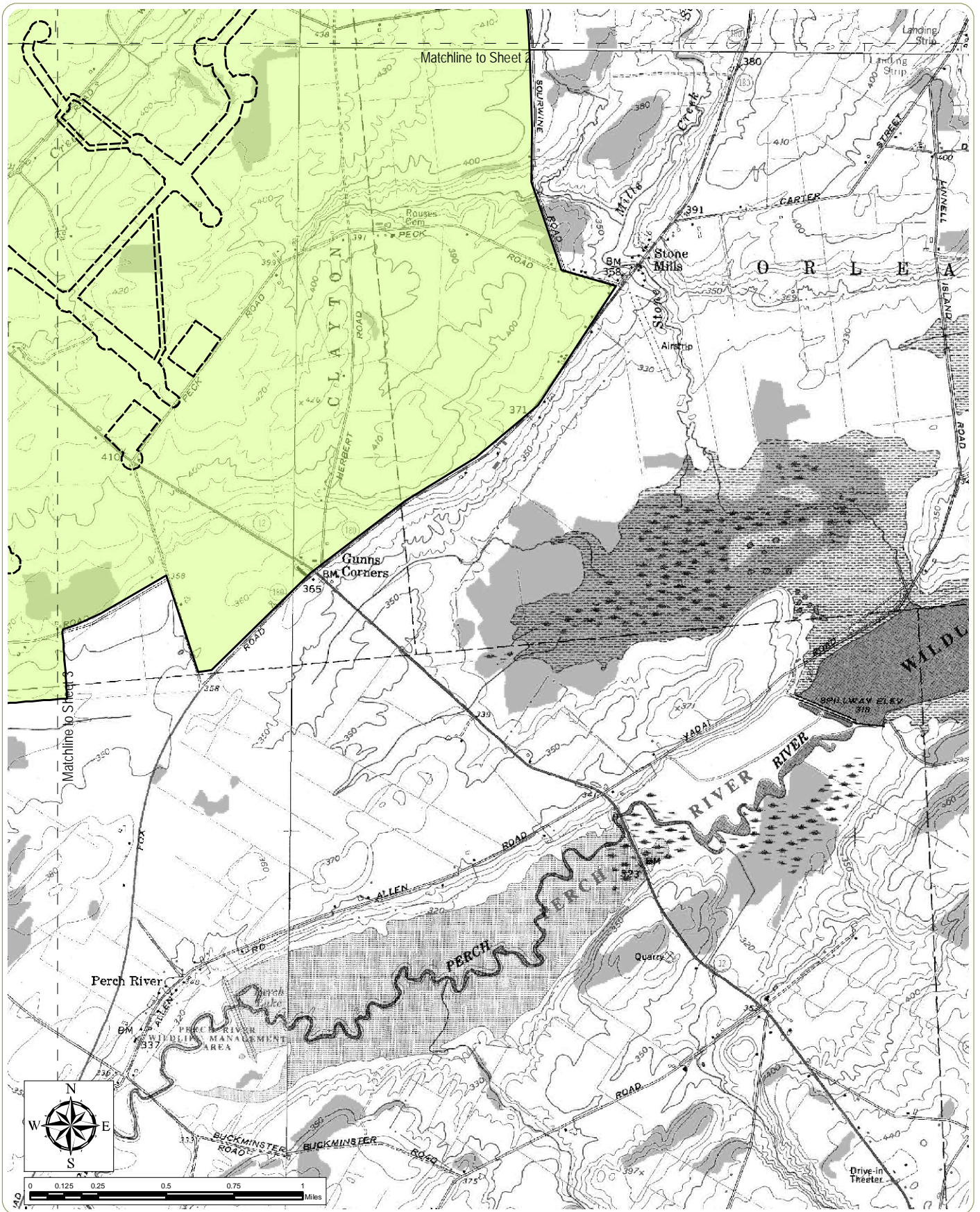
Figure 2: USGS Site Topography
Sheet 3 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary







Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

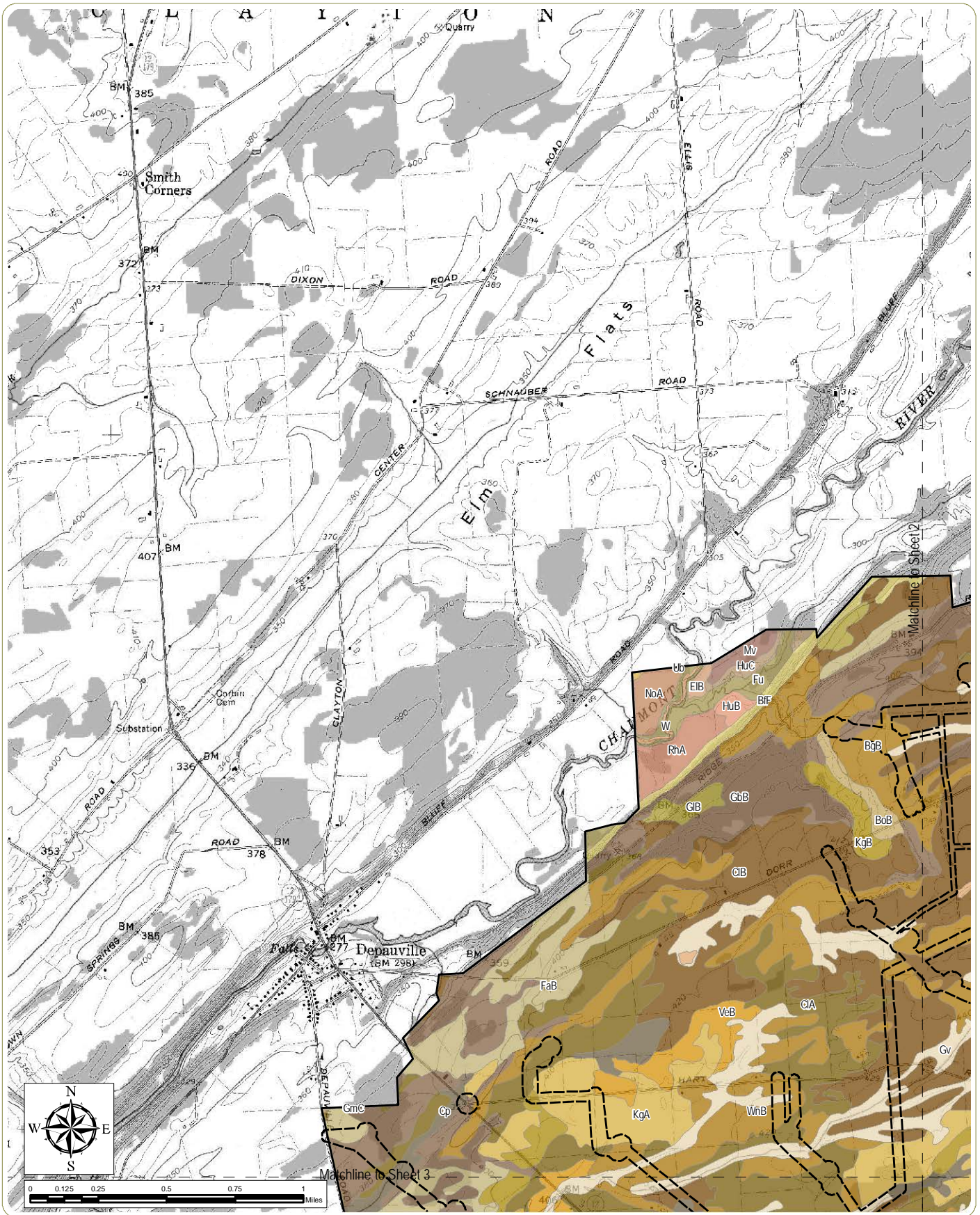
Figure 2: USGS Site Topography
 Sheet 4 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary







Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

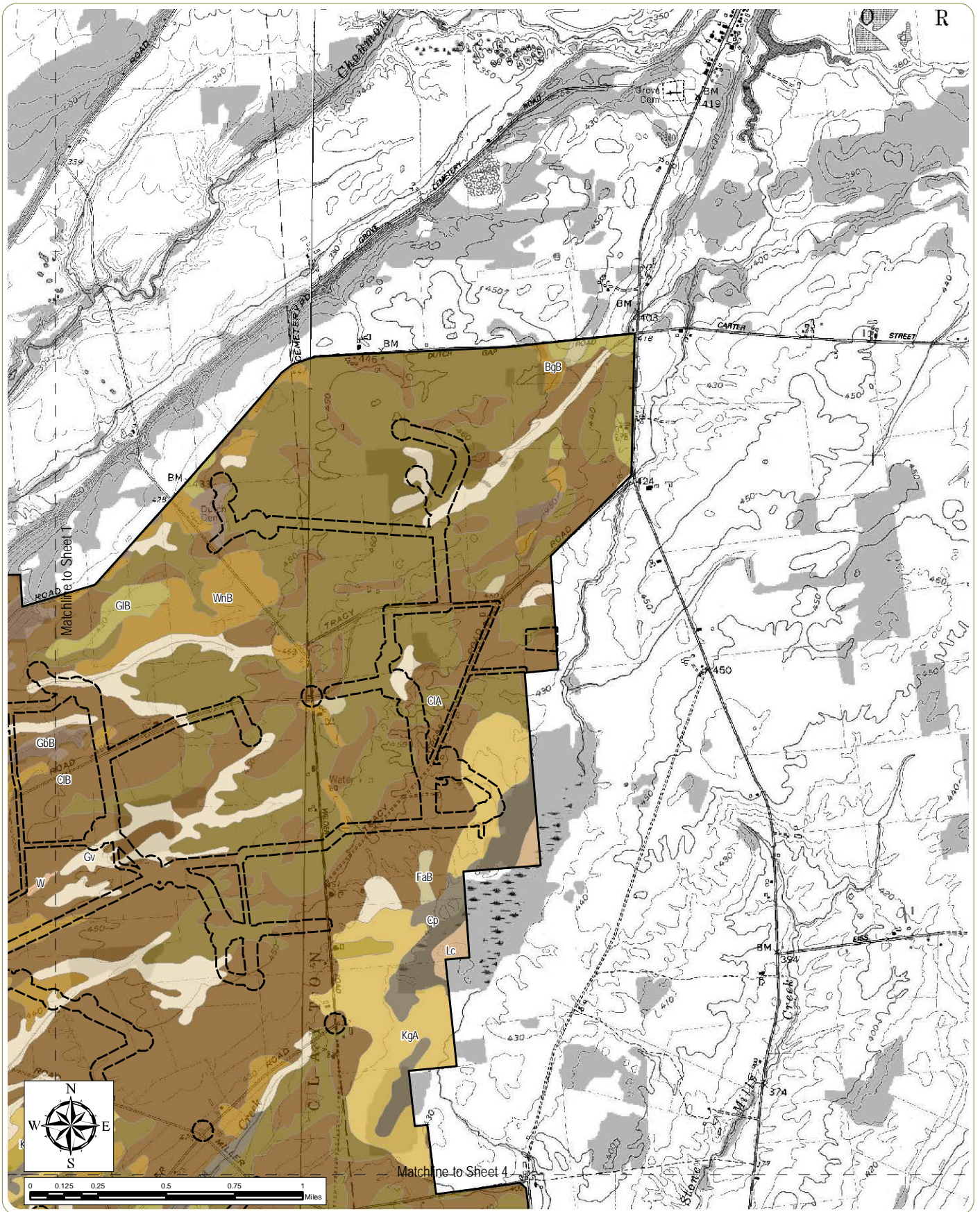
Figure 3: Project Area Soils
Sheet 1 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary







Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

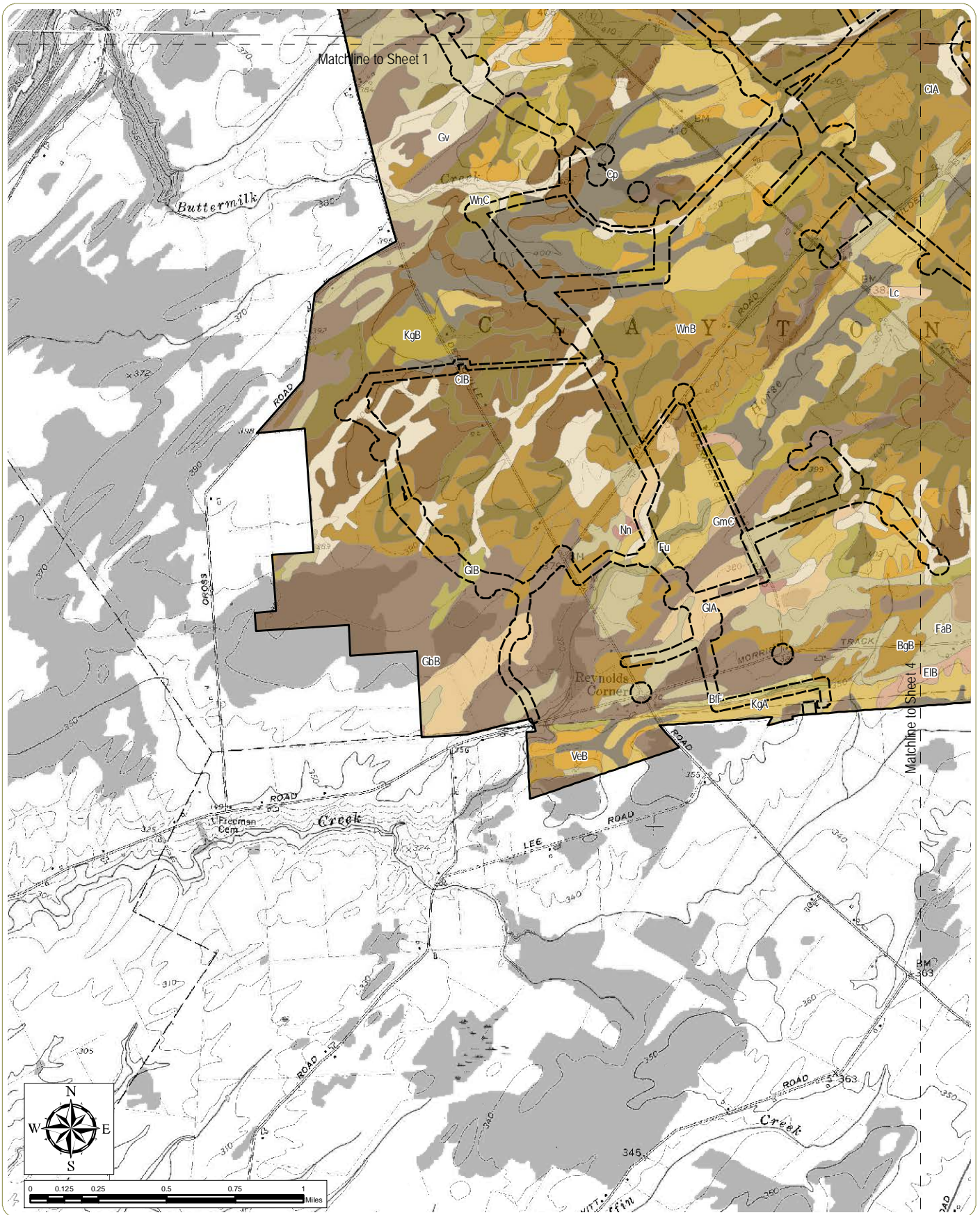
Figure 3: Project Area Soils
Sheet 2 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary







Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

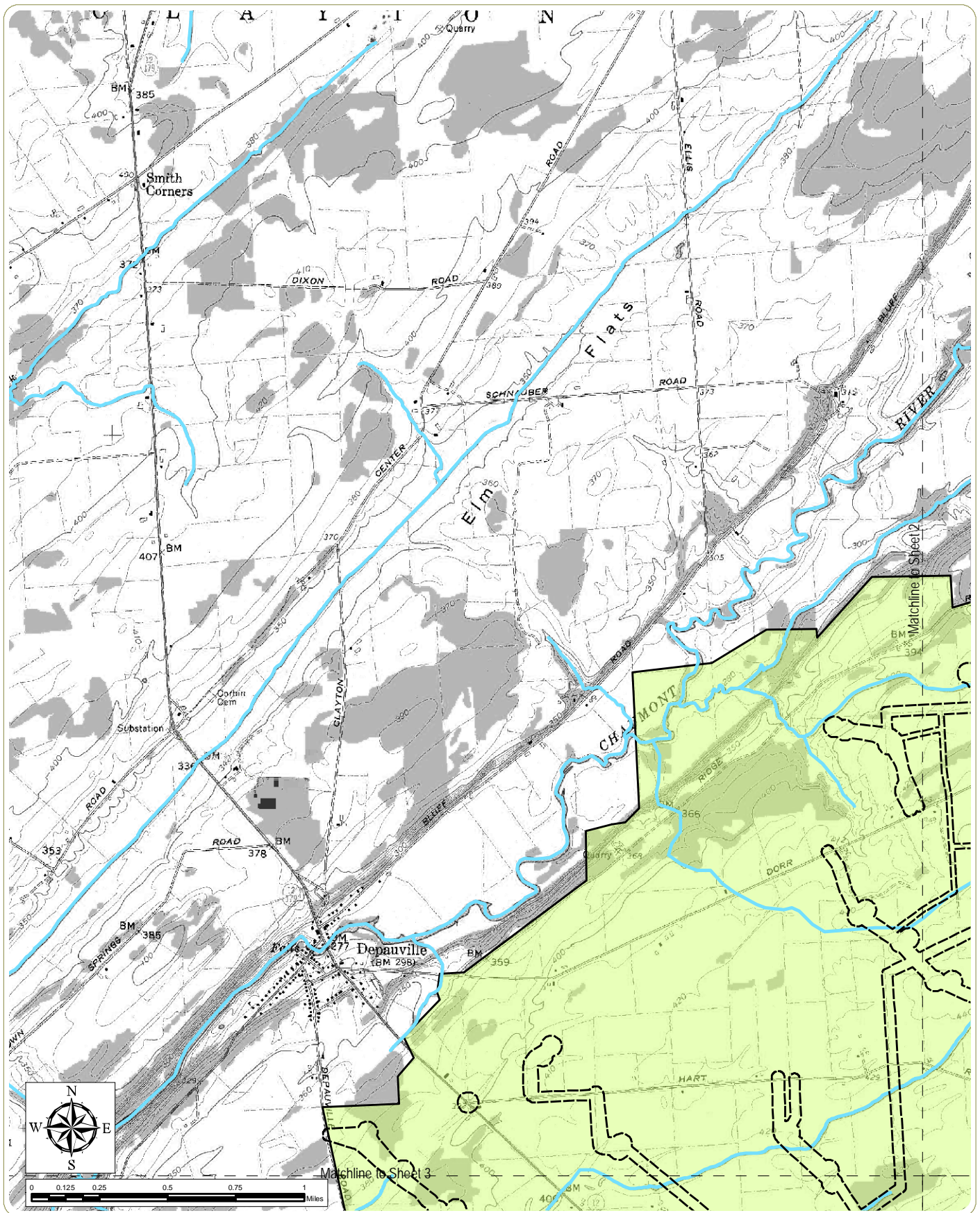
Figure 3: Project Area Soils
Sheet 3 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary









Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

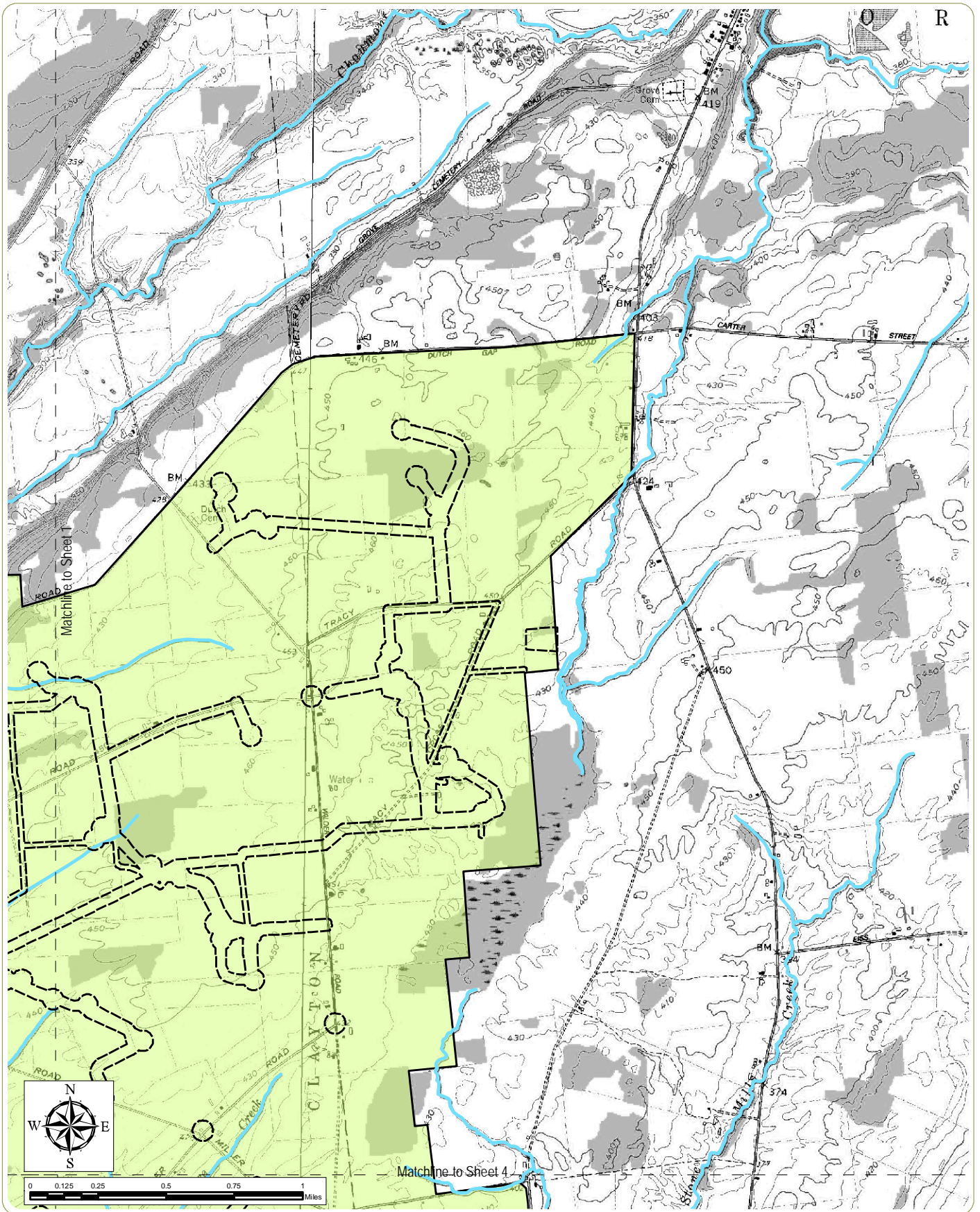
Figure 4: Surface Waters
Sheet 1 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  Unprotected Stream
-  NYS Protected Stream









Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

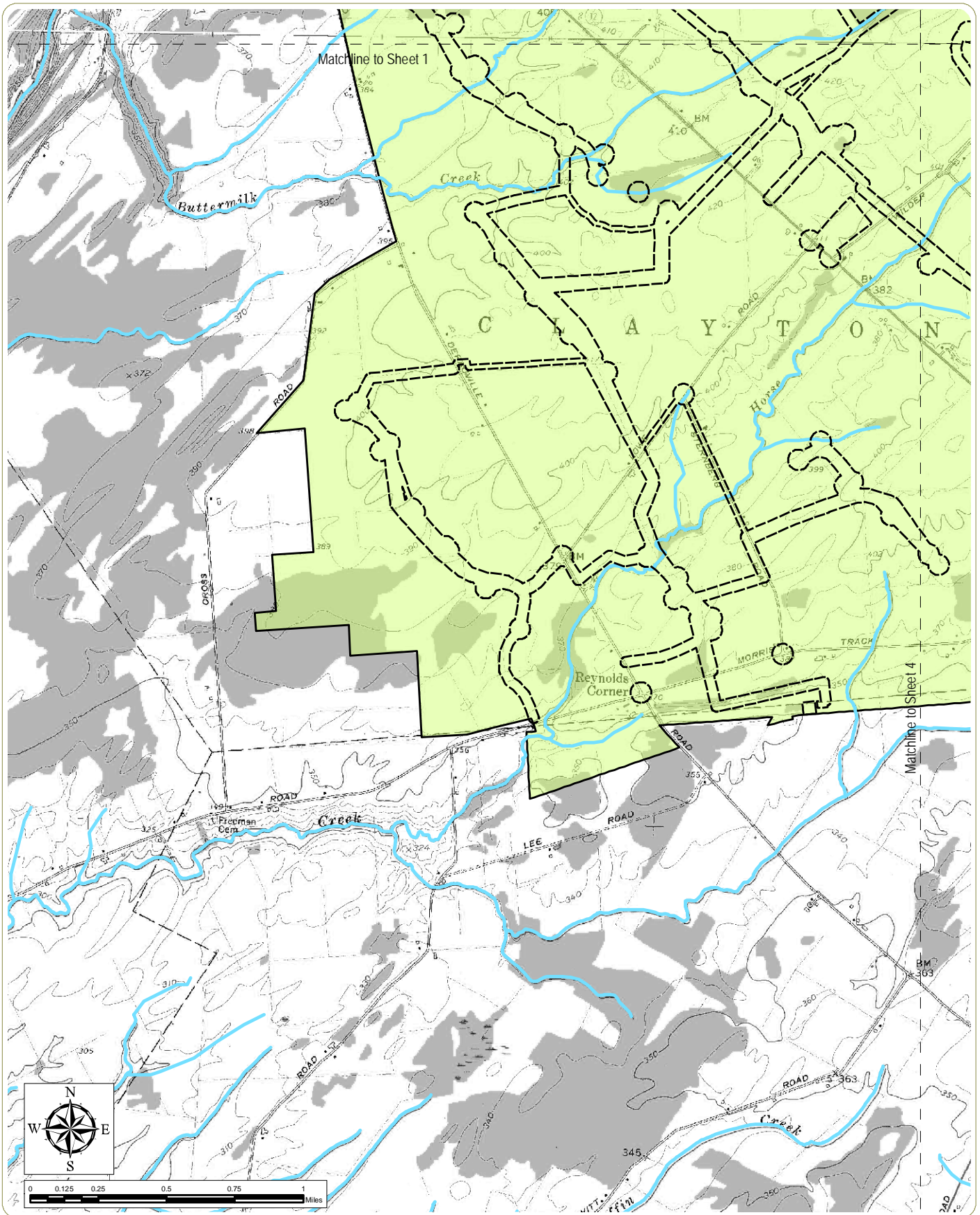
Figure 4: Surface Waters
Sheet 2 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  Unprotected Stream
-  NYS Protected Stream









Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

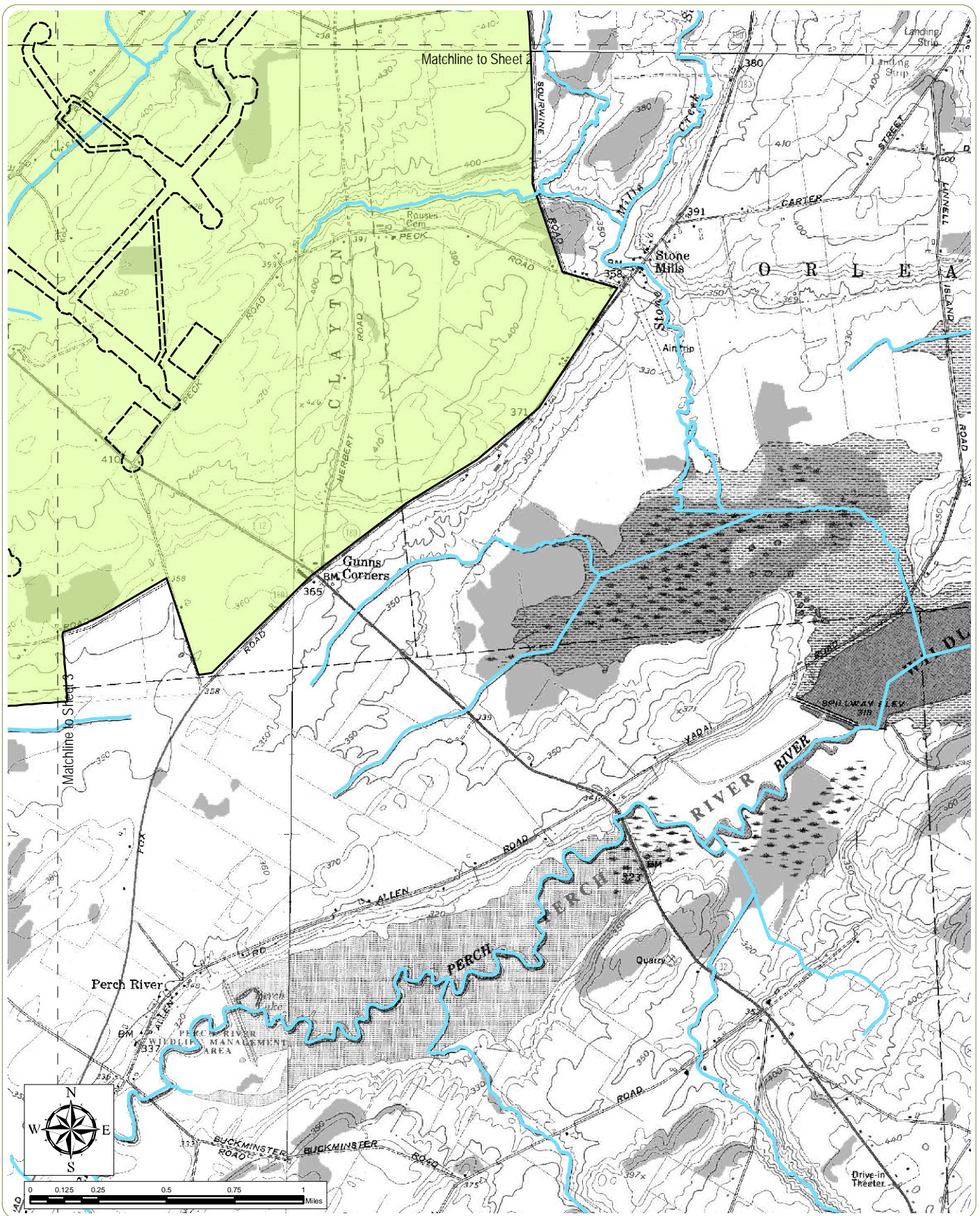
Figure 4: Surface Waters
 Sheet 3 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  Unprotected Stream
-  NYS Protected Stream





Horse Creek Wind Farm

Town of Clayton - Jefferson County, New York

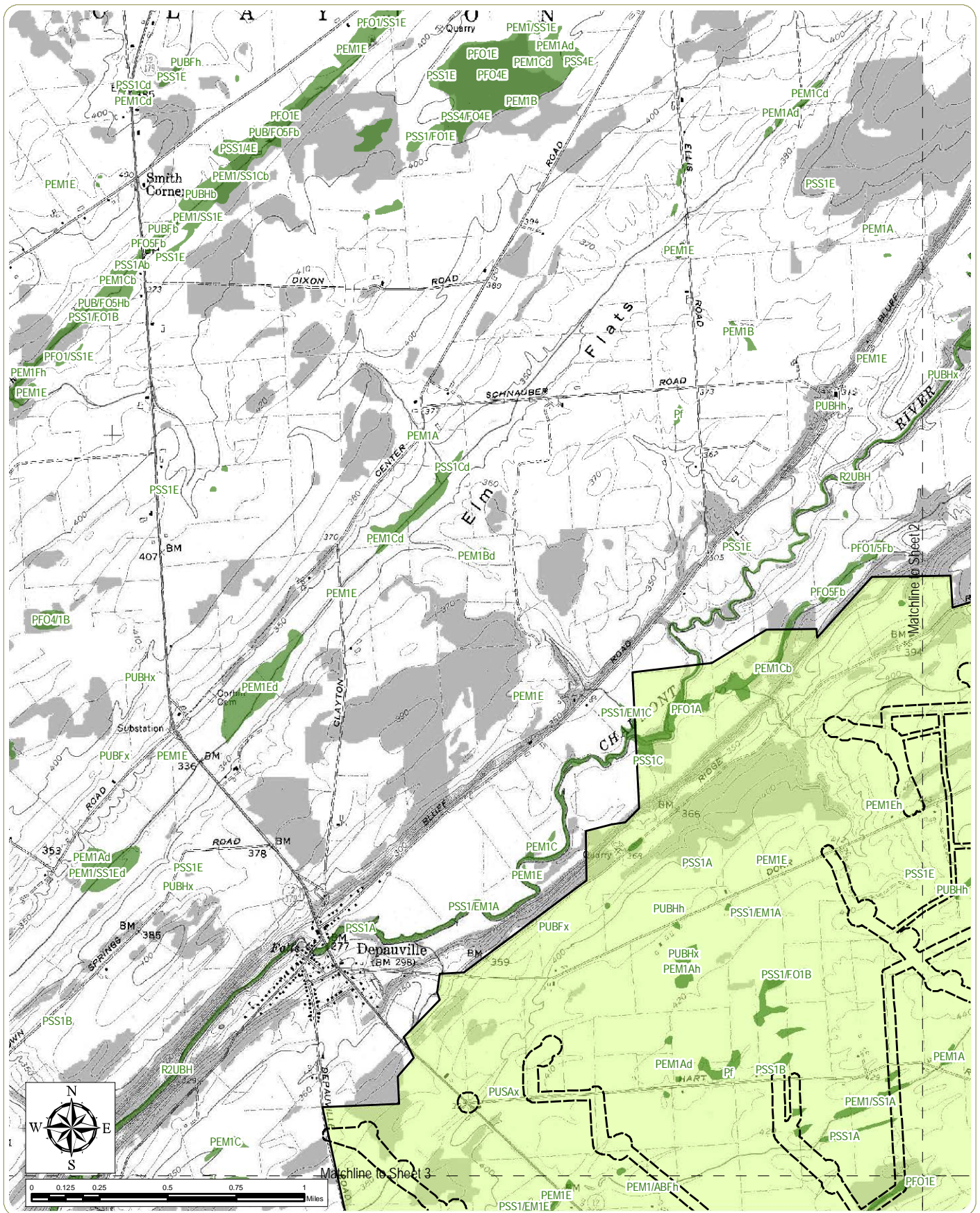
Figure 4: Surface Waters
Sheet 4 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

- Wetland Survey Area
- Project Area Boundary
- Unprotected Stream
- NYS Protected Stream








Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

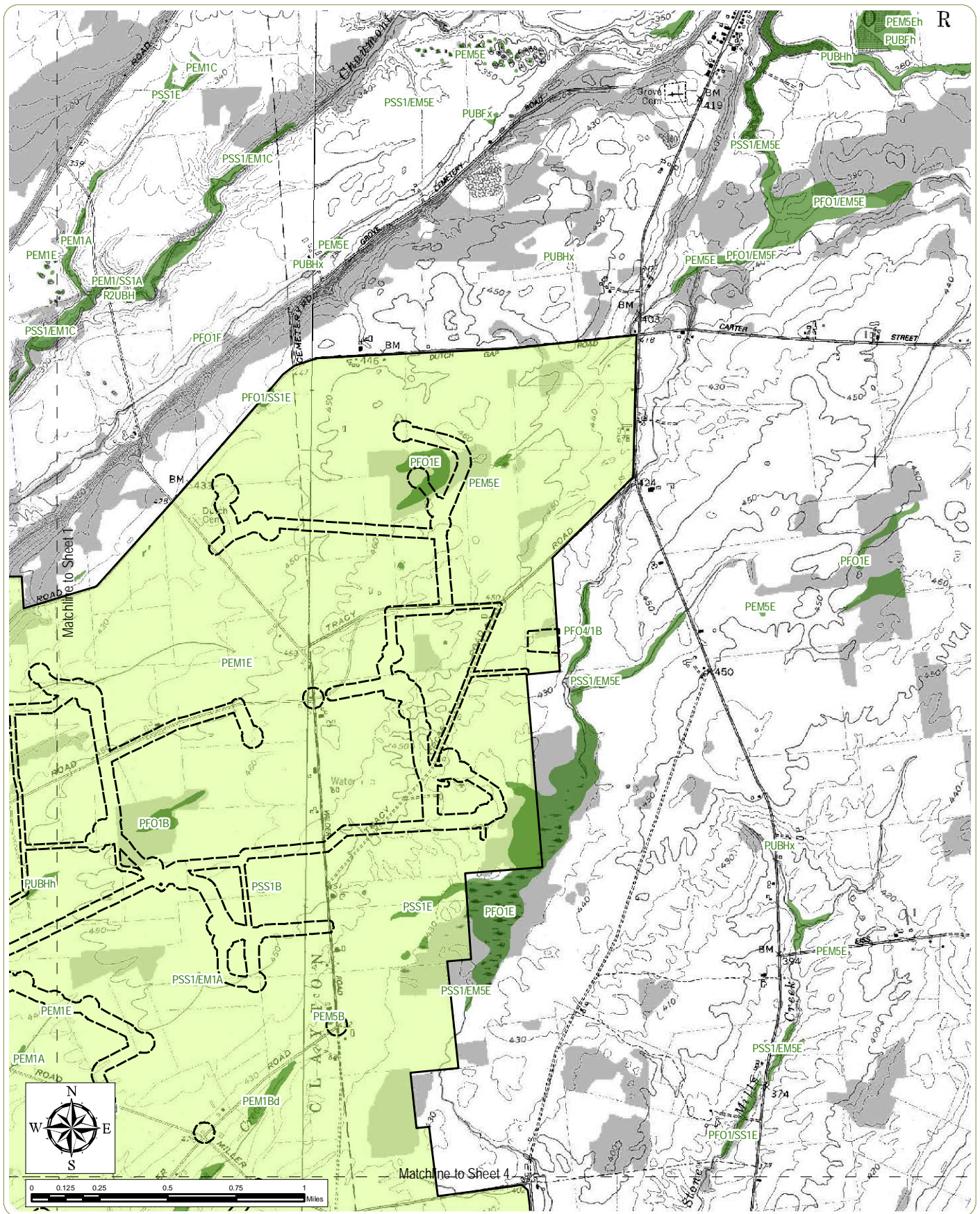
Figure 5: National Wetland Inventory
Sheet 1 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  NWI Wetland








Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

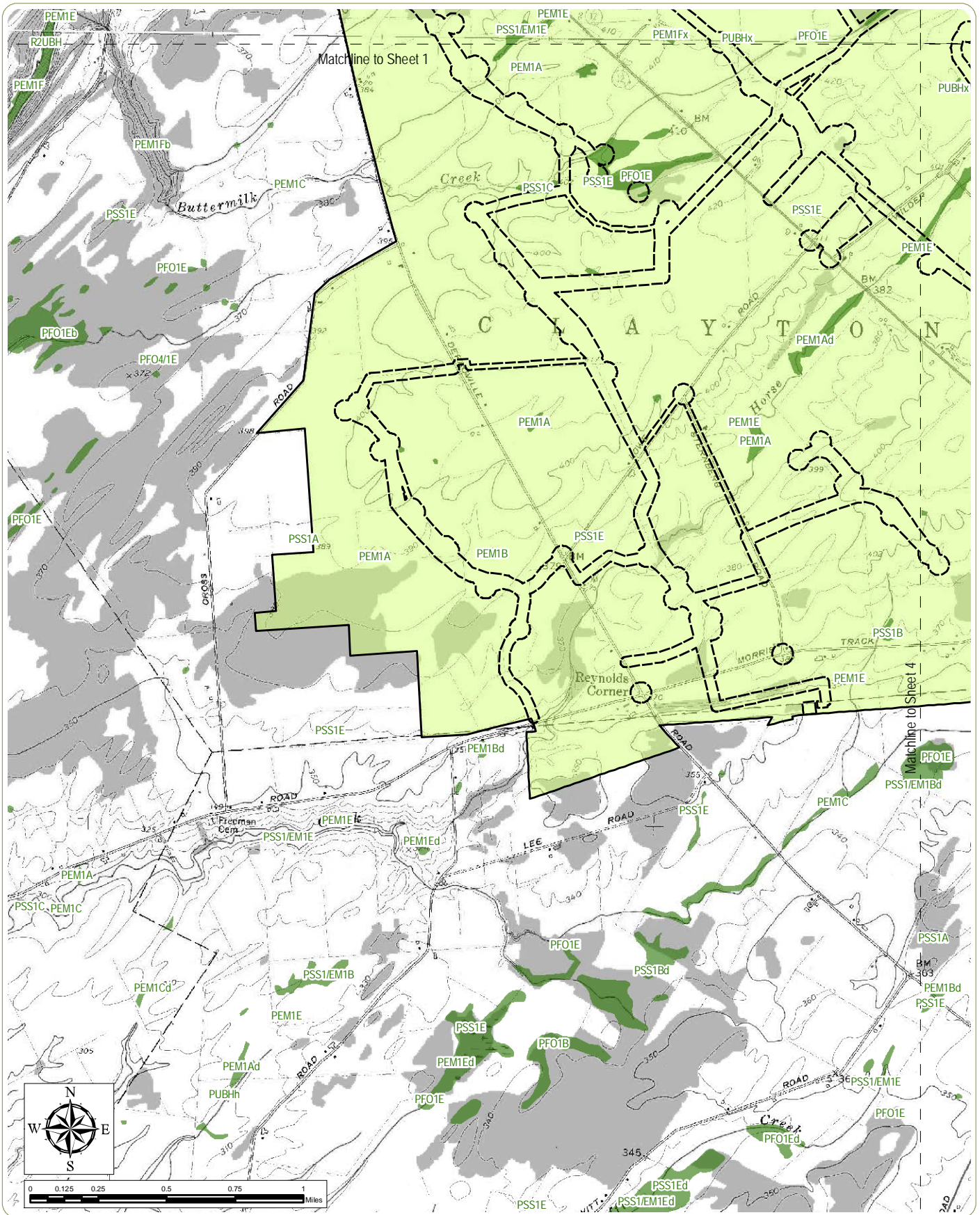
Figure 5: National Wetland Inventory
Sheet 2 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  NWI Wetland





Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

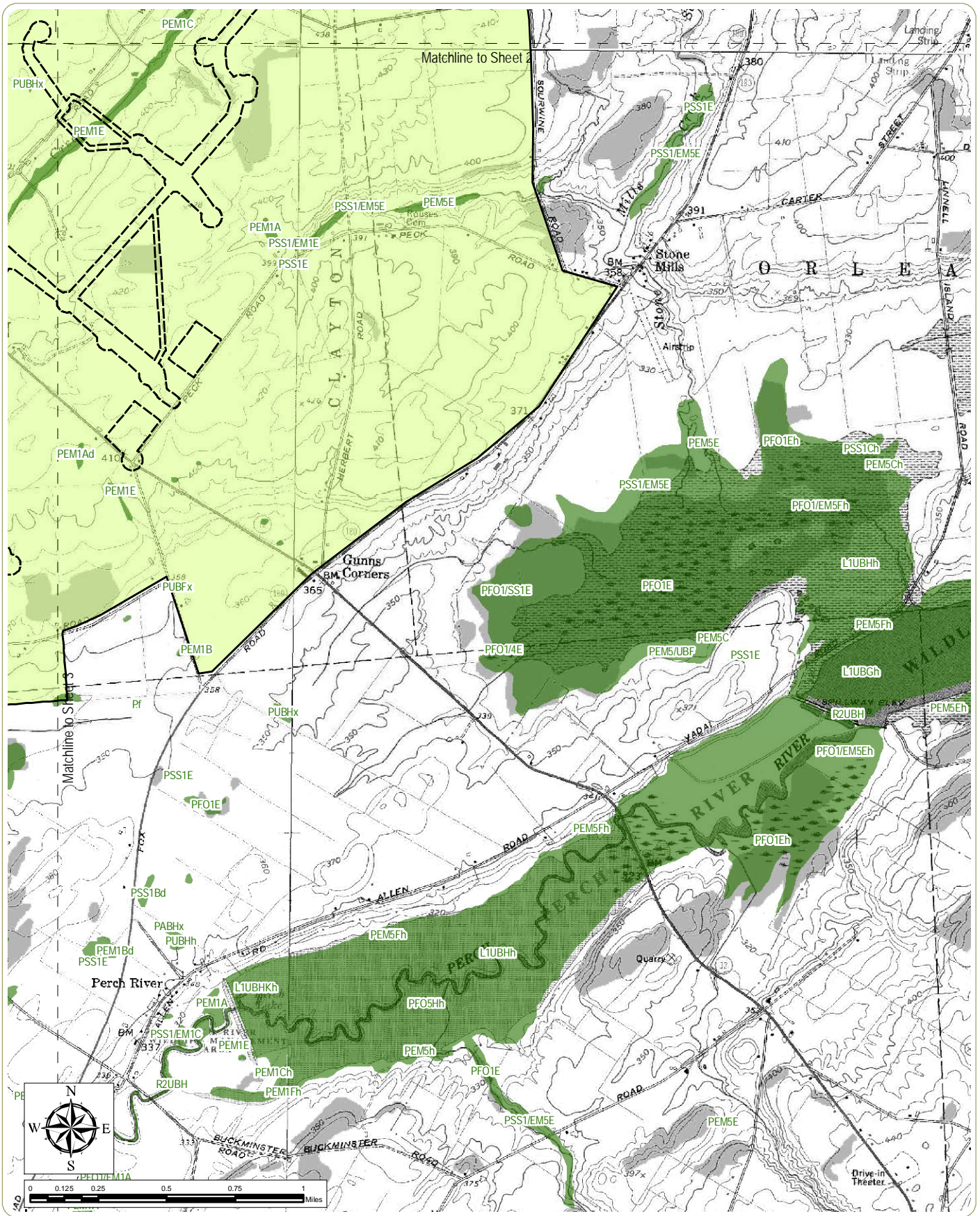
Figure 5: National Wetland Inventory
Sheet 3 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

- Wetland Survey Area
- Project Area Boundary
- NWI Wetland








Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

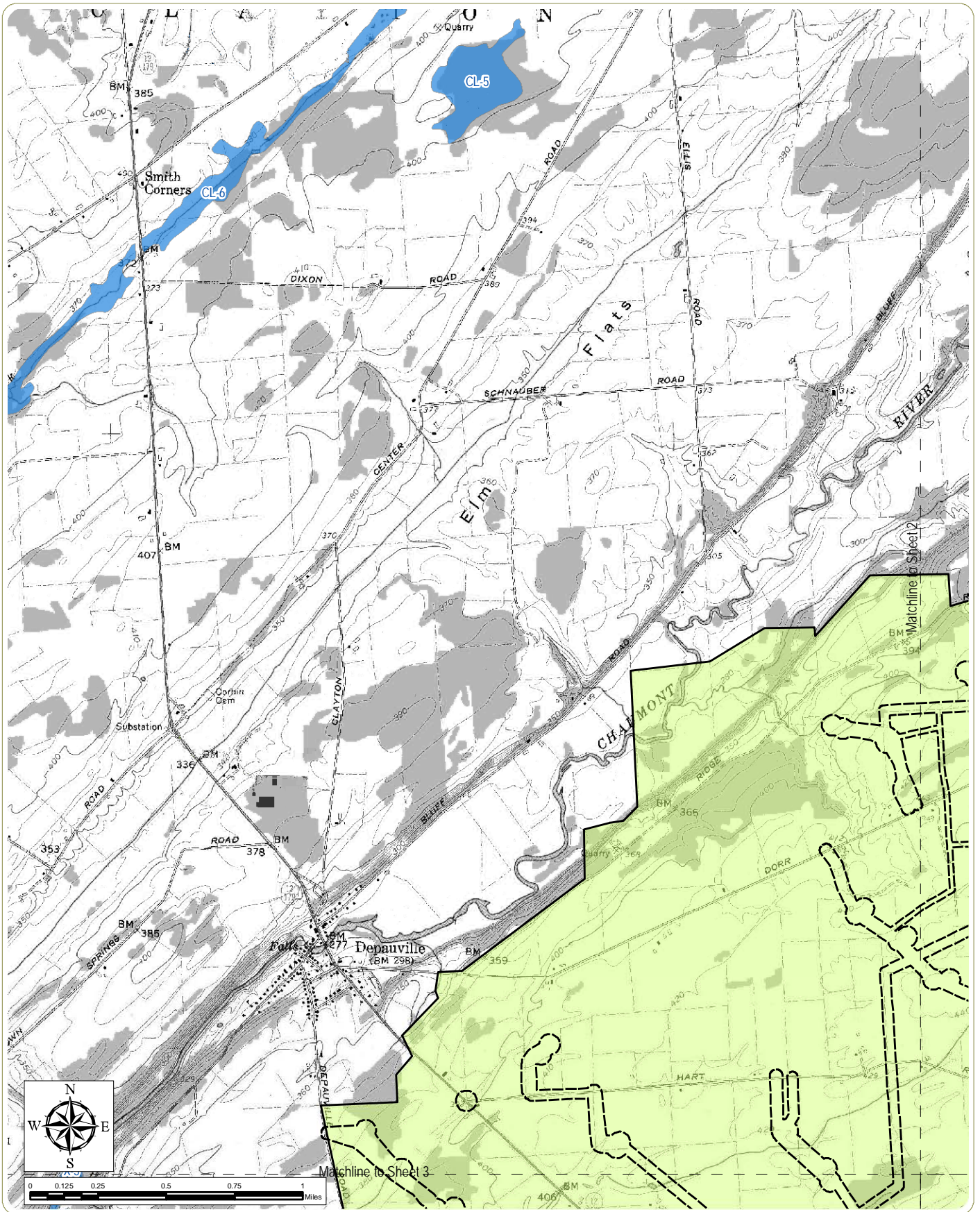
Figure 5: National Wetland Inventory
Sheet 4 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  NWI Wetland








Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

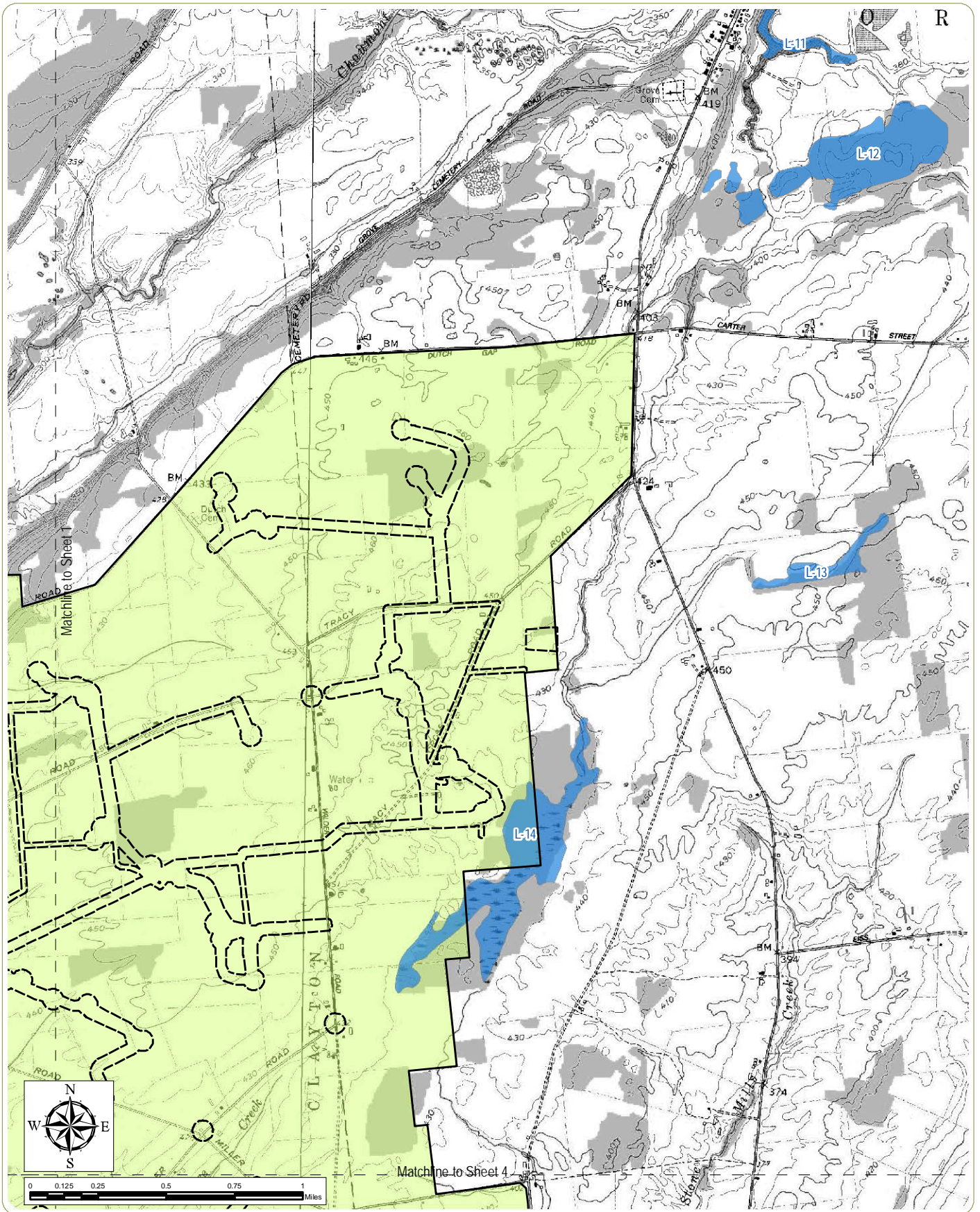
Figure 6: State Mapped Freshwater Wetlands
 Sheet 1 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  NYSDEC Wetland








Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

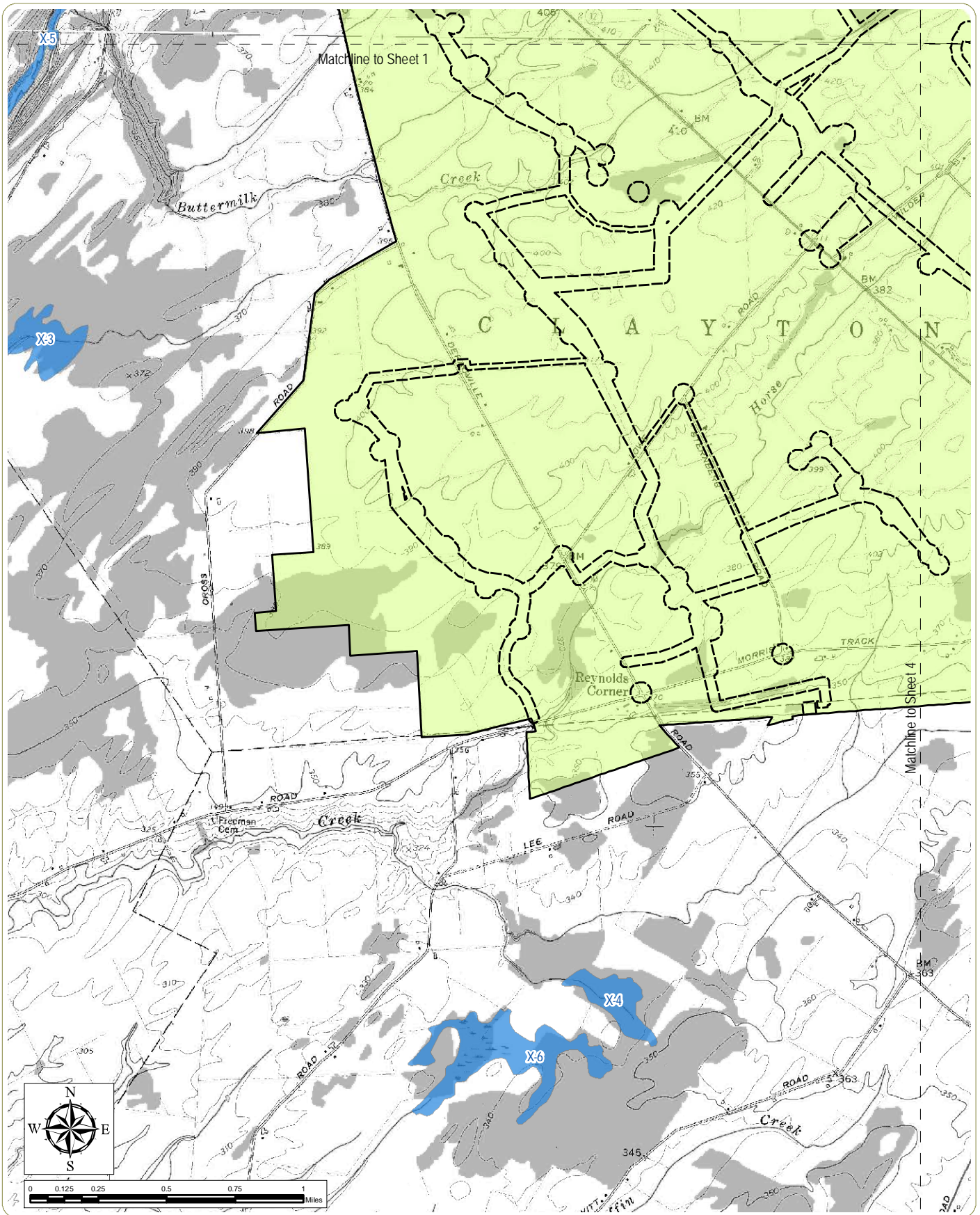
Figure 6: State Mapped Freshwater Wetlands
 Sheet 2 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

-  Wetland Survey Area
-  Project Area Boundary
-  NYSDEC Wetland





Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

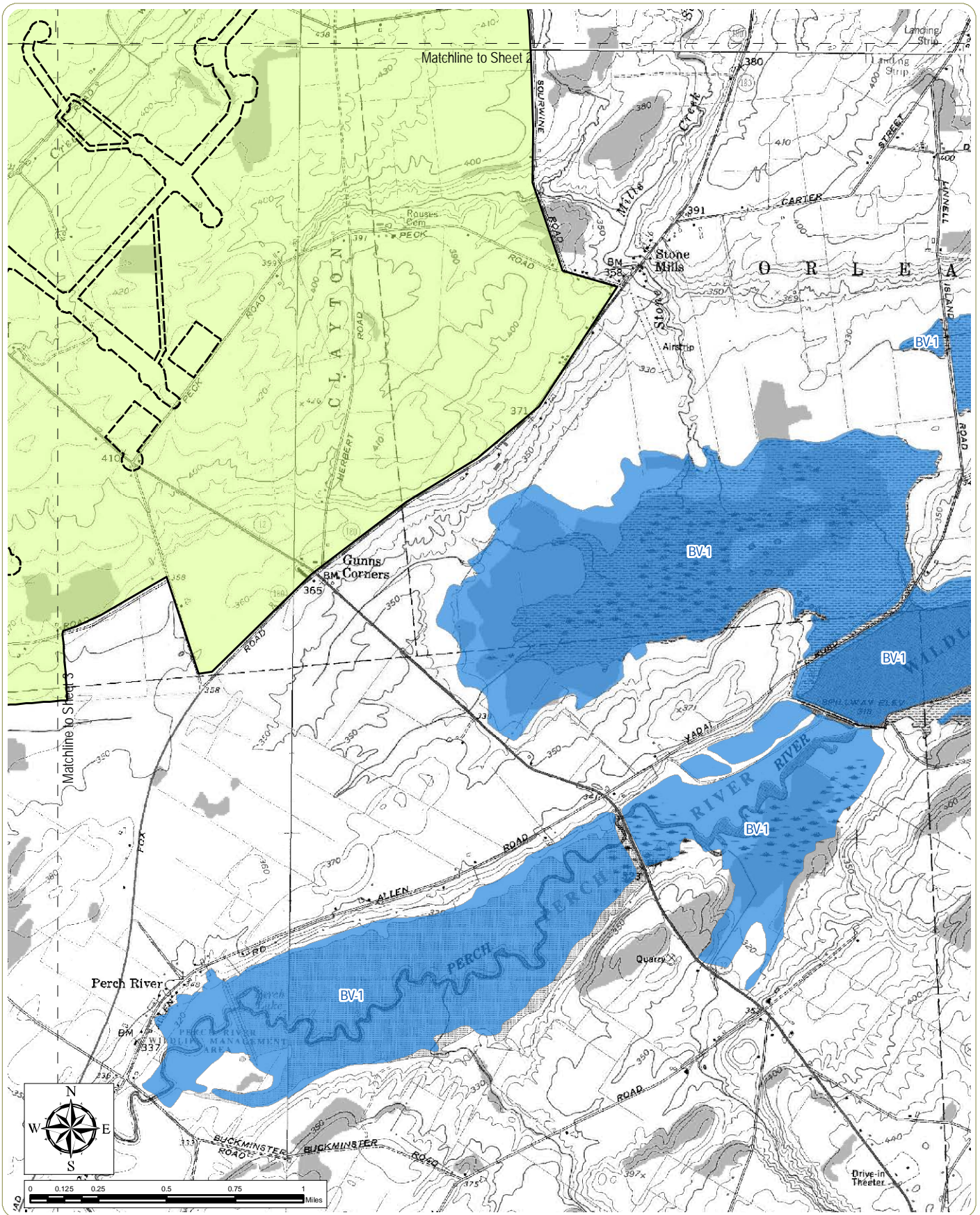
Figure 6: State Mapped Freshwater Wetlands
Sheet 3 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

- Wetland Survey Area
- Project Area Boundary
- NYSDEC Wetland





Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

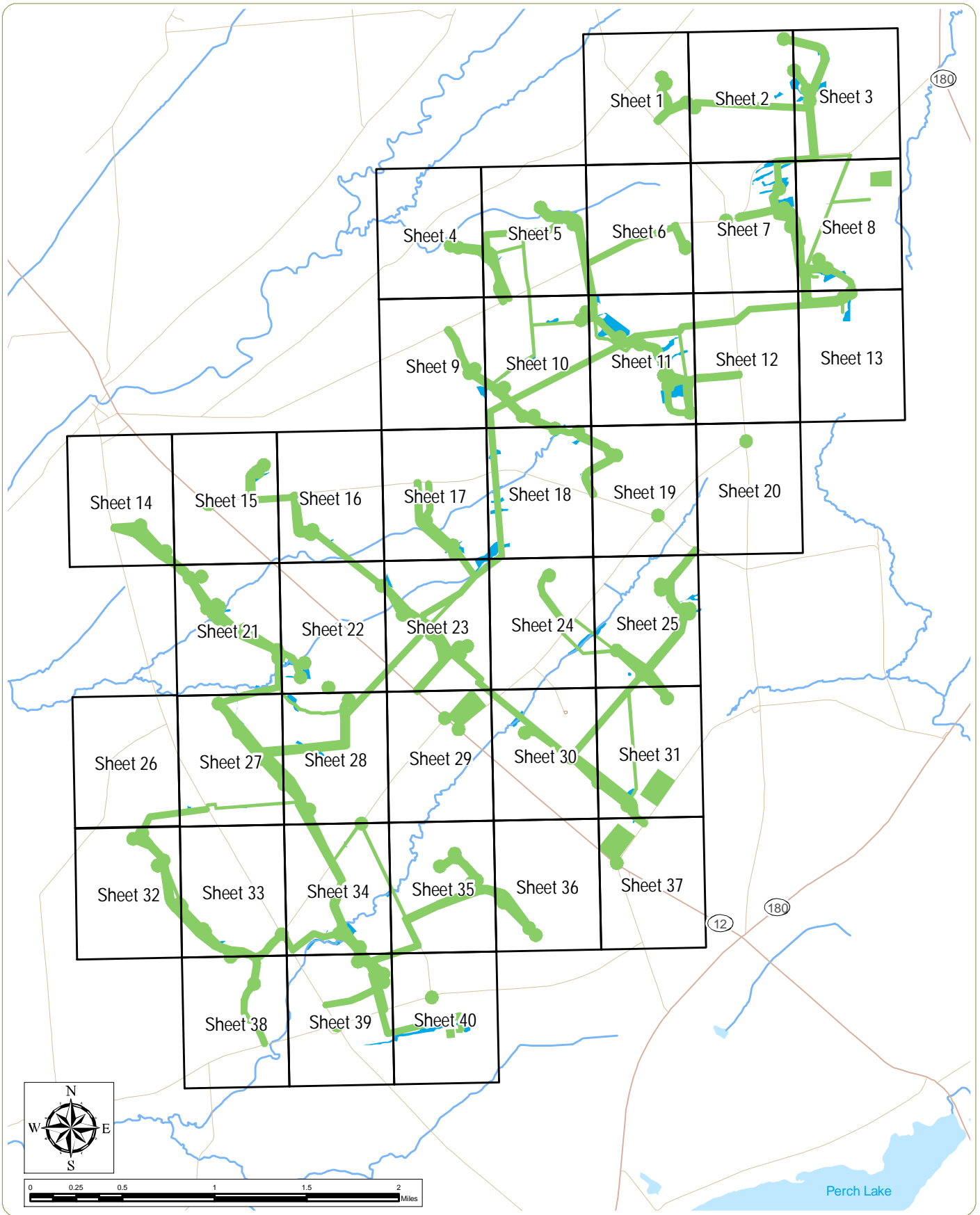
Figure 6: State Mapped Freshwater Wetlands
Sheet 4 of 4

January 2011

Notes: Base Map: USGS 1:24,000 Brownsville, Clayton, Dexter, and LaFargeville quadrangles, rendered black and white.

- Wetland Survey Area
- Project Area Boundary
- NYSDEC Wetland





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

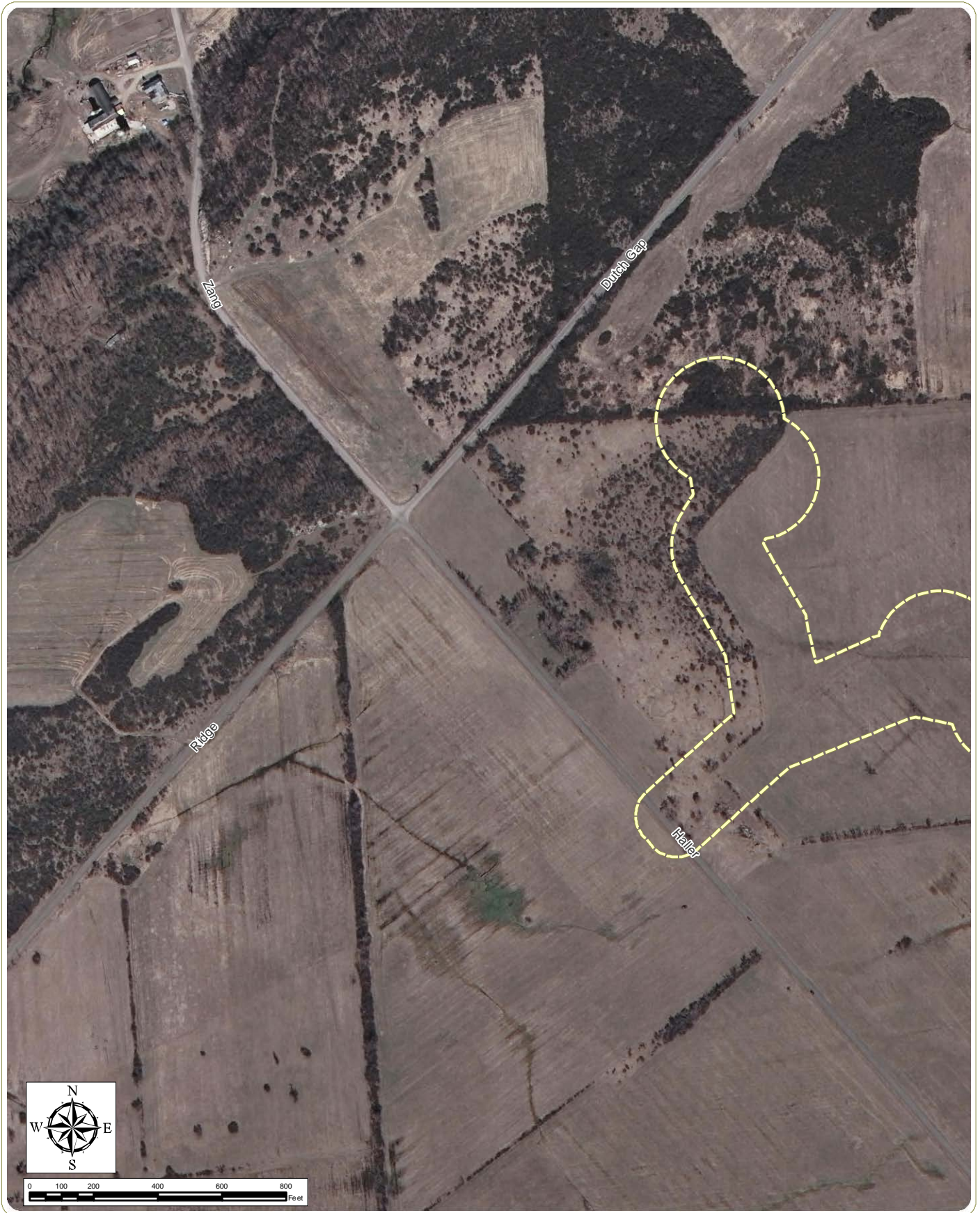
Figure 7: Delineated Wetlands
 Sheet Index

January 2011

Notes: Base Map: ESRI StreetMap North America, 2008.

Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 1 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





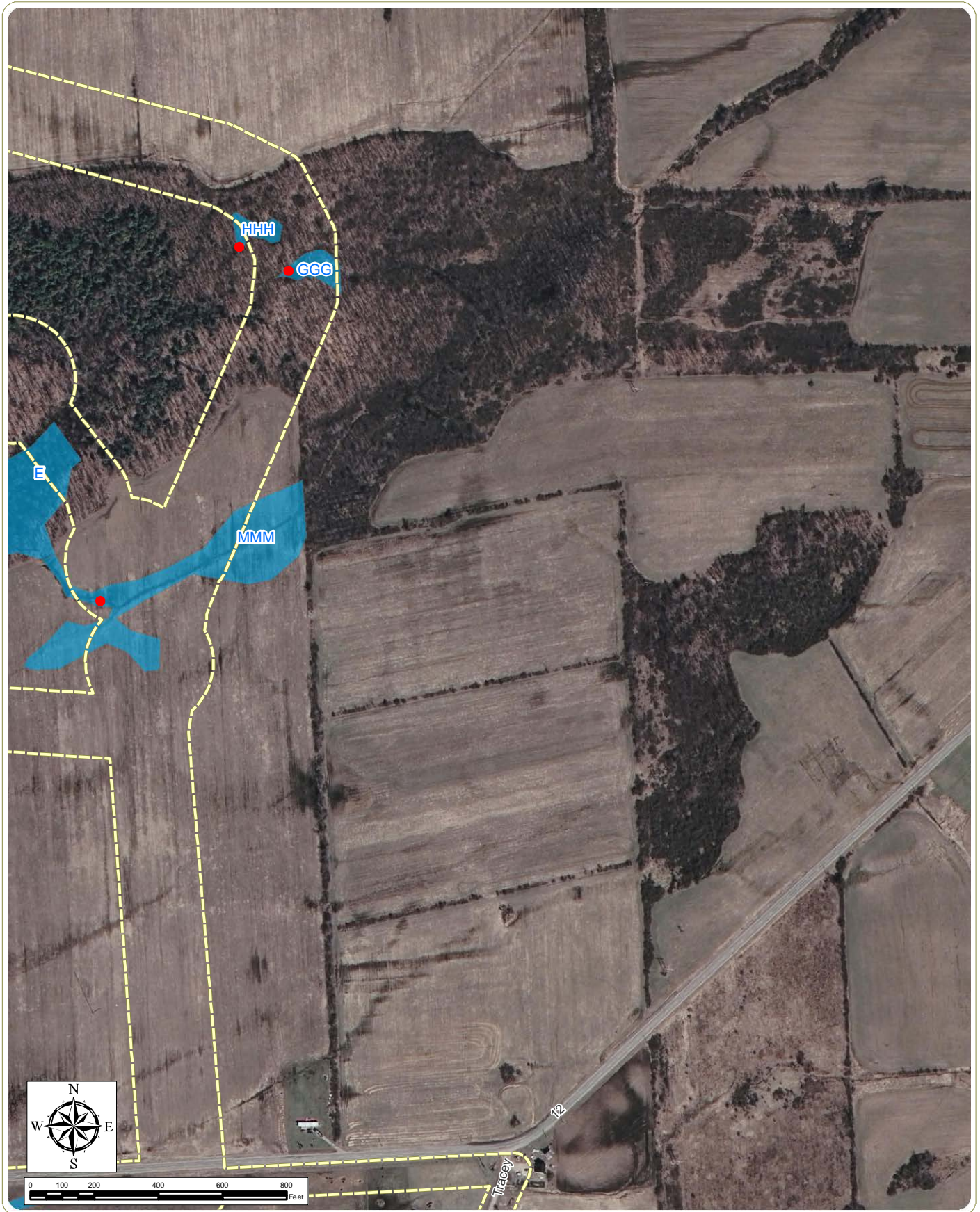
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 2 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 3 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





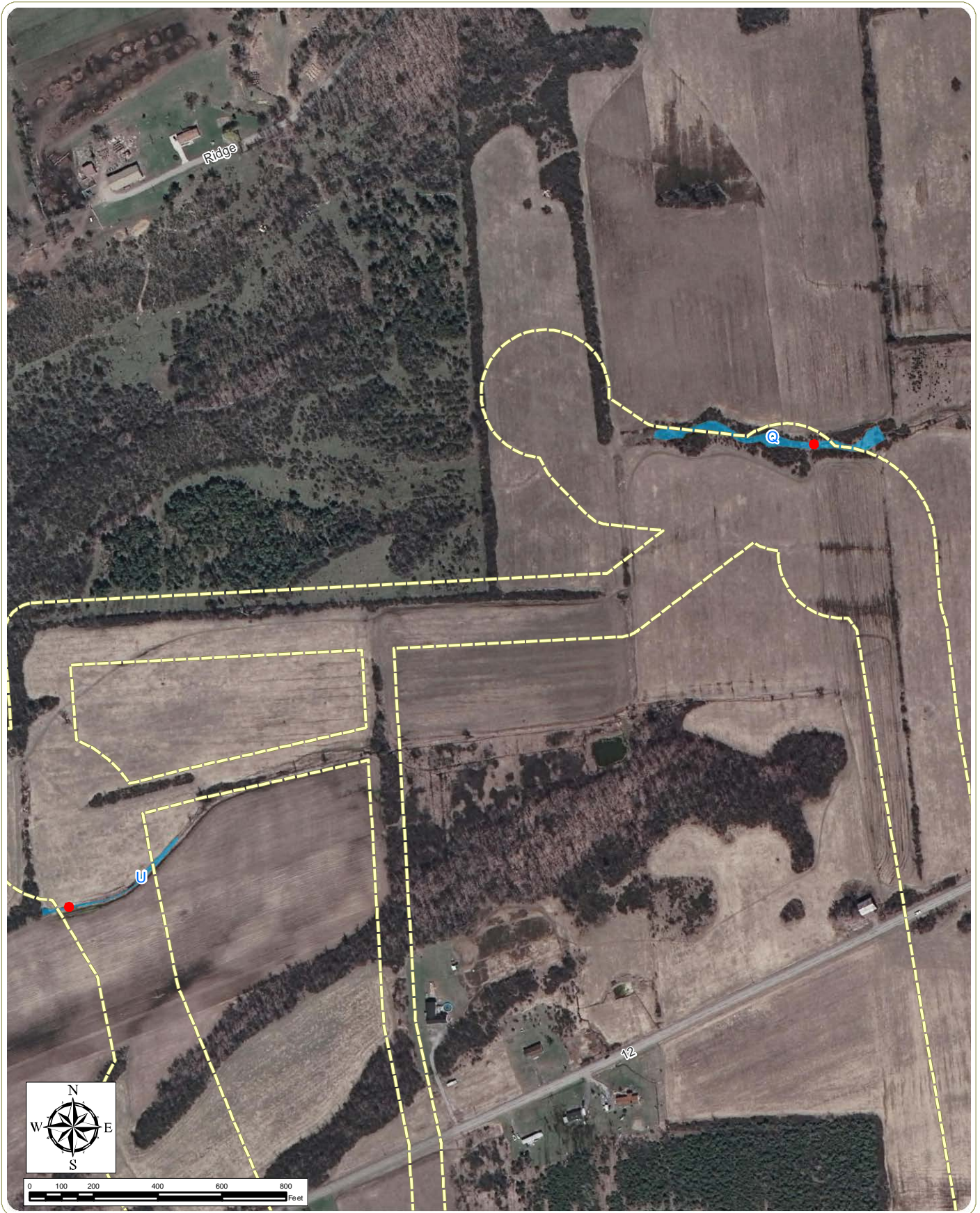
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 4 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- ▭ Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 5 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

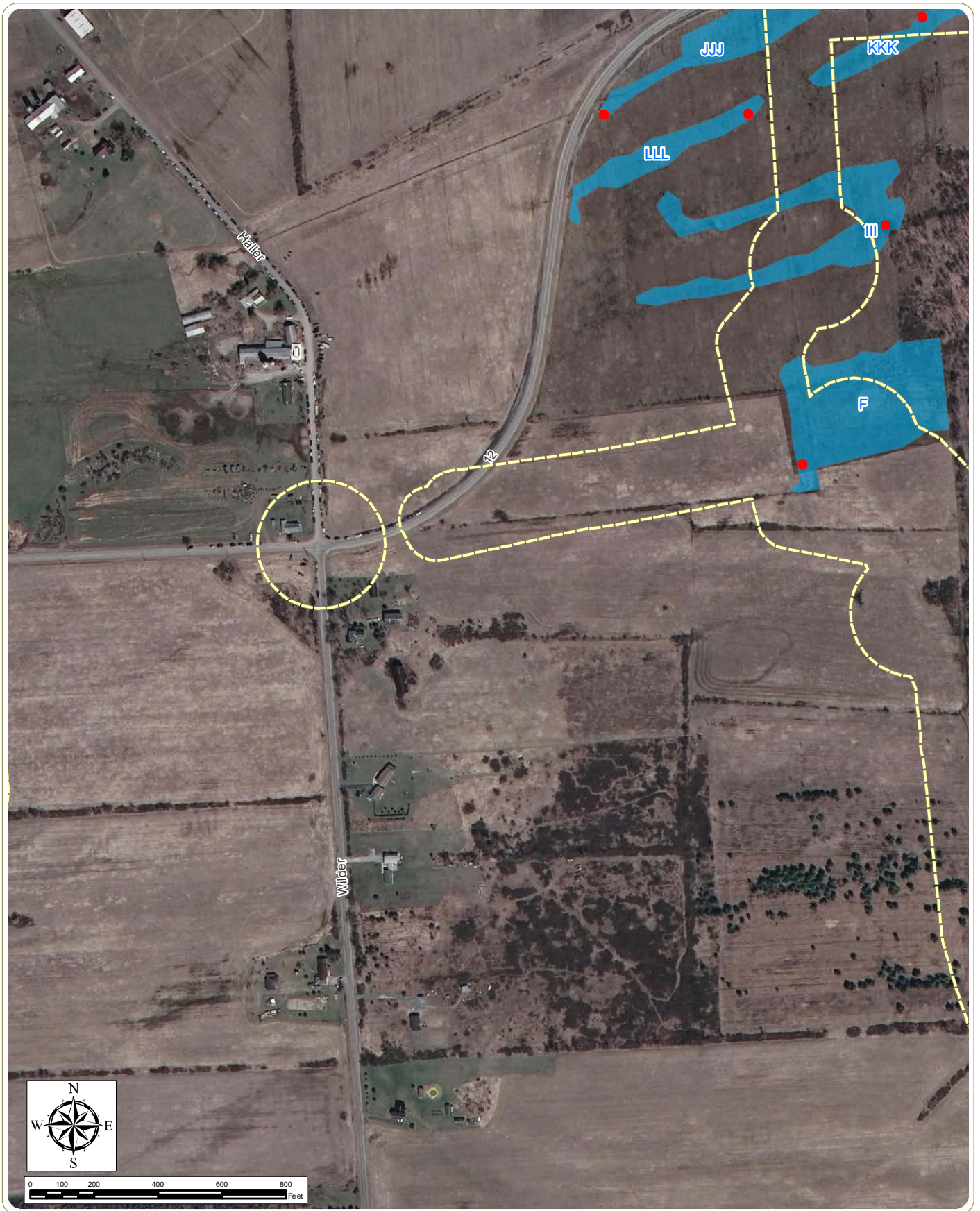
Figure 7: Delineated Wetlands
 Sheet 6 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

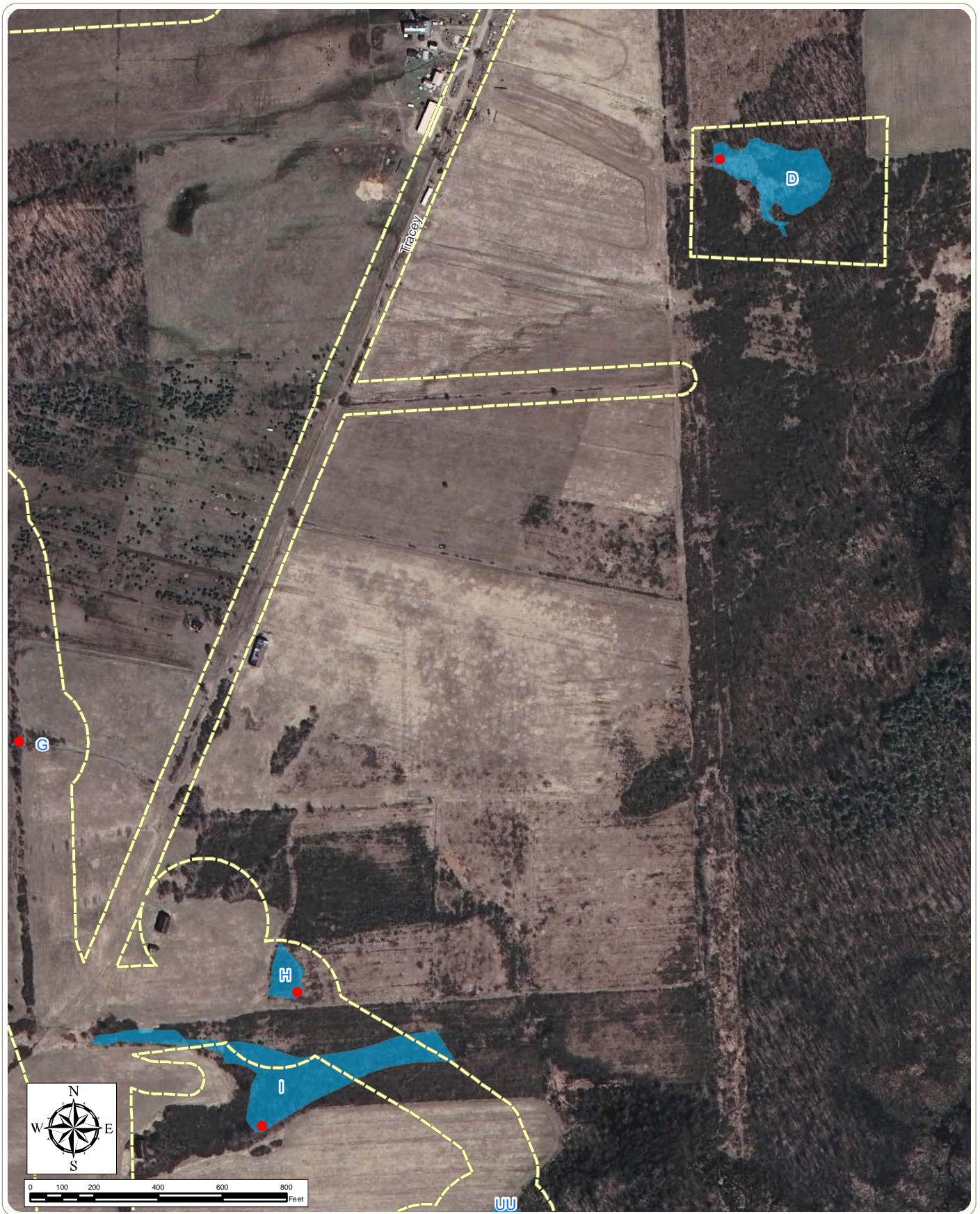
Figure 7: Delineated Wetlands
 Sheet 7 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





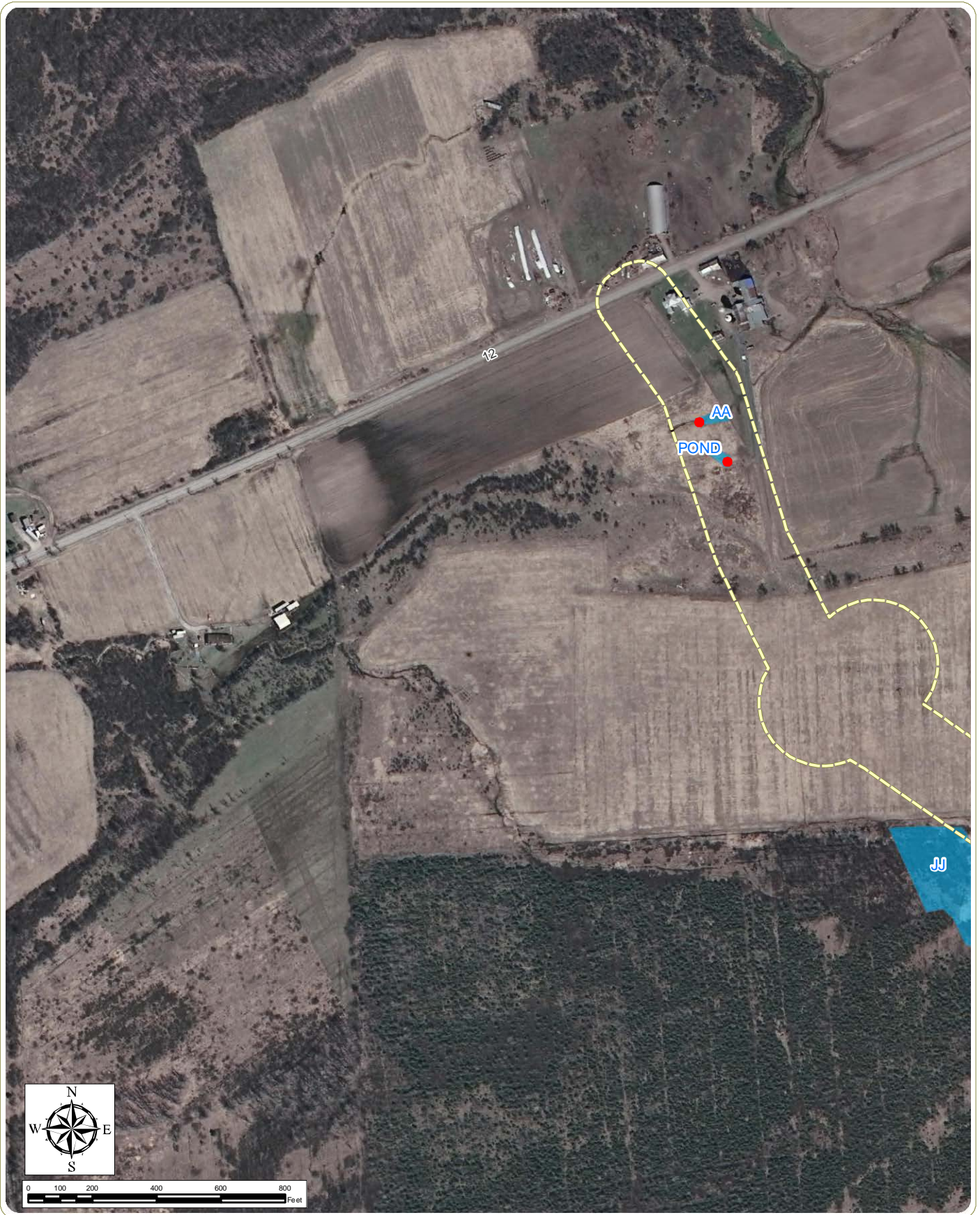
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 8 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

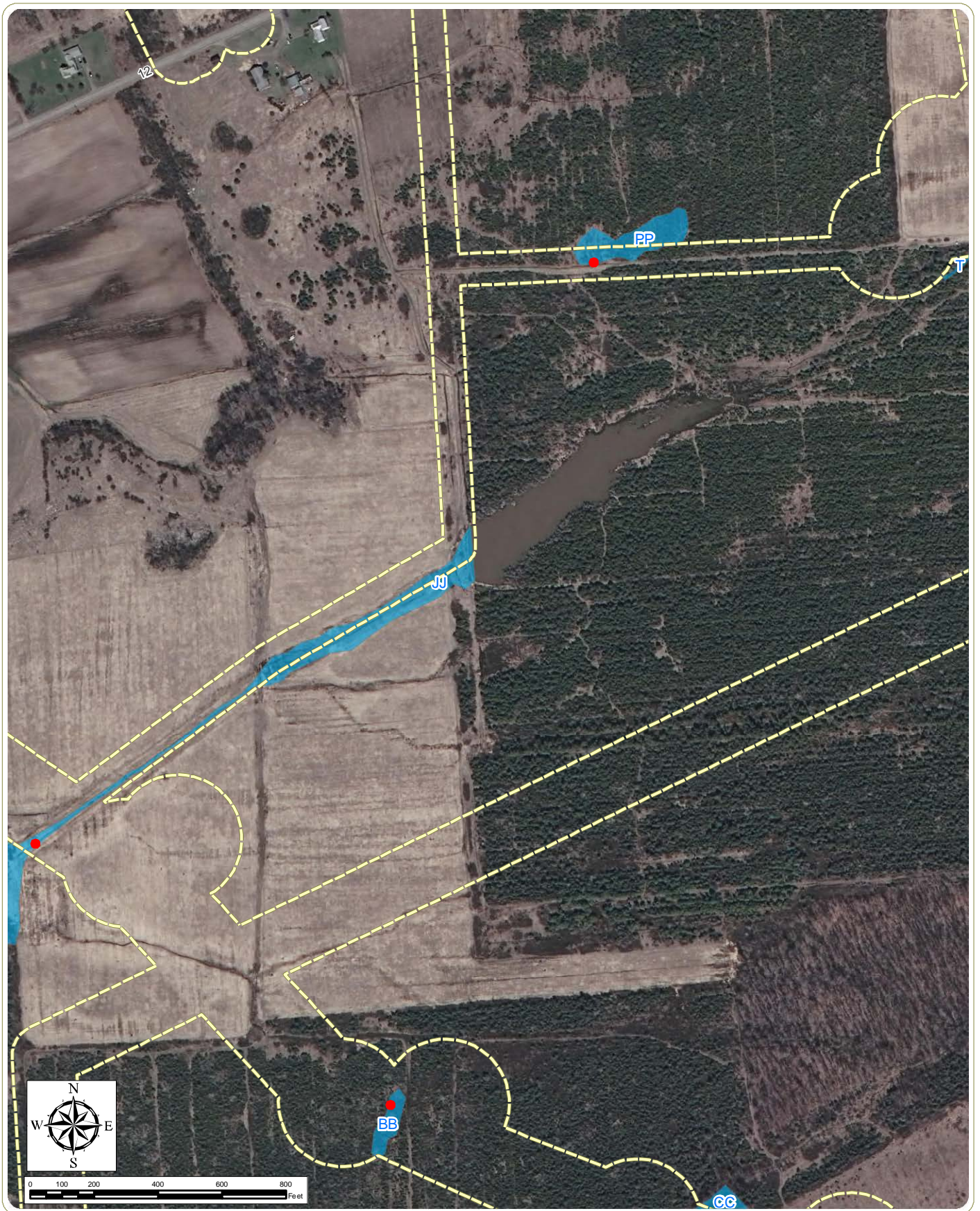
Figure 7: Delineated Wetlands
 Sheet 9 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





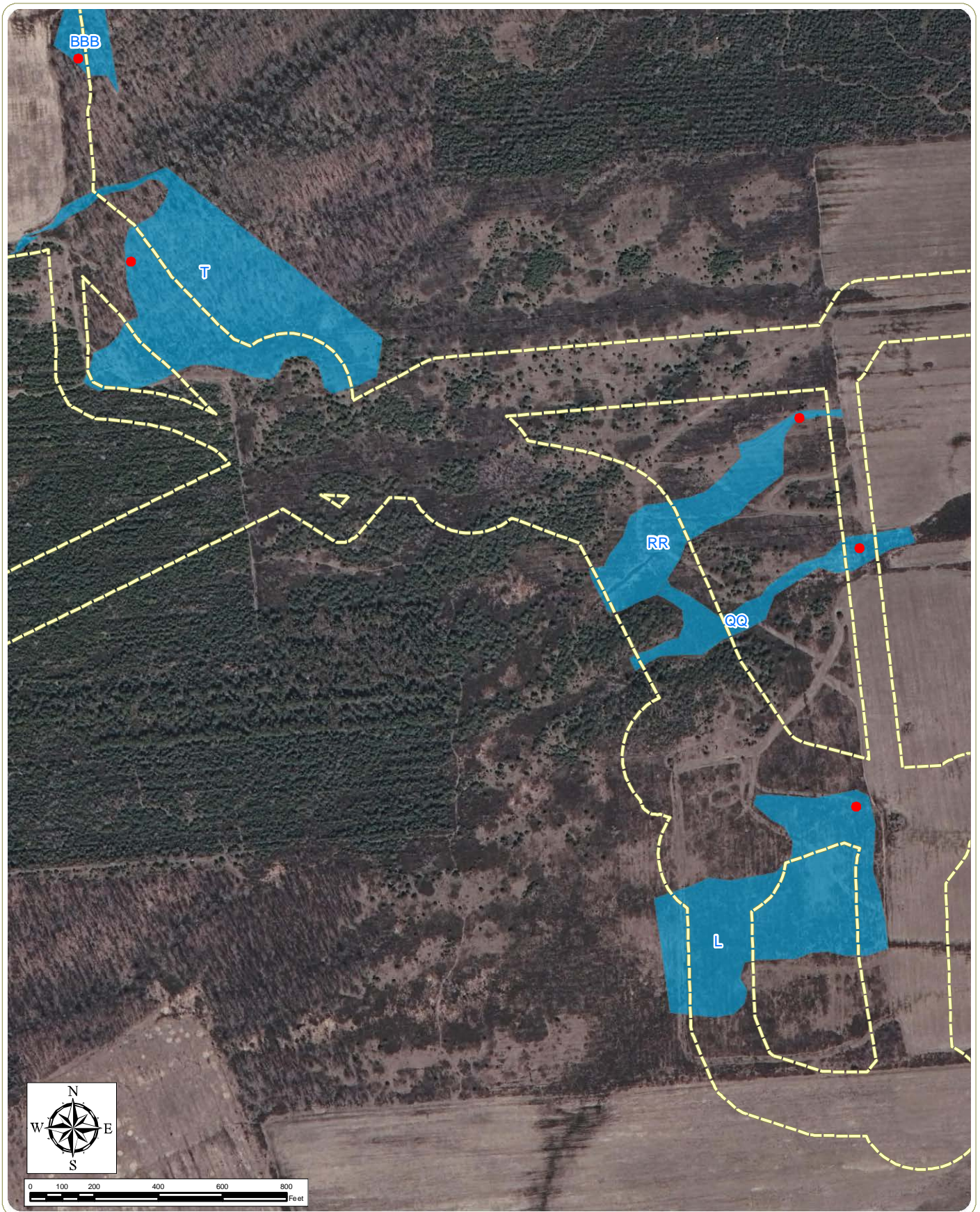
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 10 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 11 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 12 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm

Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands

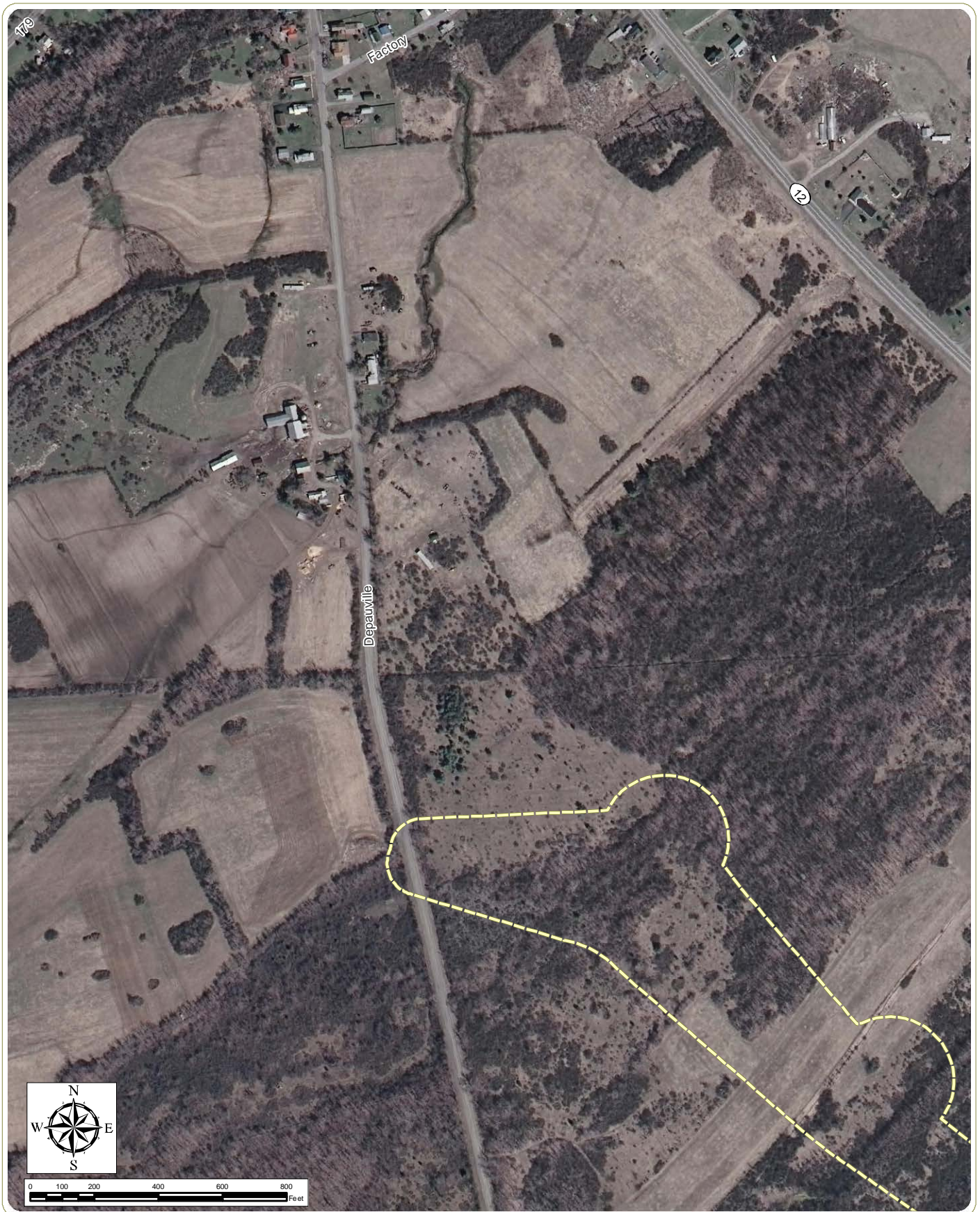
Sheet 13 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





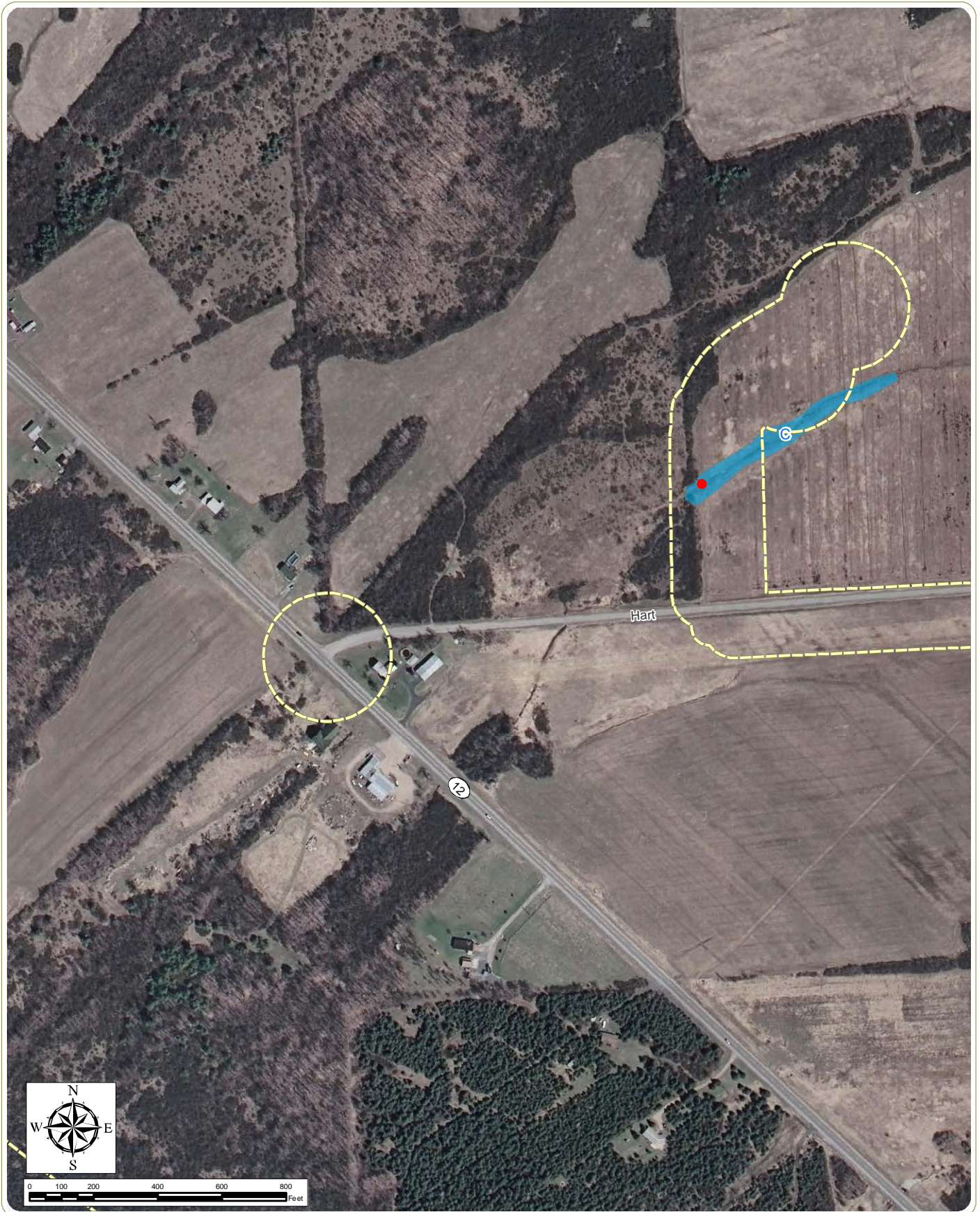
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 14 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





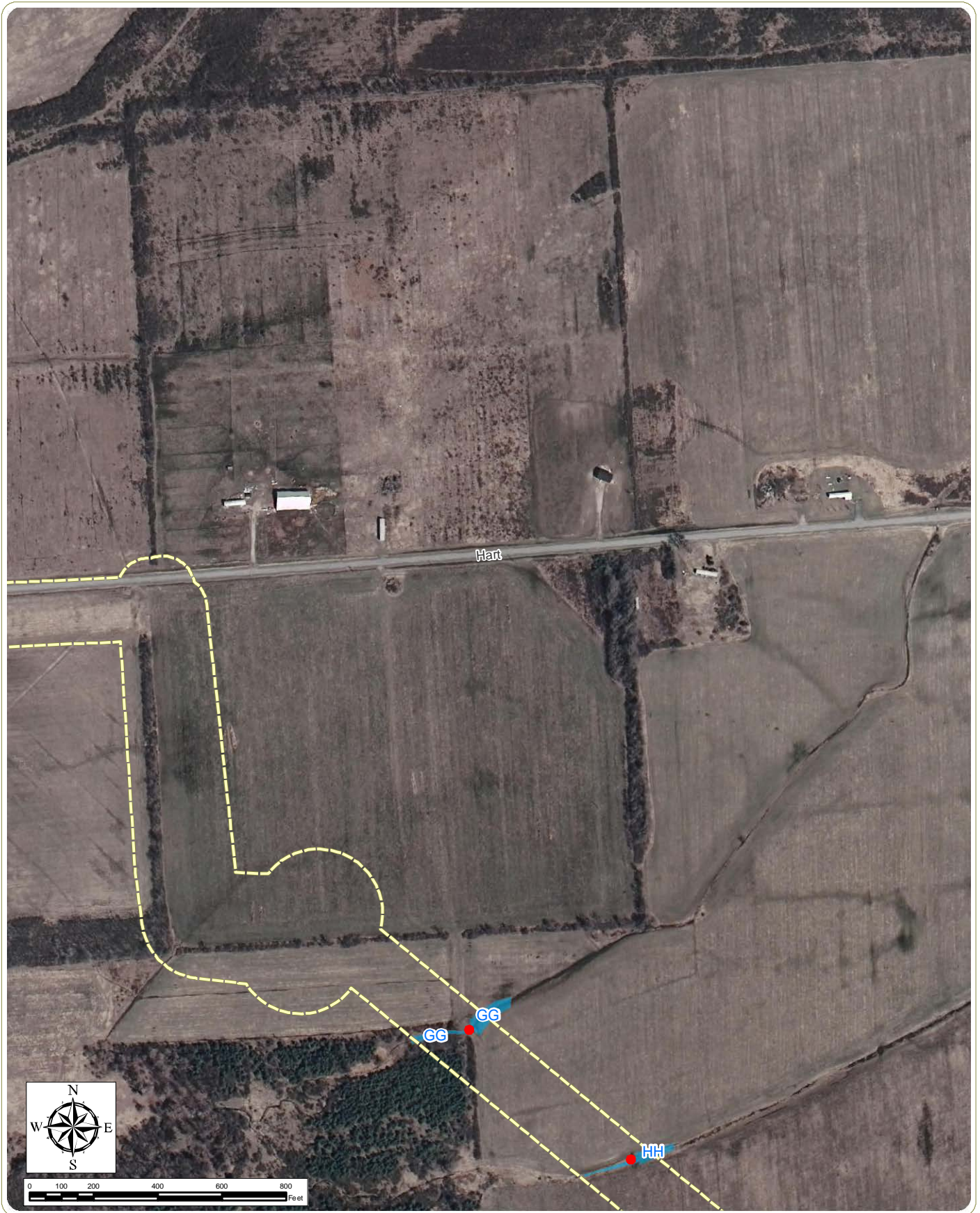
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 15 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





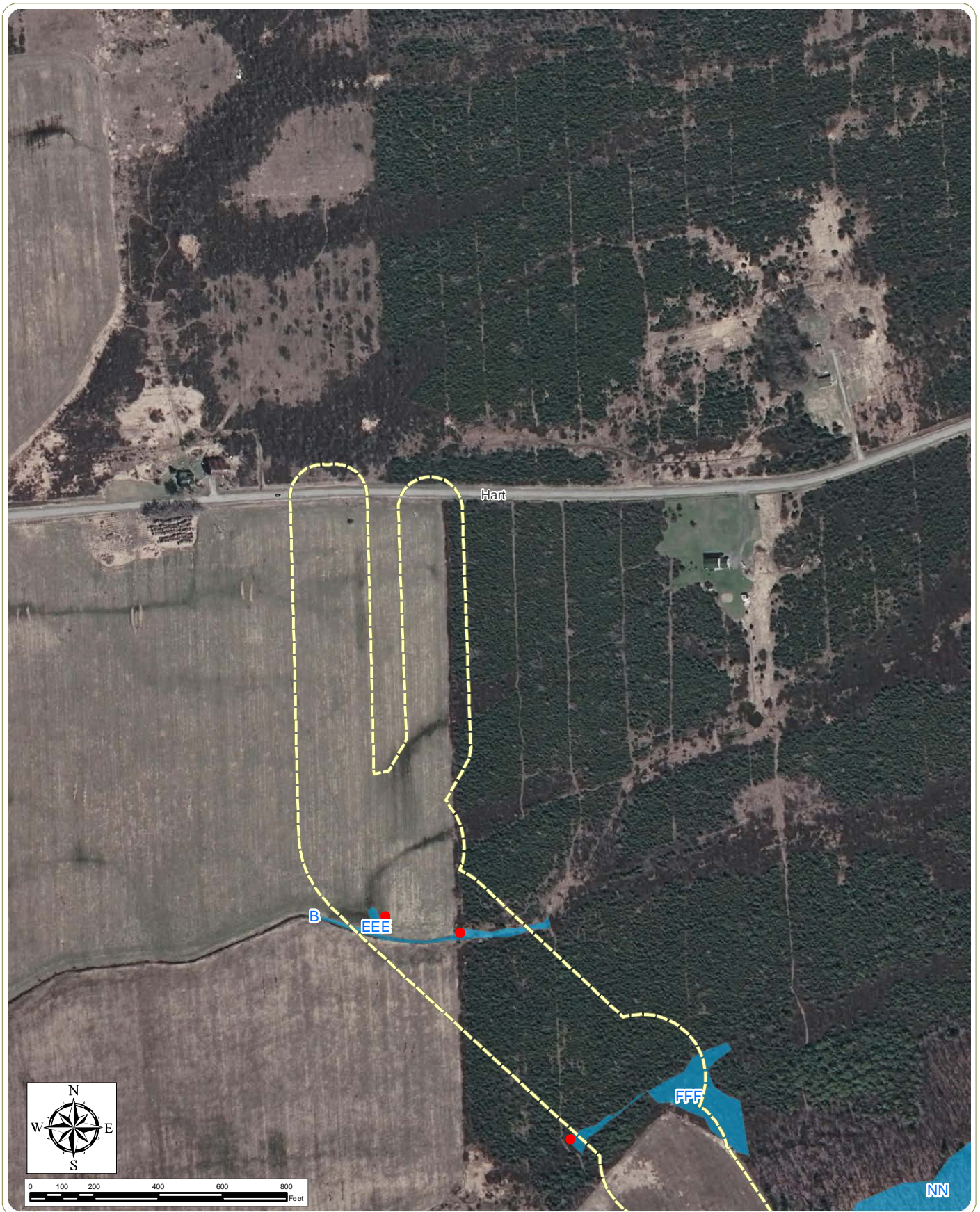
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 16 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

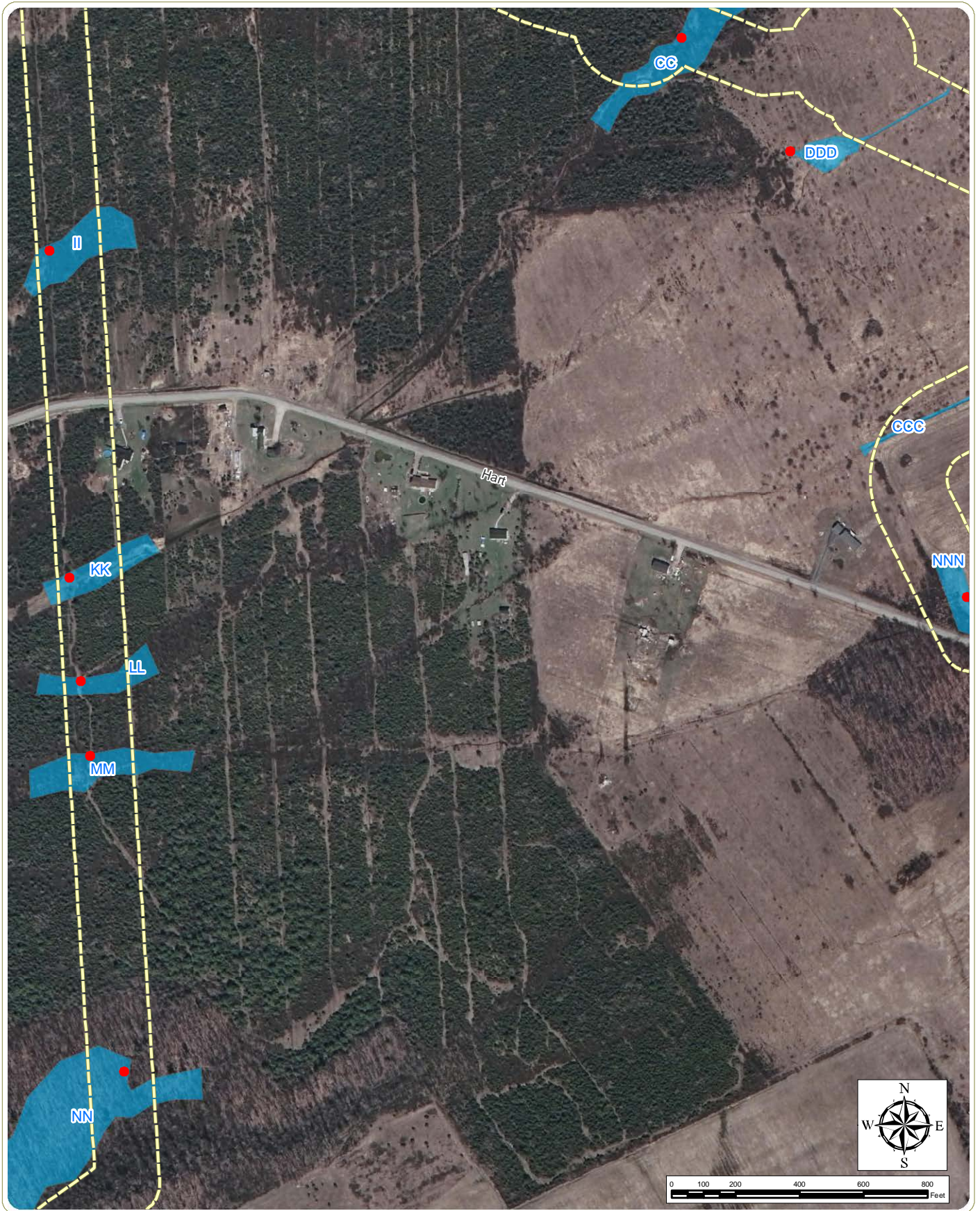
Figure 7: Delineated Wetlands
 Sheet 17 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 18 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 19 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

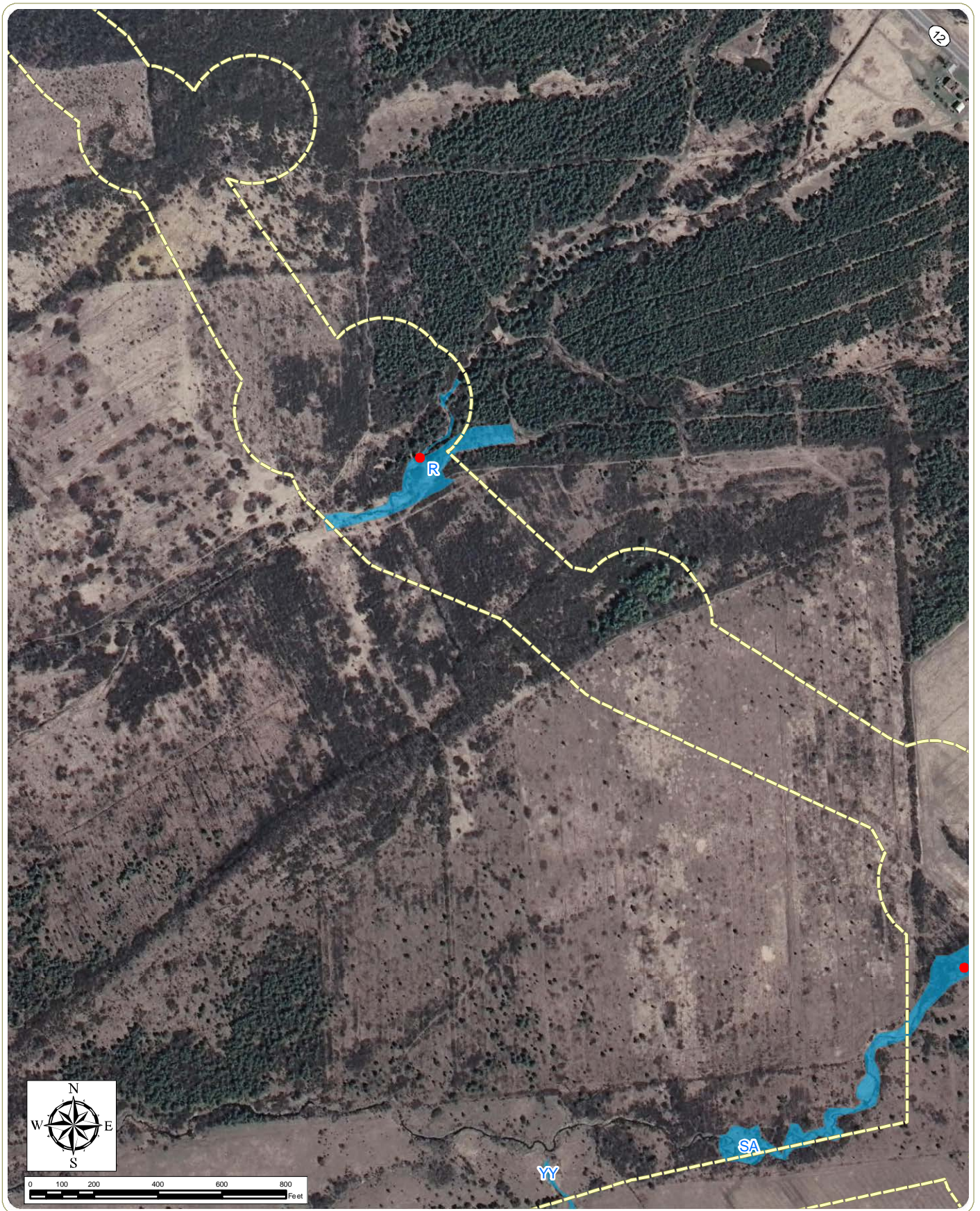
Figure 7: Delineated Wetlands
 Sheet 20 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





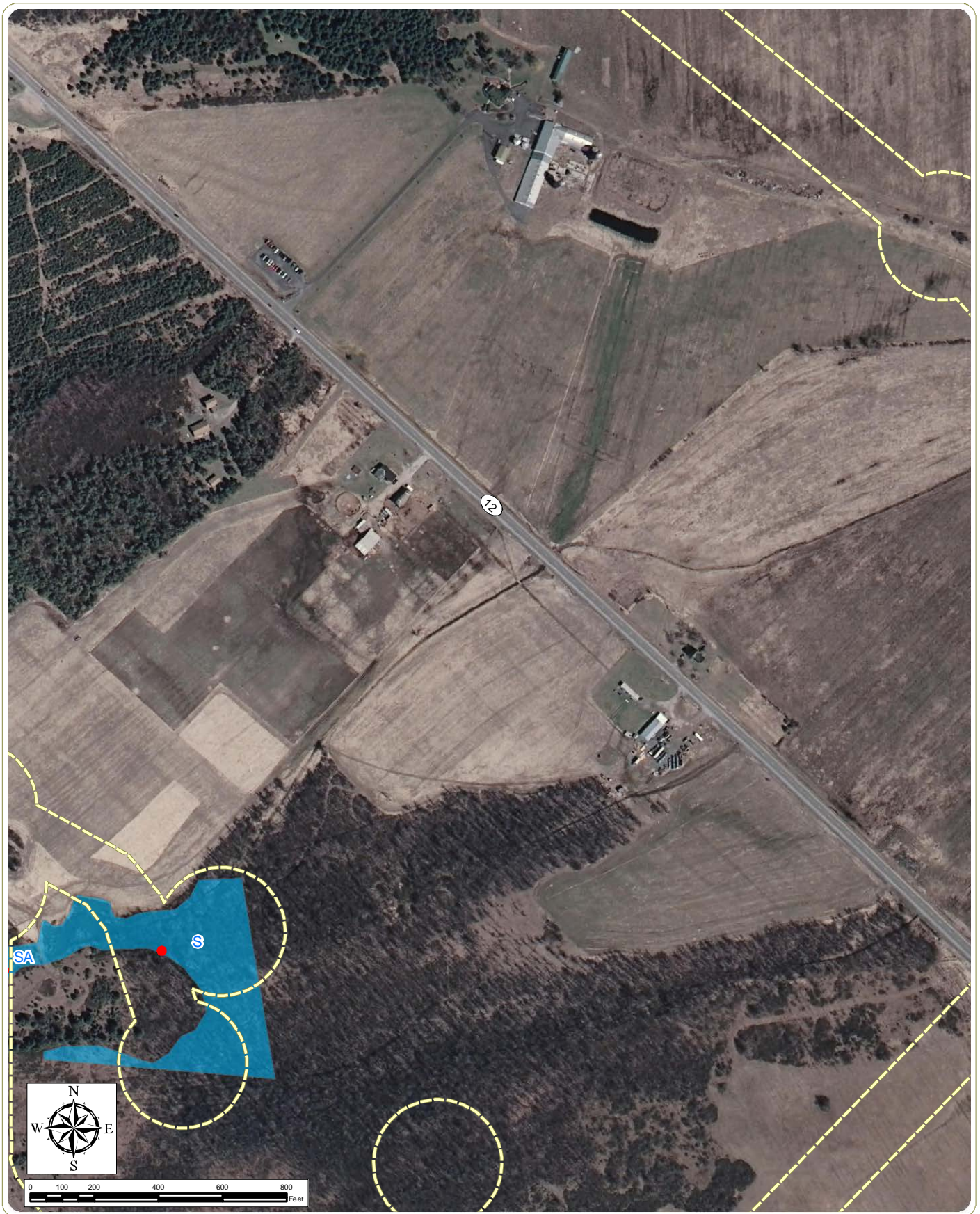
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 21 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





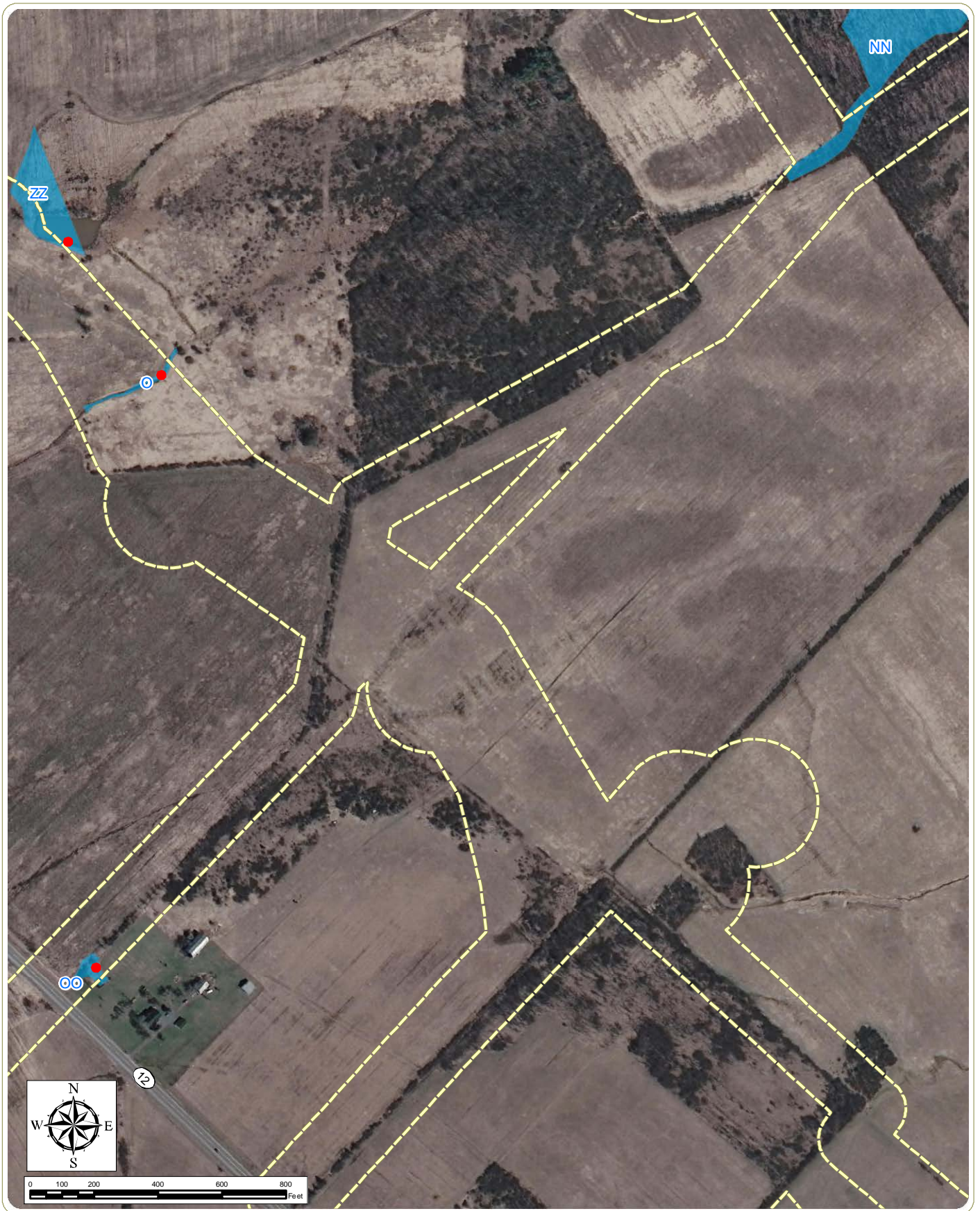
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 22 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 23 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





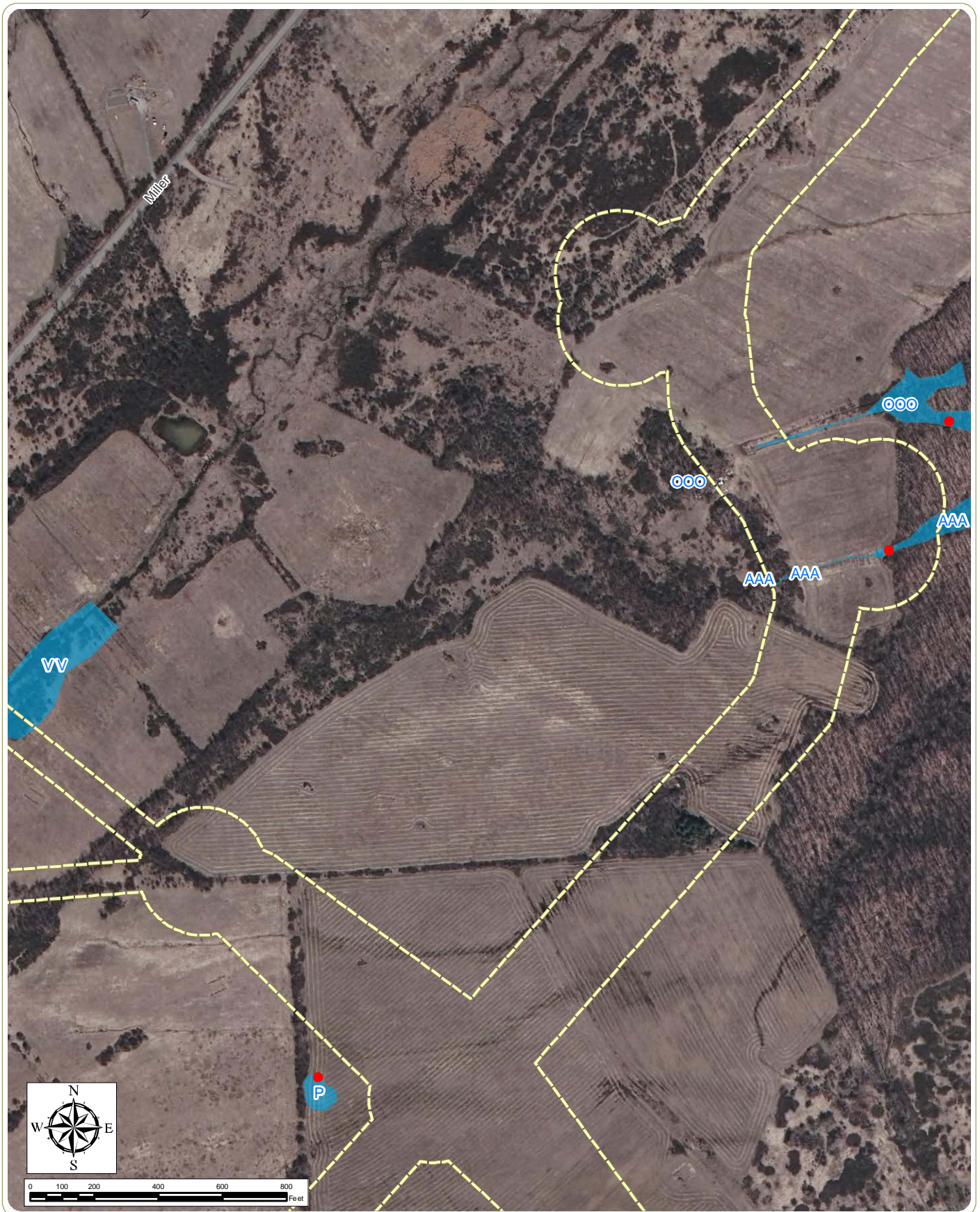
Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
Sheet 24 of 40
January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 25 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm

Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands

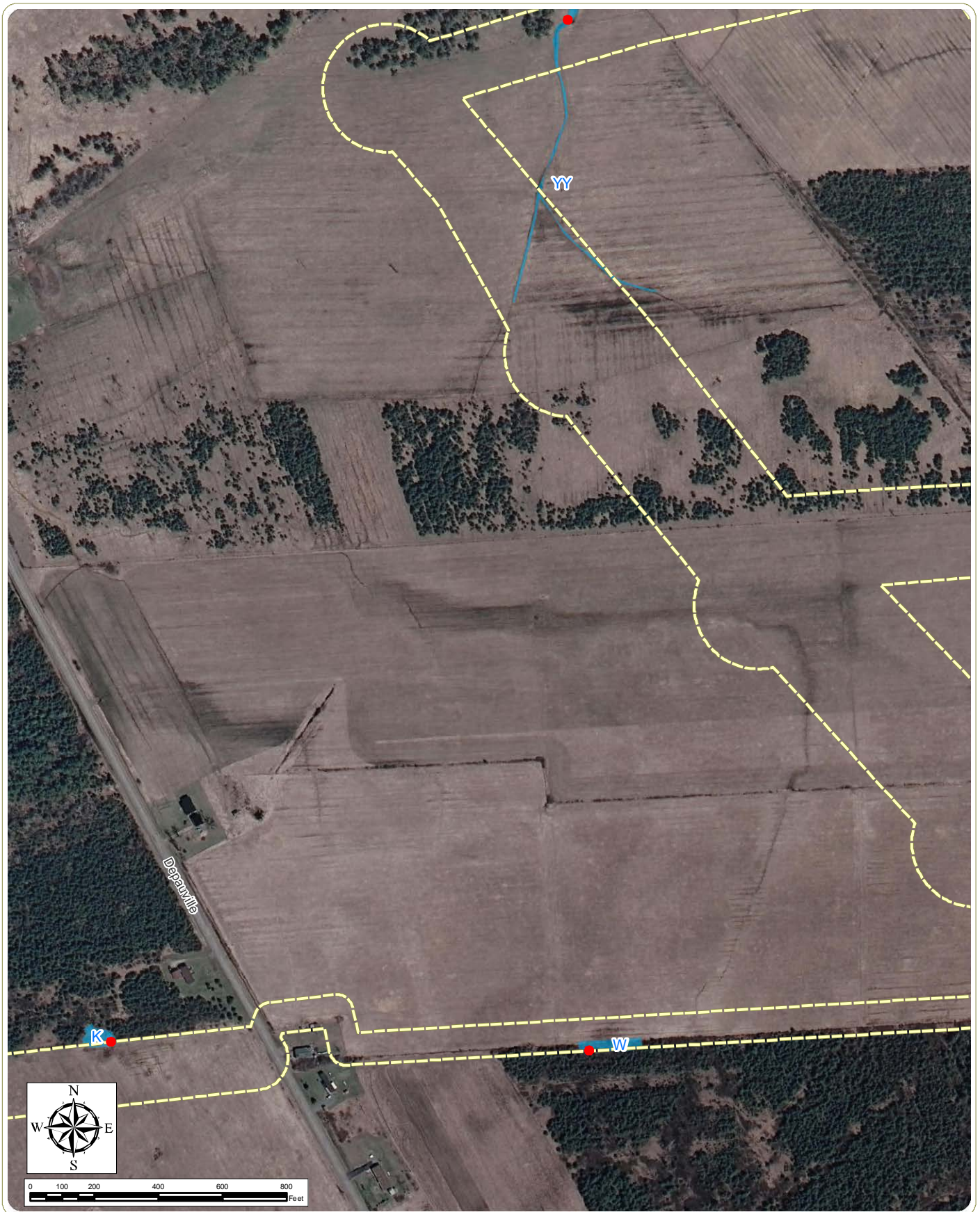
Sheet 26 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
Sheet 27 of 40
January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





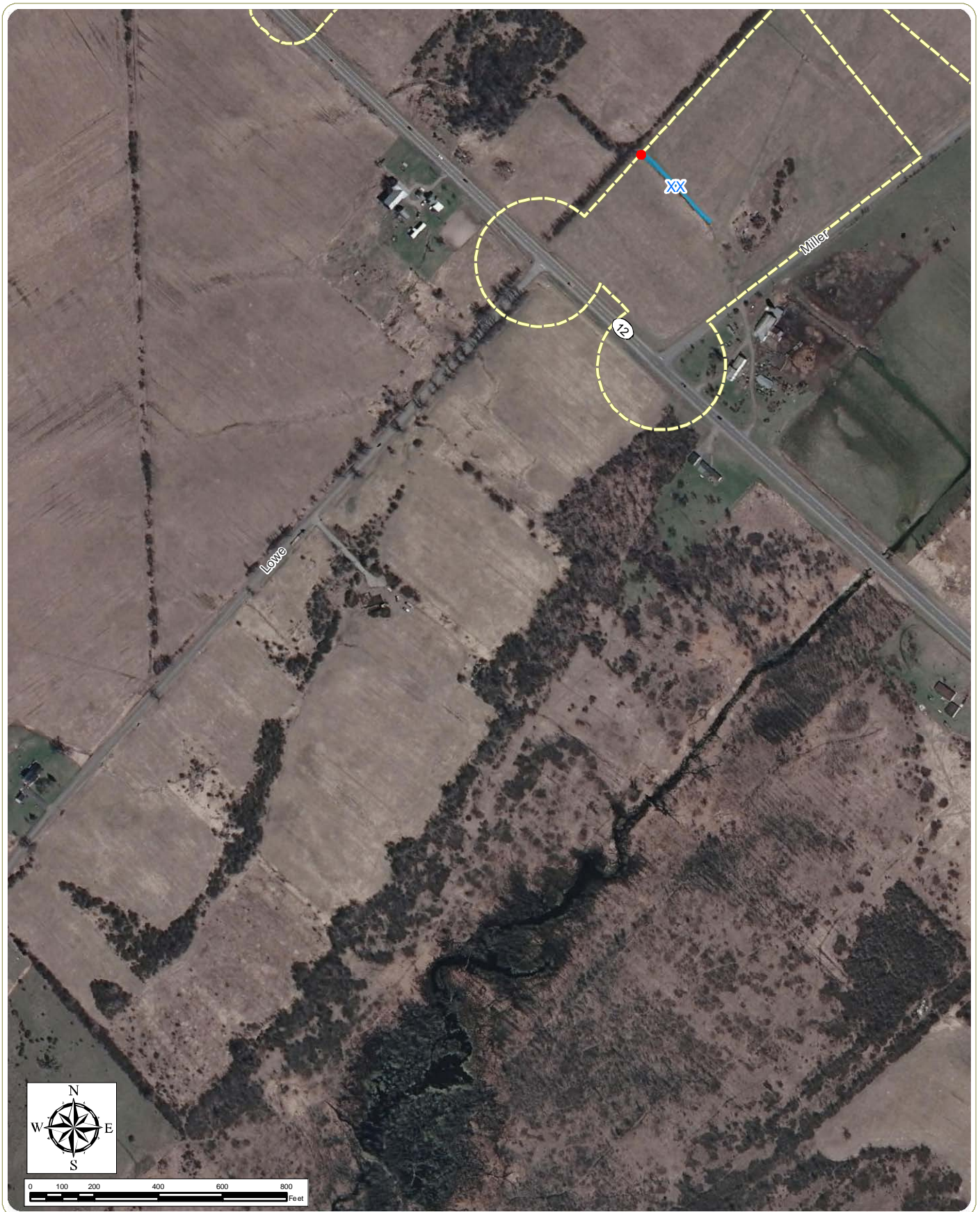
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 28 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 29 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 30 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





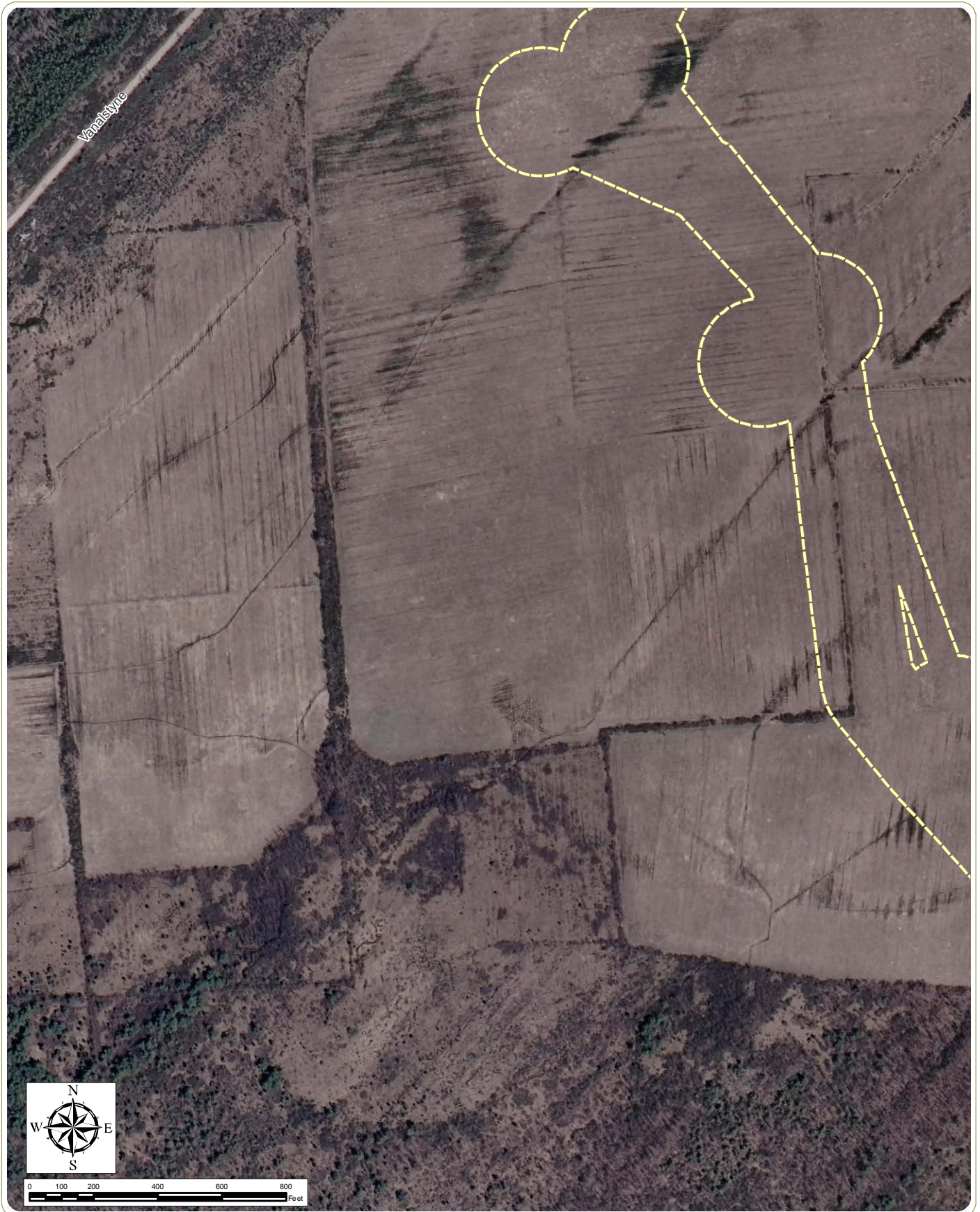
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 31 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 32 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm

Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands

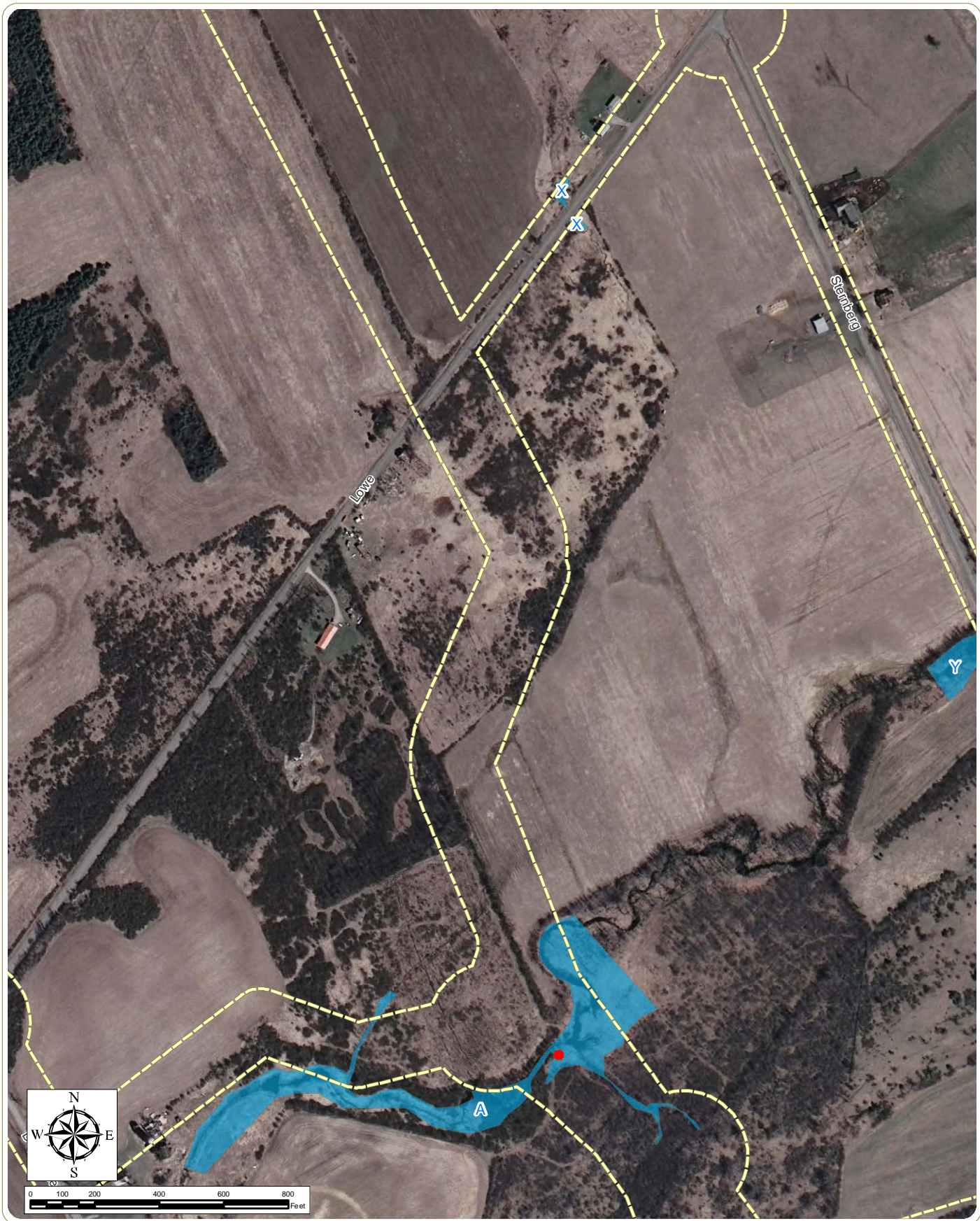
Sheet 33 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

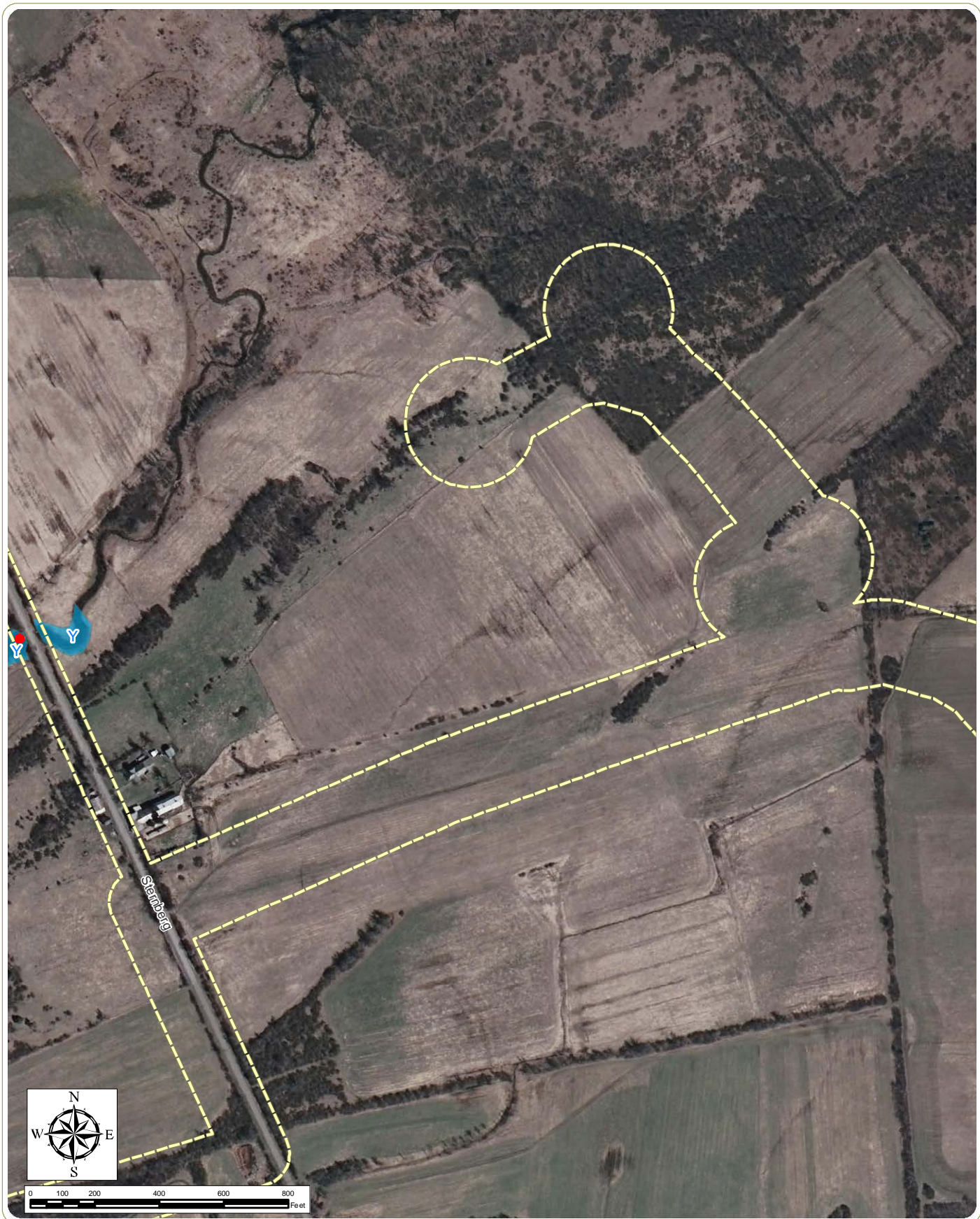
Figure 7: Delineated Wetlands
 Sheet 34 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 35 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 36 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

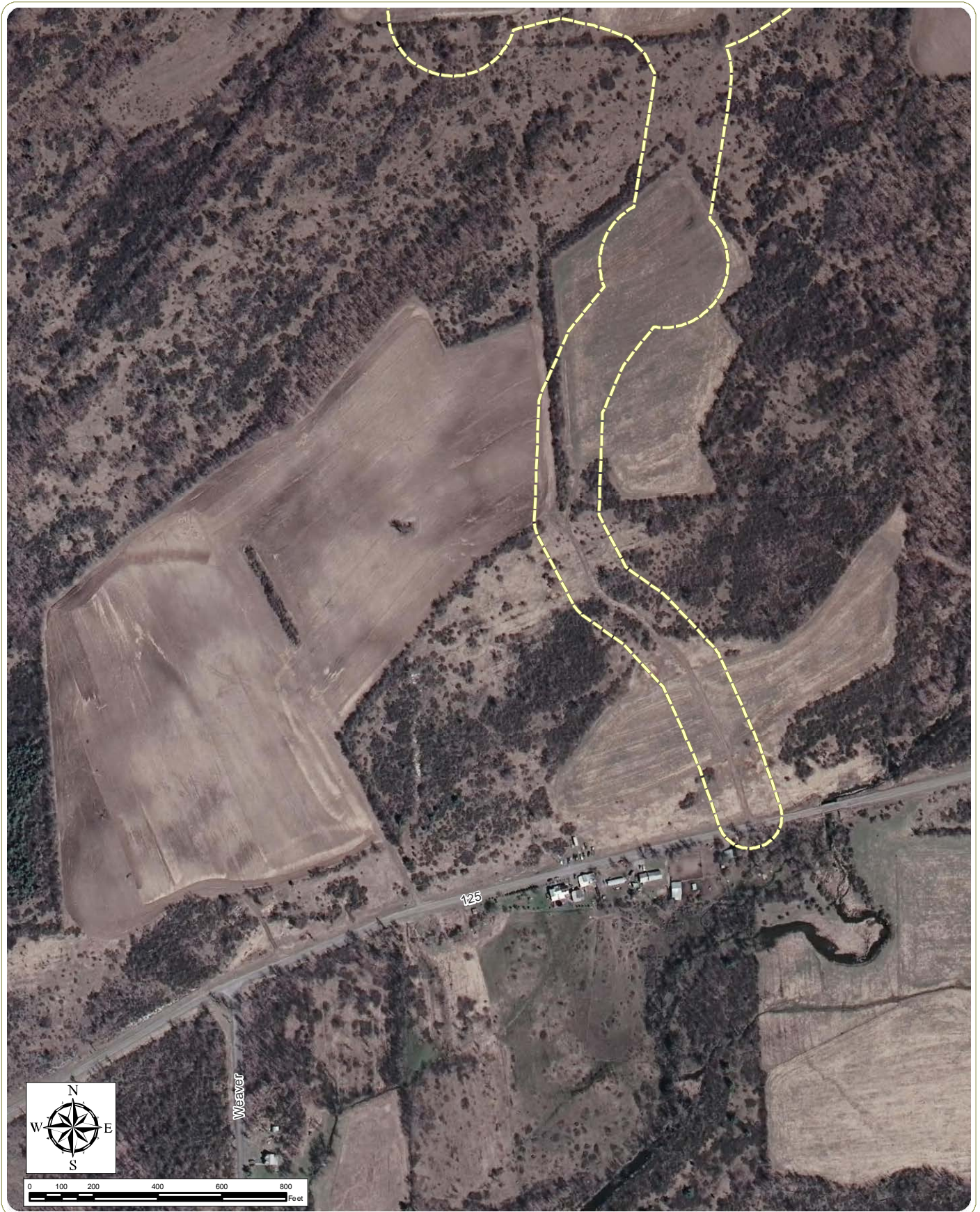
Figure 7: Delineated Wetlands
 Sheet 37 of 40

January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





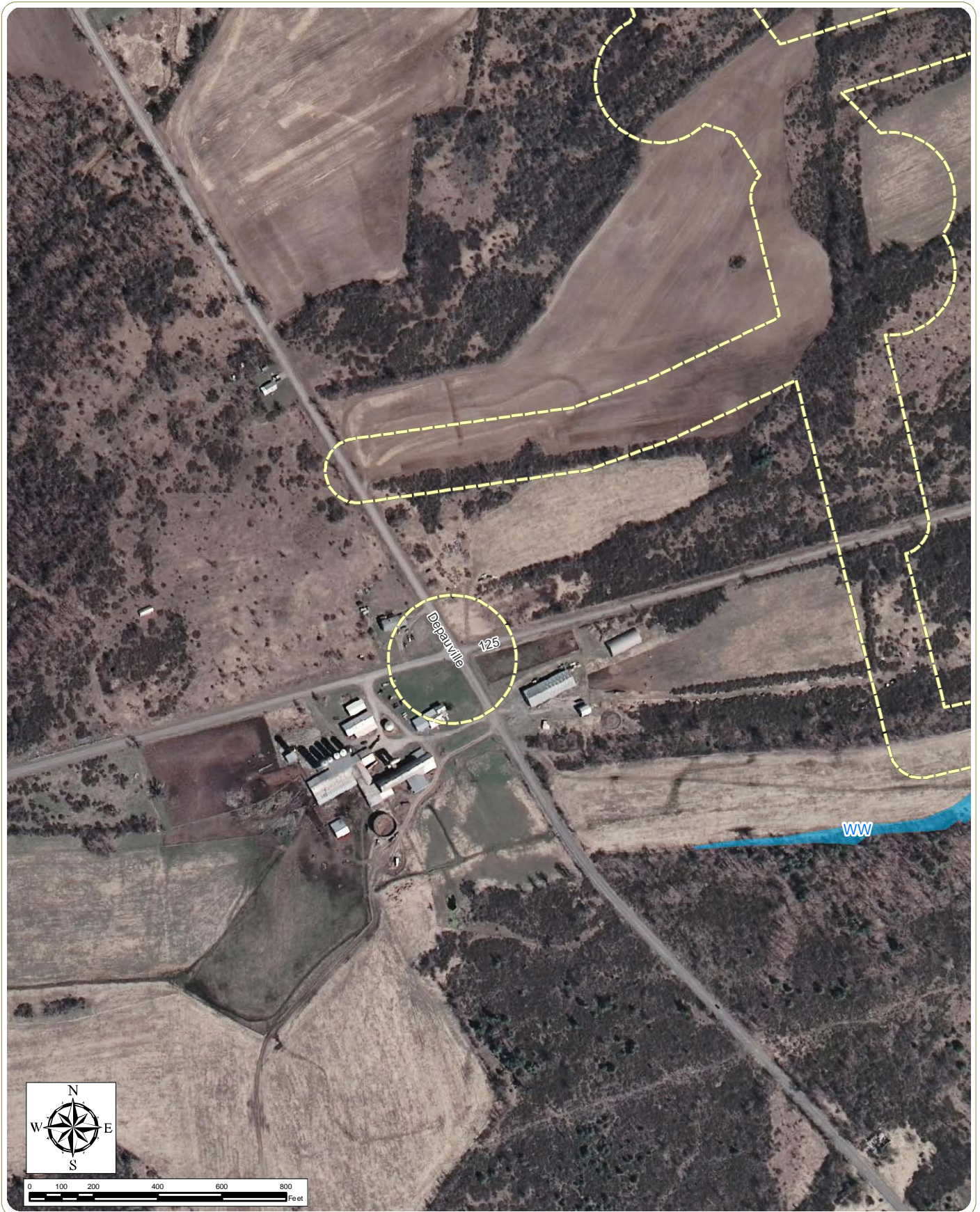
Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 38 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 39 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area





Horse Creek Wind Farm
 Town of Clayton - Jefferson County, New York

Figure 7: Delineated Wetlands
 Sheet 40 of 40
 January 2011

Notes: Base Map: 1 ft. Orthoimagery, Years 2006 and 2007.

- Wetland Sample Point
- Delineated Wetland
- Wetland Survey Area



APPENDIX B

ROUTINE WETLAND DETERMINATION FORMS

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/9/07
 Investigator: Pippin/Stebbins/Schwabebauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PEM
 Is the site significantly disturbed? Yes No Transect/Flag ID: A
 Is the area a potential Problem Area? Yes No Plot ID: A-2 wet

SOILS
 Series and Phase: (Fu) Fluvaquent - Udi Fluvent Complex Drainage Class: WD MVD SPD PD VPD
 Subgroup: Fluvaquent - Udi Fluvent Confirm Mapped Type: Yes No
 Depth Horizon Matrix color Mottle color/abundance Texture, Structure, Other
0-12" A 10YR 3/2 10YR 5/B some silty clay
12" rejects auger
 Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime
 Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY
 Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs
 Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated. moist
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.
 Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland
 Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Beaver activity evident

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/9/07
 Plot ID Number: A-2 wet

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|--------------|-----------|
| 1 <u>Need canopy Grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>70</u> |
| 2 <u>Juncosedge</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>70</u> |
| 3 <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> |
| 4 <u>Canada anemone</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>10</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100 % Percent of Dominant Species OBL, FACW 100 %
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No
 Wetland Hydrology Present? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No
 Hydric Soils Present? Yes or No
 Is this Sampling Point Within a Wetland? Yes or No
 Is this Wetland Potentially Isolated? Yes or No
 Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/9/07
 Investigator: Pippin/Stebbins / Schwabenbauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Shrub / OF
 Is the site significantly disturbed? Yes No Transect/Flag ID: A
 Is the area a potential Problem Area? Yes No Plot ID: A-2 up1

SOILS

Series and Phase: (Kga) Kingsbury silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------------------|-----------------|------------------------|---------------------------|
| <u>0-6"</u> | <u>A</u> | <u>10YR 5/3</u> | <u>none</u> | <u>silty loam</u> |
| <u>6"+</u> | <u>rejects auger</u> | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: dry crumbly soil

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no wetland hydrology

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/9/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>A-2 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: | |
|---------------------------|--|--------------|-----------|-------|
| 1 <u>Buckthorn</u> | H <input checked="" type="radio"/> S/S T V | <u>UPL</u> | <u>40</u> | - |
| 2 <u>Grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>60</u> | - |
| 3 _____ | H S/S T V | _____ | _____ | _____ |
| 4 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>30</u> | - |
| 5 <u>Canada goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>50</u> | - |
| 6 <u>wild Strawberry</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> | _____ |
| 7 _____ | H S/S T V | _____ | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 50 Percent of Dominant Species OBL, FACW 25%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Wetland Hydrology Present? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Hydric Soils Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks: _____

Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/9/07
 Investigator: Pippin/Stebbins / Schwabenbauer Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: stream channel - intermittent
 Is the site significantly disturbed? Yes No Transsect/Flag ID: 1C A 24
 Is the area a potential Problem Area? Yes No Plot ID: 1C A 24

SOILS

Series and Phase: (Fu) Fluvaquent-Udifulvent Complex Drainage Class: WD MWD SPD PD VPD
 Subgroup: Fluvaquent - Udifulvent Confirm Mapped Type: Yes No
 Depth Horizon Matrix color Mottle color/abundance Texture, Structure, Other

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks: Silt mud substrate, moist with no flow in channel

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Stream has floodplain - slightly incised avg. width 3-5 feet, no flow channel depth 2-4 feet

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/9/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>1C-A24</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|---------------------------|--|--------------|-----------|
| 1 <u>Red canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>90</u> |
| 2 <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> |
| 3 <u>clea weed</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>10</u> |
| 4 <u>water pimpernel</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>green ash</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW</u> | <u>40</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 <u>buckthorn</u> | H <input checked="" type="radio"/> S/S T V | <u>UPL</u> | <u>40</u> |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 67% Percent of Dominant Species OBL, FACW 67%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes or No | Hydric Soils Present? Yes or No |
| Wetland Hydrology Present? Yes or No | Is this Sampling Point Within a Wetland? Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: minimal snags/woody debris Photo Reference Number: _____
evidence of beaver activity - chewed trees

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: PSS w/associated channel
 Is the site significantly disturbed? Yes No Transect/Flag ID: B1-17
 Is the area a potential Problem Area? Yes No Plot ID: B 4 wet

SOILS

Series and Phase: (Gv) Guffin Clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|------------------|------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>10YR 3/1</u> | <u>—</u> | <u>Sandy clay</u> |
| <u>8-16"</u> | <u>B</u> | <u>2.5YR 4/1</u> | <u>—</u> | <u>Sandy clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
NO Ground Surface Inundated _____ inches.
NO Soil Saturated. - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Drainage Patterns in Wetland | |

Remarks:

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>B 4 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-----------------------------------|--|-----------------|-------------|
| 1 <u>Spiraea alba</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>40</u> - |
| 2 <u>Cornus foemina</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>30</u> - |
| 3 <u>willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>20</u> - |
| 4 <u>canary seed grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>40</u> - |
| 5 <u>worm grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>25</u> - |
| 6 <u>ditch stonecrop</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>5</u> |
| 7 <u>narrow leaved golden rod</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>25</u> - |
| 8 <u>Lycopus uniflorus</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>5</u> |
| 9 <u>Carex vulpinoidea</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 67%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *spruce plantation* Community: forest - thick spruce plantation
 Is the site significantly disturbed? Yes No Transect/Flag ID: B
 Is the area a potential Problem Area? Yes No Plot ID: B 4 upl

SOILS

Series and Phase: (WnB) Wilpoint silty clay loam Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aquic Hapludalfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|-----------------|------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>10YR 3/2</u> | <u>None</u> | <u>silty clay</u> |
| <u>8" +</u> | <u>B</u> | <u>10YR 3/2</u> | <u>10YR 5/8 - some</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks: soil dry, crumbly

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>B4 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|------------------------------|--|--------------|------------|
| 1 <u>white spruce</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>40%</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>50%</u> |
| 4 <u>morning glory</u> | H <input checked="" type="radio"/> S/S T V | <u>NI</u> | <u>25%</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 <u>Prunella vulgaris</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU+</u> | <u>5%</u> |
| 7 <u>Potentilla simplex</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>5%</u> |
| 8 <u>Fragaria virginiana</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>5%</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 17% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: sparse herb layer

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes or <input checked="" type="radio"/> No | Hydric Soils Present? Yes or <input checked="" type="radio"/> No |
| Wetland Hydrology Present? Yes or <input checked="" type="radio"/> No | Is this Sampling Point Within a Wetland? Yes or <input checked="" type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: Wet meadow
 Is the site significantly disturbed? Yes No Transect/Flag ID: C1-20 (open ended @ 1 and 20)
 Is the area a potential Problem Area? Yes No Plot ID: C 3 wet

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------------|-----------------|------------------------|---------------------------|
| <u>0-6"</u> | <u>A</u> | <u>10YR 4/1</u> | <u>none</u> | <u>clay</u> |
| <u>6"</u> | <u>bedrock</u> | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: several other test pits showed mottling - orange

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 NO Soil Saturated - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland ephemeral

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: hummocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>C3 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------------|--|--------------|-----------|
| 1. <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>40</u> |
| 2. <u>boneset</u> | <input checked="" type="radio"/> H S/S T V | <u>FAW+</u> | <u>20</u> |
| 3. <u>narrow leaf cattail</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> |
| 4. <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> |
| 5. <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>20</u> |
| 6. <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 7. <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>30</u> |
| 8. _____ | H S/S T V | _____ | _____ |
| 9. _____ | H S/S T V | _____ | _____ |
| 10. _____ | H S/S T V | _____ | _____ |
| 11. _____ | H S/S T V | _____ | _____ |
| 12. _____ | H S/S T V | _____ | _____ |
| 13. _____ | H S/S T V | _____ | _____ |
| 14. _____ | H S/S T V | _____ | _____ |
| 15. _____ | H S/S T V | _____ | _____ |
| 16. _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100%

Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks: also monkey flower, narrow leaf golden rod

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No

Hydric Soils Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No

Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

wet meadow associated w/ ephemeral drainage
potentially isolated - connections non-jurisdictional (?)
low spot in swale

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: old field
 Is the site significantly disturbed? Yes No Transect/Flag ID: C
 Is the area a potential Problem Area? Yes No Plot ID: C3 upl

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Acric Ochraquals Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|------------------------|-----------------|------------------------|---------------------------|
| <u>0-10"</u> | <u>A</u> | <u>2.5Y 4/3</u> | <u>none</u> | <u>silty loam</u> |
| <u>10'+</u> | <u>refers to auger</u> | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex sloping
 flat undulating Approximate slope: _____

Remarks: dry crumbly soil

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no wetland hydrology

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/10/07
 Plot ID Number: C3 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|------------------------------|--|--------------|-----------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>70</u> |
| 2 <u>A. anne's lace</u> | <input checked="" type="radio"/> H S/S T V | <u>NI</u> | <u>30</u> |
| 3 <u>rye grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>30</u> |
| 4 <u>birds foot trefoil</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>15</u> |
| 5 <u>piarella</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU+</u> | <u>10</u> |
| 6 <u>red clover</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>5</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 <u>tartar. honeysuckle</u> | H <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>5</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Orleans~~ Orleans
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: PEM
 Is the site significantly disturbed? Yes No Transect/Flag ID: D
 Is the area a potential Problem Area? Yes No Plot ID: D4 wet

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MVI SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-------------------|------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>2.5Y 2.5/1</u> | | <u>Clay</u> |
| <u>8-16"</u> | <u>B</u> | <u>2.5Y 4/1</u> | | <u>day</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 YES Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

| | |
|---|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input checked="" type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input checked="" type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Drainage Patterns in Wetland | |

Remarks:

Project Number: 05030 Date: 10/10/07
 Applicant: Horse Creek Windpower Plot ID Number: DH WCT

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-----------|
| 1 <u>typha lat.</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>40</u> |
| 2 <u>bonaset</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> |
| 3 <u>jewel weed</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>10</u> |
| 4 <u>sensitive fern</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>20</u> |
| 5 <u>wetland grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>60</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No
 Wetland Hydrology Present? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No
 Hydric Soils Present? Yes or No
 Is this Sampling Point Within a Wetland? Yes or No
 Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
Investigator: Pippin/Stebbins Town: ~~Orleans~~ Orleans
County: Jefferson State: NY
Do normal circumstances exist on site? Yes No Community: Scrub shrub
Is the site significantly disturbed? Yes No Transect/Flag ID: D
Is the area a potential Problem Area? Yes No Plot ID: 04 UPL

SOILS
Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD PD VPD
Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------------------|-----------------|------------------------|---------------------------|
| <u>0-4"</u> | <u>A</u> | <u>2.5Y 4/2</u> | <u>none</u> | <u>clayey loam</u> |
| <u>4'+</u> | <u>rejects auger</u> | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: ground very hard soil very crumbly

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>D4 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-----------------------------|--|-------------|-------------|
| 1 <u>Tartan Honeysuckle</u> | H <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>20</u> |
| 2 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>80</u> - |
| 3 <u>Flr. buckthorn</u> | H <input checked="" type="radio"/> S/S T V | <u>UPL</u> | <u>40</u> - |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>wild strawberry</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>5</u> |
| 6 <u>Canada Goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>30</u> - |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 33% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No No Hydric Soils Present? Yes or No _____

Wetland Hydrology Present? Yes or No No Is this Sampling Point Within a Wetland? Yes or No No

Hydrologic Connectivity to Off-site Wetlands? Yes or No _____ Is this Wetland Potentially Isolated? Yes or No _____

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Syracuse~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No Transect/Flag ID: D
 Is the area a potential Problem Area? Yes No Plot ID: D 22 wet

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraquoffs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-12"</u> | <u>A</u> | <u>10YR 3/1</u> | <u>none</u> | <u>clayey loam</u> |
| <u>12"+</u> | <u>B</u> | <u>10YR 5/1</u> | <u>10YR 5/2 many</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 YES Soil Saturated.
 Depth to Free Water N/A inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>D22 Wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------|--|-----------------|------------|
| 1 <u>willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>90%</u> |
| 2 <u>gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>25</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>sensitive fern</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>50</u> |
| 5 <u>field horsetail</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>60</u> |
| 6 <u>fringed reed</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>20</u> |
| 7 <u>wetland grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>30</u> |
| 8 <u>sphagnum</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>40</u> |
| 9 <u>Joe Pye weed</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>20</u> |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC _____

Percent of Dominant Species OBL, FACW _____

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Fippin/Stebbins Town: Orlean
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: forest upland
 Transect/Flag ID: D
 Plot ID: D22 UPL

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric ochraquats Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------------------|----------------|------------------------|---------------------------|
| <u>0-6"</u> | <u>A</u> | <u>2.5 4/2</u> | <u>none</u> | <u>clayey loam</u> |
| <u>6"+</u> | <u>rejects auger</u> | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:
no wetland hydrology

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/10/07
 Plot ID Number: D22 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------|-----------------------|--------------|------------|
| 1 <u>Basswood</u> | H S/S <u>(T)</u> V | <u>FACU</u> | <u>70</u> |
| 2 <u>White Oak</u> | H S/S <u>(T)</u> V | <u>FACU-</u> | <u>20</u> |
| 3 <u>hophornbeam</u> | H S/S <u>(T)</u> V | <u>FACU-</u> | <u>20</u> |
| 4 <u>grey dogwood</u> | H <u>(S/S)</u> T V | <u>FAC</u> | <u>10</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>Penn-sedge</u> | <u>(H)</u> S/S T V | <u>NL</u> | <u>80%</u> |
| 8 <u>wild strawberry</u> | <u>(H)</u> S/S T V | <u>FACU</u> | <u>5</u> |
| 9 <u>agrimony</u> | <u>(H)</u> S/S T V | <u>FACU</u> | <u>5</u> |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? (Yes) No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No (No) Hydric Soils Present? Yes or No (No)
 Wetland Hydrology Present? Yes or No (No) Is this Sampling Point Within a Wetland? Yes or No (No)
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PFO
 Transect/Flag ID: E1-14
 Plot ID: E2 wlt

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|---------------|----------|-----------------|------------------------|---------------------------|
| <u>0-3"</u> | <u>O</u> | | <u>organic matter</u> | |
| <u>0-10"</u> | <u>A</u> | <u>10YR 2/1</u> | <u>none</u> | <u>silty loam</u> |
| <u>10-16+</u> | <u>B</u> | <u>10YR 7/1</u> | <u>none</u> | <u>silty clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated.

Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:

Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/16/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>E2 Wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------------|--|-----------------|--------------|
| 1 <u>Red maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u>60</u> - |
| 2 <u>Slippery elm</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u>20</u> - |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>high bush blackberry</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW-</u> | <u>10</u> |
| 5 <u>Winterberry</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> |
| 6 <u>Rubus hispidus</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW</u> | <u>20</u> - |
| 7 <u>red maple</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>60</u> - |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 <u>wetland canex</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20%</u> - |
| 10 <u>Lycopus uniflorus</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> - |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 50%

50/20 Rule Applied? Yes No

Remarks: sparse herb layer

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Clinton~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Forested upl
 Transect/Flag ID: E
 Plot ID: E 2 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-6"</u> | <u>A</u> | <u>10YR 4/2</u> | <u>none</u> | <u>silt</u> |
| <u>6-16"</u> | <u>B</u> | <u>10YR 7/1</u> | <u>10YR 5/8</u> | <u>Silty Clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:
no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>E2 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|-----------------------|--------------|-----------|
| 1 <u>Sugar maple</u> | H S/S <u>T</u> V | <u>FACU-</u> | <u>60</u> |
| 2 <u>red oak</u> | H S/S <u>T</u> V | <u>FACU-</u> | <u>40</u> |
| 3 <u>hemlock</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>20</u> |
| 4 <u>black cherry</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>20</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 <u>black cherry</u> | H <u>S/S</u> T V | <u>FACU</u> | <u>30</u> |
| 7 <u>blackberry</u> | H <u>S/S</u> T V | <u>FACU-</u> | <u>30</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 <u>int wood fern</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>10</u> |
| 10 <u>bracted fern</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>10</u> |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:
Sparse herb layer

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No No Hydric Soils Present? Yes or No No

Wetland Hydrology Present? Yes or No No Is this Sampling Point Within a Wetland? Yes or No No

Hydrologic Connectivity to Off-site Wetlands? Yes or No _____ Is this Wetland Potentially Isolated? Yes or No _____

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: wet meadow/pasture
 Transect/Flag ID: F - no flags
 Plot ID: F wet

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD VPD
 Subgroup: mollic haplaqupts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|-------------------------------|---------------------------|
| <u>0-4"</u> | <u>A</u> | <u>10YR 3/1</u> | <u>none</u> | <u>silt clay</u> |
| <u>4-16"</u> | <u>B</u> | <u>10YR 3/1</u> | <u>10YR 7/2 10YR 5/3 many</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: man-made drainage ditch from pasture

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 NO Soil Saturated. -moist

Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: hummocky terrain

| | |
|---|------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>F wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|----------------|-------------|
| 1 <u>Soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FAW+</u> | <u>70</u> - |
| 2 <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>30</u> - |
| 3 <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 4 <u>iris</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>10</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 <u>red osier dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>20</u> - |
| 7 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>40</u> - |
| 8 <u>meadowsweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FAW+</u> | <u>10</u> |
| 9 <u>willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FAW/OBL</u> | <u>20</u> - |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 80%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or <input checked="" type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Orleans~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No *Active Ag*
 Is the area a potential Problem Area? Yes No
 Community: Active Ag - Hayfield
 Transect/Flag ID: F
 Plot ID: F UPL

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haploquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: no soils data collected - active ag hayfield w/ grey dogwood hedge surrounding

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: [Signature]

Project Number: 05030 Date: 10/10/07
 Applicant: Horse Creek Windpower Plot ID Number: F UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-------------|------------|
| 1 <u>cow. vetch</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>5</u> |
| 2 <u>D. Ann's LACE</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>5</u> |
| 3 <u>grass - upland</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>100</u> |
| 4 <u>L> timothy?</u> | H S/S T V | | |
| 5 | H S/S T V | | |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 50/20 Rule Applied? Yes No
 Percent of Dominant Species OBL, FACW

Remarks: active ag hayfield - mowed

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Yes No
 Wetland Hydrology Present? Yes or No Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Yes No
 Hydric Soils Present? Yes or No Yes No
 Is this Sampling Point Within a Wetland? Yes or No Yes No
 Is this Wetland Potentially Isolated? Yes or No Yes No

Remarks: Photo Reference Number:

Stream Inventory



Observer:

Name: Pippin/Stebbins
Weather: overcast

Project Information:

Name: Horse Creek
Number: 05030 Date: 10/10/07

Stream Name: unnamed (IC-G)

Stream Location (nearest road, structure, etc.):

turbine 62, Stock land
Adjacent Community: Active Ag - Hayfields, Multiple Harvest

Stream Gradient - gentle 0-3%
- moderate
- steep

Bank Width: 3-5 feet

Stream Width: 2-4 feet

Water Depth: no flow (A)

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank some
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other

Flow: - Permanent
- Intermittent

Photo # G Channel
Flag #'s ICG1-G

Additional Comments: drift marks
Soils = (CIB) Chamont silty clay, SPD, Aeric Ochraqualf
Orleans Township, Jefferson Cty

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Clinton~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PFD/PS
 Is the site significantly disturbed? Yes No Transect/Flag ID: H 1-10
 Is the area a potential Problem Area? Yes No Plot ID: H 3 wet

SOILS

Series and Phase: (KgA) Kingsbury silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------------|-----------------|------------------------------|---------------------------|
| <u>0-5"</u> | <u>A</u> | <u>10YR 4/1</u> | <u>10YR 5/1 10YR 5/6 few</u> | <u>clay</u> |
| <u>5"</u> | <u>bedrock</u> | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions-Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 NO Soil Saturated. - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>H3. wet</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|-----------------------|-----------------|-------------|
| 1 | <u>Green ash</u> | H S/S <u>(T)</u> V | <u>FACW</u> | <u>50</u> - |
| 2 | | H S/S T V | | |
| 3 | | H S/S T V | | |
| 4 | <u>meadowsweet</u> | H <u>(S/S)</u> T V | <u>FACW+</u> | <u>20</u> |
| 5 | <u>willow</u> | H <u>(S/S)</u> T V | <u>FACW/OBL</u> | <u>50</u> - |
| 6 | <u>grey dogwood</u> | H <u>(S/S)</u> T V | <u>FAC</u> | <u>40</u> - |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | <u>wetland carex</u> | <u>(H)</u> S/S T V | <u>FACW/OBL</u> | <u>20</u> - |
| 10 | <u>wetland grass</u> | <u>(H)</u> S/S T V | <u>FACW/OBL</u> | <u>50</u> - |
| 11 | <u>MOSS</u> | <u>(H)</u> S/S T V | <u>FACW/OBL</u> | <u>30</u> - |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 83%

50/20 Rule Applied? (Yes) No

Remarks:

WETLAND DETERMINATION

| | |
|---|---|
| Hydrophytic Vegetation Present? <u>(Yes)</u> or No | Hydric Soils Present? <u>(Yes)</u> or No |
| Wetland Hydrology Present? <u>(Yes)</u> or No | Is this Sampling Point Within a Wetland? <u>(Yes)</u> or No |
| Hydrologic Connectivity to Off-site Wetlands? <u>(Yes)</u> or <u>(No)</u> | Is this Wetland Potentially Isolated? <u>(Yes)</u> or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Orleans~~ Orleans
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Active Ag Community: Active Ag - Hayfield
 Is the site significantly disturbed? Yes No AG Transect/Flag ID: H
 Is the area a potential Problem Area? Yes No Plot ID: H3 upl

SOILS

Series and Phase: (CIB) Chaumont silty clay Drainage Class: WD MWD ~~SFB~~ PD VPD
 Subgroup: Aeric Ochraqualts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfid Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: no soil taken - plowed field

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated inches.
 Soil Saturated.
 Depth to Free Water inches.
 Depth to Saturated Soils inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>H3 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-------------|------------|
| 1 <u>Can. gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>5</u> |
| 2 <u>R. vine lace</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>5</u> |
| 3 <u>wild strawberries</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>5</u> |
| 4 <u>Upland grass-hay</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>100</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

Hayfield moved to 3!!

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: ~~Clayton~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No *shrubby hedgerow*
 Is the area a potential Problem Area? Yes No
 Community: PSS
 Transect/Flag ID: I1-10
 Plot ID: I1 wet

SOILS

Series and Phase: (KGA) Kingsbury silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Acric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|-----------------|---------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>10YR 4/1</u> | <u>none</u> | <u>clay</u> |
| <u>8"+</u> | <u>B</u> | <u>10YR 4/1</u> | <u>10YR 6/2, 10YR 5/B</u> | <u>Many clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating
 sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 NO Soil Saturated. - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks:
hummocky terrain

Project Number: 05030

Applicant: Horse Creek Windpower

Date: 10/10/07

Plot ID Number: I1 wet

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|------------|----------|
| 1 Willow | H <input checked="" type="radio"/> S/S T V | FACW/OBL | 60 - |
| 2 meadowsweet | H <input checked="" type="radio"/> S/S T V | FACW+ | 30 - |
| 3 red osier dogwood | H <input checked="" type="radio"/> S/S T V | FACW+ | 20 |
| 4 dwarf raspberry | H <input checked="" type="radio"/> S/S T V | FACW | 20 |
| 5 grey dogwood | H <input checked="" type="radio"/> S/S T V | FAC | 20 |
| 6 | H S/S T V | | |
| 7 wetland grass | <input checked="" type="radio"/> H S/S T V | FACW/OBL | 40 - |
| 8 wetland sedge | <input checked="" type="radio"/> H S/S T V | FACW/OBL | 30 |
| 9 moss | <input checked="" type="radio"/> H S/S T V | FACW/OBL | 50 - |
| 10 green butyrch | <input checked="" type="radio"/> H S/S T V | OBL | 5 |
| 11 Swamp milkweed | <input checked="" type="radio"/> H S/S T V | OBL | 5 |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100%

Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/10/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: Successional shrubland
 Transect/Flag ID: I
 Plot ID: I 1 UPL

SOILS

Series and Phase: (Kga) Kingsbury silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>2.5Y 3/3</u> | <u>none</u> | <u>silt loam</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex
 flat undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/10/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>I1 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-------------|
| 1 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>90</u> - |
| 2 <u>willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 3 <u>meadowsweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> |
| 4 <u>Tatar honeysuckle</u> | H <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>30</u> - |
| 5 <u>strawberry</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>5</u> - |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: Spars herb layer

WETLAND DETERMINATION

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes or No <u>No</u> | Hydric Soils Present? Yes or No <u>No</u> |
| Wetland Hydrology Present? Yes or No <u>No</u> | Is this Sampling Point Within a Wetland? Yes or No <u>No</u> |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/11/07
Investigator: Pippin/Stebbins Town: Clayton
County: Jefferson State: NY
Do normal circumstances exist on site? Yes No *old an field* Community: wet meadow
Is the site significantly disturbed? Yes No *some tree wetlands* Transect/Flag ID: J1-15
Is the area a potential Problem Area? Yes No Plot ID: J1 wet

SOILS

Series and Phase: (GIB) Galway silt loam Drainage Class: WD MW SPD PD VPD
Subgroup: Typic Entrochrepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-14" | A | 10YR 3/1 | none | silt clay |
| 14" + | B | 10YR 3/1 | 10YR 2/1 many | silt clay |

Hydric Soil Indicators:

- Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating
sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated. - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Hummocky terrain

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/11/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>J1 wet</u> |

| VEGETATION | | | |
|--------------------------------|--|--------------|-------------|
| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 <u>tussock sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>90</u> - |
| 2 <u>narrow leaf goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>45</u> - |
| 3 <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>5</u> |
| 4 <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>5</u> |
| 5 <u>blue vervain</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>5</u> |
| 6 <u>Bidens frondosa</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>30</u> |
| 7 <u>Swamp milkweed</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>5</u> |
| 8 <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>5</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

| | |
|---|--|
| Percent of Dominant Species OBL, FACW, FAC <u>50%</u> | Percent of Dominant Species OBL, FACW <u>50%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks:

| WETLAND DETERMINATION | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or No |
| Remarks: <u>low bowl in topography collects moisture no flow, no connectivity</u> | Photo Reference Number: |

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/11/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No *has been placed*
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: old field
 Transect/Flag ID: J
 Plot ID: J1 UPL

SOILS
 Series and Phase: (G1B) Galway silt loam Drainage Class: WD MWD SPD PD VPD
 Subgroup: Typic Entrochrepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 3/3</u> | <u>none</u> | <u>silty clay</u> |
| | | | | |
| | | | | |

 Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime
 Landscape position: concave flat convex undulating sloping Approximate slope: _____
 Remarks:

HYDROLOGY

| | |
|---|---|
| <input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> No Recorded Data Available <input type="checkbox"/> Stream, Lake or Tide Gauge <input type="checkbox"/> Aerial Photographs | Field Observations <input type="checkbox"/> Ground Surface Inundated _____ inches. <input type="checkbox"/> Soil Saturated. <input type="checkbox"/> Depth to Free Water _____ inches. <input type="checkbox"/> Depth to Saturated Soils _____ inches. |
|---|---|

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in upper 12 inches. <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetland | Secondary Indicators (2 or more required) <input type="checkbox"/> Oxidized Root Channels in upper 12 inches <input type="checkbox"/> Water-Stained leaves <input type="checkbox"/> Local Soil Survey <input type="checkbox"/> Morphological Plant Adaptations <input type="checkbox"/> Other (Explain in Remarks) |
|--|--|

Remarks: no wetland hydrology

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/11/07
 Plot ID Number: J1 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|---------------------------|--|-------------|-------------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>60</u> - |
| 2 <u>Canada gold.</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>30</u> - |
| 3 <u>narrow leaf gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>30</u> - |
| 4 <u>clover vetch</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>20</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 33%

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/11/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PEM
 Is the site significantly disturbed? Yes No Transect/Flag ID: K1-6
 Is the area a potential Problem Area? Yes No Plot ID: K3 wet

SOILS

Series and Phase: (Cp) Covington silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Mollic Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 3/1</u> | <u>none</u> | <u>clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated. - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/11/07
 Plot ID Number: K3 wet

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|------------------------------|--|-----------------|-----------|
| 1 <u>narrow leaf cattail</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>60</u> |
| 2 <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>40</u> |
| 3 <u>wetland carol.</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 4 <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100 %

Percent of Dominant Species OBL, FACW 100 %

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/11/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *plowing* Community: active ag
 Is the site significantly disturbed? Yes No Transect/Flag ID: K
 Is the area a potential Problem Area? Yes No Plot ID: K3 UPL

SOILS

Series and Phase: (cp) Conington silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Mollic Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: no soil data taken - plowed/cultivated field

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/11/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>R3 OPL</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|-----------------------|--------------|-------------|
| 1 | <u>Upland Grass</u> | <u>(H)</u> S/S T V | <u>FACU</u> | <u>100%</u> |
| 2 | <u>red clover</u> | <u>(H)</u> S/S T V | <u>FACU-</u> | <u>30%</u> |
| 3 | | H S/S T V | | |
| 4 | | H S/S T V | | |
| 5 | | H S/S T V | | |
| 6 | | H S/S T V | | |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: mowed for 311

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <u>Yes or No</u> | Hydric Soils Present? <u>Yes or No</u> |
| Wetland Hydrology Present? <u>Yes or No</u> | Is this Sampling Point Within a Wetland? <u>Yes or No</u> |
| Hydrologic Connectivity to Off-site Wetlands? <u>Yes or No</u> | Is this Wetland Potentially Isolated? <u>Yes or No</u> |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/11/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PSS
 Transect/Flag ID: L
 Plot ID: L2 wet

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|-------------------|-------------------------------|---------------------------|
| <u>0-2"</u> | <u>A</u> | <u>10YR 3/1</u> | <u>none</u> | <u>clay</u> |
| <u>2-8"</u> | <u>B</u> | <u>10YR 5/1</u> | <u>10YR 5/8 some</u> | <u>clay</u> |
| <u>8" +</u> | <u>C</u> | <u>Gley 8/10Y</u> | <u>10YR 4/1 10YR 6/8 many</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated. - MOIST
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Strained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/11/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>1.2 WPT</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------|---|----------------|---------------------------|
| 1 <u>willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FAW/OBL</u> | <u>70</u> - |
| 2 <u>meadow sweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FAW+</u> | <u>60</u> - |
| 3 <u>open dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>40</u> - |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>field horsetail</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>30</u> - |
| 6 <u>moss</u> | <input checked="" type="radio"/> H S/S T V | <u>FAW/OBL</u> | <u>70</u> |
| 7 <u>wetland corex</u> | <input checked="" type="radio"/> H S/S T V | <u>FAW/OBL</u> | 70 <u>30</u> - |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 67%

Percent of Dominant Species OBL, FACW 67%

50/20 Rule Applied?

Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/11/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: upland shrub
 Is the site significantly disturbed? Yes No Transect/Flag ID: L
 Is the area a potential Problem Area? Yes No Plot ID: L2 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|-------------------|------------------------|---------------------------|
| 0-9" | A | 2.5Y 5/3 | none | silty clay |
| 9"+ | | negligible orange | | |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: Soil dry on 10/11/07

HYDROLOGY

Recorded Data (Describe in Remarks) _____
 No Recorded Data Available _____
 Stream, Lake or Tide Gauge _____
 Aerial Photographs _____

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated _____
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
- Saturated in upper 12 inches.
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
- Water-Stained leaves
- Local Soil Survey
- Morphological Plant Adaptations
- Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/11/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>L2 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------------|--|--------------|-------------|
| 1 <u>Siots vine</u> | H S/S <input checked="" type="radio"/> T V | <u>NL</u> | <u>10</u> - |
| 2 <u>A. ASPEN</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>10</u> - |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>70</u> - |
| 5 <u>meadowsweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>30</u> - |
| 6 <u>arrowwood downy</u> | H <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> - |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 <u>wild chawbany</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>20</u> - |
| 9 <u>farrow</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> - |
| 10 <u>old field cinquefoil</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>10</u> - |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 29%

Percent of Dominant Species OBL, FACW 14%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins/Trombath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No Transect/Flag ID: L1-61
 Is the area a potential Problem Area? Yes No Plot ID: L41 wet

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|---------------|----------|-----------------|--|---------------------------|
| <u>0-7"</u> | <u>A</u> | <u>10YR 5/2</u> | <u>none</u> | <u>clay</u> |
| <u>7"-16"</u> | <u>B</u> | <u>10YR 5/2</u> | <u>10YR 5/6 some</u> <u>10YR 7/2 some</u> | <u>clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating
 sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 No Ground Surface Inundated N/A inches.
 No Soil Saturated. - moist

Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks:

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/16/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>L41 Wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|------------------------------|--|-----------------|-------------|
| 1 <u>wet willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>50</u> - |
| 2 <u>meadow sweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>75</u> - |
| 3 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAL</u> | <u>30</u> |
| 4 <u>red osier dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>5</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>5</u> |
| 7 <u>narrow leaved gold.</u> | <input checked="" type="radio"/> H S/S T V | <u>FAL</u> | <u>5</u> |
| 8 <u>MOSS</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20</u> - |
| 9 <u>field horse tail</u> | <input checked="" type="radio"/> H S/S T V | <u>FAL</u> | <u>10</u> - |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 75%
 50/20 Rule Applied? Yes No

Remarks: sparse herb layer - shrubs very thick

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins/Trembora Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Successional shrubland
 Transect/Flag ID: L
 Plot ID: L41 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------------------|-----------------|------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>10YR 5/3</u> | <u>none</u> | <u>silty clay</u> |
| <u>8-12"</u> | <u>B</u> | <u>10YR 5/3</u> | <u>none</u> | <u>clay</u> |
| <u>12"+</u> | <u>rejects auger</u> | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:
No wetland hydrology

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/16/07
 Plot ID Number: L41 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------------|--|--------------|-------------|
| 1 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>50</u> - |
| 2 <u>meadow sweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>40</u> - |
| 3 <u>arrowwood doorny</u> | H <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>timothy</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>50</u> - |
| 6 <u>R. Anne's lace</u> | <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> |
| 7 <u>canada gold.</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>30</u> - |
| 8 <u>narrow leaved gold</u> | <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>30</u> - |
| 9 <u>wild strawberry</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>10</u> |
| 10 <u>yanon</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>10</u> |
| 11 <u>old field cinquefoil</u> | <input checked="" type="radio"/> S/S T V | <u>FACU-</u> | <u>10</u> |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 60%

Percent of Dominant Species OBL, FACW 20%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No
 Wetland Hydrology Present? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No
 Hydric Soils Present? Yes or No
 Is this Sampling Point Within a Wetland? Yes or No
 Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins / Trumbolt Town: Clayton
 County: Jefferson State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: sedge meadow
 Transect/Flag ID: M1-15
 Plot ID: M1 wet

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualks Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-3"</u> | <u>A</u> | <u>10YR 4/3</u> | <u>none</u> | <u>silty clay</u> |
| <u>3-9"</u> | <u>B</u> | <u>10YR 3/2</u> | <u>none</u> | <u>silty clay</u> |
| <u>9-16"</u> | <u>C</u> | <u>10YR 2/1</u> | <u>none</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 No Ground Surface Inundated N/A inches.
 No Soil Saturated.

Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches - lots
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/16/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>M1-wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------|--|--------------|-------------|
| 1 <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>50</u> - |
| 2 <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>40</u> - |
| 3 <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> |
| 4 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>20</u> |
| 5 <u>narrowleaf gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>20</u> |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100%

Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks: swamp milkweed < 5%
green bulrush

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Hydric Soils Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or <input type="radio"/> No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins/Tremblath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No agland
 Is the area a potential Problem Area? Yes No
 Community: Old Field - Ag
 Transect/Flag ID: M
 Plot ID: M1 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 4/3</u> | <u>none</u> | <u>silty clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: soil disturbed by Ag land use

HYDROLOGY

| | |
|--|--|
| <input type="checkbox"/> Recorded Data (Describe in Remarks) | Field Observations |
| <input type="checkbox"/> No Recorded Data Available | <input type="checkbox"/> Ground Surface Inundated _____ inches. |
| <input type="checkbox"/> Stream, Lake or Tide Gauge | <input type="checkbox"/> Soil Saturated. |
| <input type="checkbox"/> Aerial Photographs | Depth to Free Water _____ inches. |
| Wetland Hydrology Indicators: | Depth to Saturated Soils _____ inches. |
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no wetland hydrology

| | |
|---|--|
| Project Number: <u>05030</u> Applicant: <u>Horse Creek Windpower</u> | Date: <u>10/16/07</u> Plot ID Number: <u>M1 UPL</u> |
|---|--|

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-------------|-----------|
| 1 <u>Amo</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>90</u> |
| 2 <u>D. Anne's lace</u> | <input checked="" type="radio"/> B S/S T V | <u>NL</u> | <u>10</u> |
| 3 <u>Upland grass</u> | <input checked="" type="radio"/> B S/S T V | <u>FACU</u> | <u>30</u> |
| 4 <u>cow vetch</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>10</u> |
| 5 | H S/S T V | | |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: Ag Land - Hayfield (not cut)

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins/Trembar Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *history of ag use*
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: wet meadow
 Transect/Flag ID: N 1-8
 Plot ID: N 2 wet

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Aric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|------------------|------------------------|---------------------------|
| <u>0-9"</u> | <u>A</u> | <u>10YR 3/2</u> | <u>None</u> | <u>silty loam</u> |
| <u>9-14"</u> | <u>B</u> | <u>7.5YR 5/2</u> | <u>None</u> | <u>silty clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histis Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating
 sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Project Number: 05030 Date: 10/16/07
 Applicant: Horse Creek Windpower Plot ID Number: N 2 wet

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|---------------------------|--|--------------|-----------|
| 1 <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>40</u> |
| 2 <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>30</u> |
| 3 <u>narrow leaf gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>25</u> |
| 4 <u>Bidens frondosa</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>10</u> |
| 5 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>20</u> |
| 6 <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks: Swamp milkweed < 5%
wool grass

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No No
 Wetland Hydrology Present? Yes or No No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No No
 Hydric Soils Present? Yes or No No
 Is this Sampling Point Within a Wetland? Yes or No No
 Is this Wetland Potentially Isolated? Yes or No
 Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins / Frembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Hayfield
 Transect/Flag ID: N
 Plot ID: N2 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric ochraqual fs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks: no soils data collected
Land filled - layers disrupted

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/16/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>N2 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-------------|-----------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>85</u> |
| 2 <u>Q. Anne's Lace</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>60</u> |
| 3 <u>upland grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>30</u> |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied?

Yes No

Remarks:

Actual Ag - Hayfield

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No

Hydric Soils Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No

Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

Stream Inventory

**Observer:**

Name: Kippin/Tremblay/Stobiers
Weather: Fair

Project Information:

Name: Horse Creek
Number: 05030 Date: 10/16/07

Stream Name: Unnamed channel (flagged as IC-0)

Stream Location (nearest road, structure, etc.):

between turbines 26 + 27; NE of Rte 12; Kevin Forkey Trust property
Adjacent Community: Old Field

Stream Gradient - gentle
- moderate
- steep

Bank Width: 15-19'

Stream Width: 3-5'

Water Depth: no flow

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other

Flow: - Permanent
- Intermittent

Photo # 1C0
Flag #'s 1C0 1-11

Additional Comments: soils = (KGA) Kingsburg silty clay, SPD, Acid Ochragualts
Clayton Township, Jefferson Cty

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins/Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Agland Community: wet meadow
 Is the site significantly disturbed? Yes No fire Transect/Flag ID: P1-7
 Is the area a potential Problem Area? Yes No RUTS Plot ID: P3 wet

SOILS

Series and Phase: (CIA) Chautauque silty clay Drainage Class: WD MWD ~~SPD~~ PD VPD
 Subgroup: Aeric Ochraqualc Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 5/2</u> | <u>10YR 4/8 some</u> | <u>clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated N/A inches.
 ND Soil Saturated. - moist

Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks:

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/16/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>P3 WCT</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-----------|
| 1 <u>green br rush</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>50</u> |
| 2 <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>50</u> |
| 3 <u>wetland carex</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>30</u> |
| 4 <u>calico oak</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>75</u> |
| 5 <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/16/07
 Investigator: Pippin/Stebbins/Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Ag/OF Community: Active Ag/ Old Field
 Is the site significantly disturbed? Yes No Transect/Flag ID: P
 Is the area a potential Problem Area? Yes No Plot ID: P 3 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWDP SPD PD VPD
 Subgroup: Acric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 3/3</u> | <u>none</u> | <u>silty clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated _____
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/16/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>P3 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------|--|--------------|-------------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>50</u> - |
| 2 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>75</u> - |
| 3 <u>common milkweed</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>10</u> |
| 4 <u>R. Innes Lael</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>35</u> |
| 5 <u>Canada Gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>20</u> |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 50% Percent of Dominant Species OBL, FACW 50%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No
 Wetland Hydrology Present? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No
 Hydric Soils Present? Yes or No
 Is this Sampling Point Within a Wetland? Yes or No
 Is this Wetland Potentially Isolated? Yes or No

Remarks: Photo Reference Number:

Stream Inventory

**Observer:**

Name: Piffin/Trenbath/Shehro
Weather: _____

Project Information:

Name: Horse Creek
Number: 05030 Date: 10/16/07

Stream Name: Unnamed (IC-Q)

Stream Location (nearest road, structure, etc.):

turbine 54 workspace, N of Overbluff Rd; Patricia Patchen Living Trust Property
Adjacent Community: shrubby hedge row in Ag Land

Stream Gradient - gentle
- moderate _____
- steep _____

Bank Width: 25-30'

Stream Width: 10-12'

Water Depth: no flow - ord many high water mark 6-12"

Substrate: - Bed Rock
- Boulder
- Cobble _____
- Gravel _____
- Sand _____
- Silt _____
- Clay _____

Instream Cover: - Undercut bank _____
- Overhanging vegetation _____
- Logs/woody debris _____
- Deep pools _____
- Other _____

Flow: - Permanent _____
- Intermittent

Photo # IC Q
Flag #'s IC Q 1-11

Additional Comments: culvert @ road crossing
soils = (Gv) Guffin clay, PD/VPD, mollic Haplagnapt
Clayton Twnshp, Jefferson Cty

Stream Inventory



Observer:

Name: Stebbins/Trumbath/Pippin
Weather: Overcast/Light Rain

Project Information:

Name: Horse Creek
Number: 05030 Date: 10/17/07

Stream Name: Unnamed - IC R

Stream Location (nearest road, structure, etc.):

near turbine 10-AH W of Rte 12; E of DePauville Rd; Haas/Garnsey property
Adjacent Community: Spruce Plantation

Stream Gradient - gentle
- moderate
- steep

Bank Width: 20-25' at widest, 10-15' avg

Stream Width: 10-12' at widest, 5-8' avg

Water Depth: no flow

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other

Flow: - Permanent
- Intermittent

Photo # IC R
Flag #'s IC R

Additional Comments: Drift lines

Soils = (Gv) Guffin clay, PD/VPD, mollic Haplaquept

Clayton township, Jefferson City

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/17/07
 Investigator: Pippin/Stebbins/Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PEN w/associated channel
 Transect/Flag ID: R1-33
 Plot ID: R9 wet

SOILS

Series and Phase: (Gv) Guffin Clay Drainage Class: WD MWD SPD VPD
 Subgroup: Mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 3/2</u> | <u>None</u> | <u>silty clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping _____ Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/17/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>R9 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|--------------|-----------|
| 1 <u>blue vervain</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>25</u> |
| 2 <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>25</u> |
| 3 <u>Elecampane</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>60</u> |
| 4 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>40</u> |
| 5 <u>Willow herb</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 6 <u>NE aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>10</u> |
| 7 <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/17/07
 Investigator: Pippin/Stebbins / Trembath Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Successional shrubland
 Transect/Flag ID: R1-33
 Plot ID: R9 UPL

SOILS

Series and Phase: (FAB) Farmington loam Drainage Class: WD MWD SPD PD VPD
 Subgroup: Lithic Entrochrepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 3/2</u> | <u>None</u> | <u>silty clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/17/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>R9 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|-----------------------|--------------|-----------|
| 1 <u>grey dogwood</u> | H <u>(S/S)</u> T V | <u>FAC</u> | <u>90</u> |
| 2 <u>buckthorn</u> | H <u>(S/S)</u> T V | <u>UPL</u> | <u>60</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>old field ragwort</u> | <u>(H)</u> S/S T V | <u>FACU-</u> | <u>5</u> |
| 6 <u>wild strawberry</u> | <u>(H)</u> S/S T V | <u>FACU.</u> | <u>5</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? (Yes) No

Remarks: Sparse herb layer

WETLAND DETERMINATION

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes or <u>No</u> | Hydric Soils Present? Yes or <u>No</u> |
| Wetland Hydrology Present? Yes or <u>No</u> | Is this Sampling Point Within a Wetland? Yes or <u>No</u> |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/17/07
 Investigator: Pippin/Stebbins/Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? No Yes *farm pond area under 100 yds from stream side highly disturbed PFO less soil has been driven through*
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PFO w/ associated farm pond + channel
 Transect/Flag ID: S 1-21
 Plot ID: S16 wet.

SOILS

Series and Phase: (Cp) Covington silty clay Drainage Class: WD MWI SPD PD VPD
 Subgroup: Mollic Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|-------------------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>10YR 3/1</u> | <u>none</u> | <u>loamy clay</u> |
| <u>8-14"</u> | <u>B</u> | <u>10YR 3/1</u> | <u>10YR 4/8, 10YR 5/8, 10YR 8/1</u> | <u>clay</u> |
| <u>14"+</u> | <u>C</u> | <u>10YR 7/2</u> | <u>10YR 5/8</u> | <u>many clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex _____ sloping _____ Approximate slope: _____
 flat undulating _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks) _____
 No Recorded Data Available _____
 Stream, Lake or Tide Gauge _____
 Aerial Photographs _____

Field Observations
NO Ground Surface Inundated N/A inches.
YES Soil Saturated.
 Depth to Free Water N/A inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/17/07
 Plot ID Number: S Wet

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------------|--|-----------------|-----------|
| 1 <u>fringed sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>30</u> |
| 2 <u>blue flag</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>20</u> |
| 3 <u>green burrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> |
| 4 <u>wetland carex (other)</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>10</u> |
| 5 <u>tufted head</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>5</u> |
| 6 <u>tussock sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>20</u> |
| 7 <u>red osier</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 <u>green ash</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW</u> | <u>30</u> |
| 11 <u>Am. elm</u> | H S/S <input checked="" type="radio"/> V | <u>FACW-</u> | <u>30</u> |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100%

Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number: 0

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/17/07
 Investigator: Pippin/Stebbins/Trenbath Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: Upland forest
 Is the site significantly disturbed? Yes No Transect/Flag ID: S
 Is the area a potential Problem Area? Yes No Plot ID: S 16 UPL

SOILS

Series and Phase: (Cp) Covington silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: mollic Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-6"</u> | <u>A</u> | <u>10YR 2/2</u> | <u>none</u> | <u>silty clay loam</u> |
| <u>6-16"</u> | <u>B</u> | <u>10YR 6/1</u> | <u>10YR 5/8 many</u> | <u>clay</u> |

Hydric Soil Indicators:

Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators

Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/17/07
 Plot ID Number: S 16 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-----------------------------|-----------------------|--------------|-------------|
| 1 <u>BUR oak</u> | H S/S <u>T</u> V | <u>FAC-</u> | <u>90</u> - |
| 2 <u>Am. elm</u> | H S/S <u>T</u> V | <u>FACW-</u> | <u>20</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>black thorn</u> | H <u>S/S</u> T V | <u>UPL</u> | <u>30</u> - |
| 6 <u>tartar honeysuckle</u> | H <u>S/S</u> T V | <u>FACU</u> | <u>60</u> - |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 <u>wild strawberry</u> | <u>T</u> S/S T V | <u>FACU</u> | <u>5</u> - |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 25% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

sparse herb layer

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/17/07
 Investigator: Pippin/Stebbins / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PEM w/PFO + channel
 Transect/Flag ID: T 1-29
 Plot ID: T 6 wet

SOILS FD/NPD

Series and Phase: (GV) Guffin clay
(CIB) Chaumont silty clay
 Subgroup: mollic Haplaquepts
Aeric Ochraqualfs
 Drainage Class: WD MWD PD VPD
 Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------|---------|--------------|------------------------|---------------------------|
| 0-8" | A | 10YR 3/1 | none | loamy clay |
| 8-16"+ | B | 10YR 5/1 | 10YR 5/6 few | clay |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave _____ convex _____ sloping _____ Approximate slope: _____
 flat undulating _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/17/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>T6 Wct</u> |

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|---------------------------|--|-----------------|-------------|
| 1 <u>greenbutrush</u> | <input checked="" type="radio"/> S/S T V | <u>DBL</u> | <u>30</u> - |
| 2 <u>blue vervain</u> | <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>30</u> - |
| 3 <u>wetland sedge</u> | <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>10</u> |
| 4 <u>fringed sedge</u> | <input checked="" type="radio"/> S/S T V | <u>DBL</u> | <u>40</u> - |
| 5 <u>wool grass</u> | <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> |
| 6 <u>Narrowleaf goss.</u> | <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>15</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/17/07
 Investigator: Pippin/Stebbins / Fremborn Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: Successional shrublad
 Transect/Flag ID: T
 Plot ID: T6 UPL

SOILS

Series and Phase: (C1B) Chaumont silty clay and (Gv) Guffin clay Drainage Class: WD MWD SPD (FD VPD)
 Subgroup: Acric Ochragumpts and Mollic Haploaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------------------------|------------------------|---------------------------|
| <u>0-12"</u> | <u>A</u> | <u>10YR 3/3</u> | <u>none</u> | <u>silt loam</u> |
| <u>12"+</u> | | <u>rejects auger - root/stone</u> | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating
 sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/17/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>T60PL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-----------------------------|--|-------------|-------------|
| 1 <u>bur oak</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC-</u> | <u>30</u> - |
| 2 <u>white spruce</u> | H <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>10</u> |
| 3 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>60</u> - |
| 4 <u>narrow honeysuckle</u> | H <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>60</u> - |
| 8 <u>wild straw</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>25</u> |
| 9 <u>yanow</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>30</u> - |
| 10 <u>Canada gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>30</u> - |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 40% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes or <input checked="" type="radio"/> No | Hydric Soils Present? Yes or <input checked="" type="radio"/> No |
| Wetland Hydrology Present? Yes or <input checked="" type="radio"/> No | Is this Sampling Point Within a Wetland? Yes or <input checked="" type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: _____ Photo Reference Number: _____

Stream Inventory



Observer:

Name: 200 hrs / Pembak / Pippin
Weather: Fair

Project Information:

Name: Horse Creek
Number: 05030 Date: 10/17/07

Stream Name: Unnamed - ICU

Stream Location (nearest road, structure, etc.):

Near turbine 46 N of Overbluff Rd, Matthews Property
Adjacent Community: Active Ag Land - Hay Field

Stream Gradient - gentle
- moderate
- steep

Bank Width: 10-15'

Stream Width: 3-5'

Water Depth: no flow

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other

*dense growth of tussock sedge etc
from channel bottom*

Flow: - Permanent
- Intermittent

Photo # ICU
Flag #'s ICU 1-12

Additional Comments: _____
_____ soils = (Gv) Guffin clay; PD/NPD, mollic Haplaquept
_____ Clayton township, Jefferson City

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: Wet meadow
 Transect/Flag ID: V1-7
 Plot ID: V4 wet

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------|---------|--------------|-----------------------------------|---------------------------|
| 0-10" | A | 10YR 6/1 | 10YR 5/8 - some | clay |
| 10-16" | B | 10YR 7/1 | 10YR 5/8 10YR 8/1 - many distinct | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex _____ sloping _____
 flat _____ undulating _____ Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated. - MOIST
 Depth to Free Water N/A inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: hummocky terrain

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/25/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>V4 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-------------|
| 1 <u>Spartan rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>65</u> - |
| 2 <u>calico aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW-</u> | <u>40</u> - |
| 3 <u>MOSS</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>30</u> |
| 4 <u>Carex scoparia</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>25</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>20</u> - |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

| | |
|---|--|
| Percent of Dominant Species OBL, FACW, FAC <u>100%</u> | Percent of Dominant Species OBL, FACW <u>67%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or <input checked="" type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or No |

Remarks: potentially connected to system in species (drainage)

Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *Active Ag*
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: Active Ag Field - Hay
 Transect/Flag ID: V
 Plot ID: V 4 UPL

SOILS

Series and Phase: (C1B) Chaumont Silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Acric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no wetland hydrology

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/25/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>V4 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|--------------|------------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>100</u> |
| 2 <u>red clover</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>20</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: Moved to S11

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/26/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *small PSS between spruce* Community: PSS
 Is the site significantly disturbed? Yes No *plantation and hayfield* Transect/Flag ID: W 1-6
 Is the area a potential Problem Area? Yes No Plot ID: W 1 wet

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Aeric Ochraqual Ps Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|----------------------------------|---------------------------|
| <u>0-8"</u> | <u>A</u> | <u>10YR 3/1</u> | | <u>silty clay</u> |
| <u>8-16"</u> | <u>B</u> | <u>10YR 6/1</u> | <u>10YR 5/6 - some, distinct</u> | <u>clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex _____ sloping _____
 flint _____ undulating _____
 Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated - moist
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: hummocky terrain

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/26/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>W1 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: | |
|----------------------------|--|-----------------|-----------|---|
| 1 <u>Wet willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>40</u> | - |
| 2 <u>Red osier dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>20</u> | |
| 3 <u>grey dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>60</u> | - |
| 4 <u>White spruce</u> | H <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>10</u> | |
| 5 <u>meadowsweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> | |
| 6 <u>Silver maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW</u> | <u>20</u> | - |
| 7 | H S/S T V | | | |
| 8 <u>fox sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> | |
| 9 <u>Soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>60</u> | - |
| 10 <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> | |
| 11 <u>Narrow leaf gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>10</u> | |
| 12 | H S/S T V | | | |
| 13 | H S/S T V | | | |
| 14 | H S/S T V | | | |
| 15 | H S/S T V | | | |
| 16 | H S/S T V | | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 75%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/26/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: Active Ag
 Transect/Flag ID: W
 Plot ID: W1 UPL

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks: No soil sample taken - soils disturbed from plowing

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology

| | |
|---|------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/26/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>W1JPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|--------------|-------------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>100%</u> |
| 2 <u>red clover</u> | <input checked="" type="radio"/> S/S T V | <u>FACU-</u> | <u>10%</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: mowed to 5"

WETLAND DETERMINATION

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes or <input checked="" type="radio"/> No | Hydric Soils Present? Yes or <input checked="" type="radio"/> No |
| Wetland Hydrology Present? Yes or <input checked="" type="radio"/> No | Is this Sampling Point Within a Wetland? Yes or <input checked="" type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: _____ Photo Reference Number: _____

Stream Inventory



Observer:
Name: Stebbins/Pippin
Weather: Sunny

Project Information:
Name: Horseshoe Creek
Number: DSD30 Date: 10/26/07

Stream Name: unnamed - IC X

Stream Location (nearest road, structure, etc.):
Lower rd (culvert under) SW of Sternberg Rd
Adjacent Community: Active Ag Hayfield, Old field

Stream Gradient - gentle
- moderate
- steep

Bank Width: 35-40' (N) 8-10' (S)

Stream Width: variable, avg 10-15 feet (N) 4-6 feet (S)

Water Depth: no flow

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

[also some areas of sediment deposit]

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other shallow pools on S side of lower rd 1-3"

Flow: - Permanent
- Intermittent

Photo # IC X
Flag #'s IC X 1-14

Additional Comments: 2 foot diameter corrugated culvert
soils = Galway silt loam, MWD/WA, typical Entrochrepts
Clayton township, Jefferson Co

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/26/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: (perennial) channel w/ PFO+PEM floodplain
 Is the site significantly disturbed? Yes No Transect/Flag ID: Y 1-19
 Is the area a potential Problem Area? Yes No Plot ID: Y 7 Wet

SOILS
 Series and Phase: (KGA) Kingsbury silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Anc Ochraqualts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|-----------------|--------------------------|---------------------------|
| <u>0-7"</u> | <u>A</u> | <u>10YR 4/1</u> | <u>none</u> | <u>clay</u> |
| <u>7-</u> | <u>B</u> | <u>10YR 6/1</u> | <u>10YR 5/8 10YR 4/1</u> | <u>very many clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping _____ Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks) _____
 No Recorded Data Available _____
 Stream, Lake or Tide Gauge _____
 Aerial Photographs _____

Field Observations → man culvert + within channel
 YES Ground Surface Inundated _____ inches
 NO Soil Saturated - moist _____ inches

Depth to Free Water > 16 inches.
 Depth to Saturated Soils > 16 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

s:\edr office files\forms\Data Form Routine Wetland Determination.xls

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/26/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>Y 7 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-----------|
| 1 <u>sensitive fern</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>40</u> |
| 2 <u>blue flag</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>20</u> |
| 3 <u>water horehound</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>10</u> |
| 4 <u>Canada Reed grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW +</u> | <u>50</u> |
| 5 <u>wetland sedges</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>50</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>Green ash</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW</u> | <u>40</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/26/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No

Community: Active Ag Hayfield
 Transect/Flag ID: Y0
 Plot ID: 47 UPL

SOILS

Series and Phase: (KGA) Kingsbury silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Acric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 4/3</u> | <u>none</u> | <u>clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex
 flat undulating sloping Approximate slope:

Remarks: Soils disturbed - layers mixed by plowing

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: No wetland hydrology

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/26/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>Y 7 UPL</u> |

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|--------------|-----------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>70</u> |
| 2 <u>milkweed</u> | <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> |
| 3 <u>ragweed</u> | <input checked="" type="radio"/> S/S T V | <u>FACU</u> | <u>20</u> |
| 4 <u>red clover</u> | <input checked="" type="radio"/> S/S T V | <u>FACU-</u> | <u>25</u> |
| 5 <u>bull thistle</u> | <input checked="" type="radio"/> S/S T V | <u>FACU-</u> | <u>20</u> |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC Percent of Dominant Species OBL, FACW

50/20 Rule Applied? Yes No

Remarks: moved to 811

WETLAND DETERMINATION

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes or No <input checked="" type="radio"/> Yes <input type="radio"/> No | Hydric Soils Present? Yes or No <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Wetland Hydrology Present? Yes or No <input checked="" type="radio"/> Yes <input type="radio"/> No | Is this Sampling Point Within a Wetland? Yes or No <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/26/07
Investigator: Pippin/Stebbins Town: Clayton
County: Jefferson State: NY
Do normal circumstances exist on site? Yes No
Is the site significantly disturbed? Yes No
Is the area a potential Problem Area? Yes No
Community: PEM
Transect/Flag ID: Z 1-12
Plot ID: Z 11 Oct

SOILS
Series and Phase: (KgA) Kingsbury silty clay Drainage Class: WD MWD SPD PD VPD
Subgroup: Aric Ochraqualls Confirm Mapped Type: Yes No
Depth Horizon Matrix color Mottle color/abundance Texture, Structure, Other
0-8" A 10YR 3/2 none clay
8-16" B 10YR 6/1 10YR 5/8, 10YR 3/2 many clay
Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime
Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY
Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs
Field Observations
NO Ground Surface Inundated N/A inches.
NO Soil Saturated. - MOIST
Depth to Free Water >16" inches.
Depth to Saturated Soils >16" inches.
Wetland Hydrology Indicators:
Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland
Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Project Number: 05030
Applicant: Horse Creek Windpower

Date: 10/26/07
Plot ID Number: # 11 WCT

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-------------|
| 1 <u>wetland sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>100%</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>willow - crack</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u>20%</u> |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100%

Percent of Dominant Species OBL, FACW 50%

50/20 Rule Applied? Yes No

Remarks: < 5% blue wren's calico aster

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/26/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: Old Field
 Is the site significantly disturbed? Yes No Transect/Flag ID: Z
 Is the area a potential Problem Area? Yes No Plot ID: Z 11 up L

SOILS

Series and Phase: (WNB) Wilpoint silty clay loam Drainage Class: WD M V D SPD PD VPD
 Subgroup: Agnic Hapludalfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-------------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 6/3/3</u> | <u>none</u> | <u>clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: 0-3%

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches fw
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: no wetland hydrology

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/26/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>211 UPL</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-------------|------------|
| 1 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>80%</u> |
| 2 <u>Q Anne's lace</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> |
| 3 <u>Canada gold</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes or <input checked="" type="radio"/> No | Hydic Soils Present? Yes or <input checked="" type="radio"/> No |
| Wetland Hydrology Present? Yes or <input checked="" type="radio"/> No | Is this Sampling Point Within a Wetland? Yes or <input checked="" type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *Agricultural landscape*
 Is the site significantly disturbed? Yes No *near the out pond, old fields*
 Is the area a potential Problem Area? Yes No
 Community: Wet Meadow
 Transect/Flag ID: AA 1-6
 Plot ID: AA 3 wet

SOILS

Series and Phase: (C13) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Anc Ochragnalts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|--------------------|----------------|------------------------|---------------------------|
| <u>0-12"</u> | <u>A</u> | <u>10R3/2</u> | <u>none</u> | <u>clay</u> |
| <u>12"</u> | <u>rocky layer</u> | <u>rejects</u> | <u>angular</u> | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histie Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: 0-3%

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated 0-2" inches.
 Soil Saturated.
 Depth to Free Water 0 inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: hummocky terrain

| | |
|---|---------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/25/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>AA 3 Wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|---------------------------|--|--------------|-------------|
| 1 <u>green button</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>30</u> - |
| 2 <u>curly reed grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>30</u> - |
| 3 <u>Bidens frondosa</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>5</u> |
| 4 <u>path rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC-</u> | <u>15</u> |
| 5 <u>tussock sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>30</u> - |
| 6 <u>owlfruit sedge</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>10</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Hydric Soils Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or <input type="radio"/> No |

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Old field
 Is the site significantly disturbed? Yes No Transect/Flag ID: AA
 Is the area a potential Problem Area? Yes No Plot ID: AA 3 UPL

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10R 3/3</u> | <u>none</u> | <u>silty clay</u> |
| | | | | |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
- Saturated in upper 12 inches.
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
- Water-Stained leaves
- Local Soil Survey
- Morphological Plant Adaptations
- Other (Explain in Remarks)

Remarks:

no wetland hydrology

Project Number: 05030 Date: 10/25/07
 Applicant: Horse Creek Windpower Plot ID Number: AA 3 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------------|--|------------|----------|
| 1 Timothy | <input checked="" type="radio"/> H S/S T V | FACU | 90 |
| 2 Q. Anni's lace | <input checked="" type="radio"/> H S/S T V | FACU | 5 |
| 3 bull thistle | <input checked="" type="radio"/> H S/S T V | FACU- | 10 |
| 4 rice grass (Oryzopsis asp.) | <input checked="" type="radio"/> H S/S T V | NL | 10 |
| 5 curly dock | <input checked="" type="radio"/> H S/S T V | FACU | 5 |
| 6 | H S/S T V | | |
| 7 | H S/S T V | | |
| 8 | H S/S T V | | |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No
 Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No
 Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No
 Is this Wetland Potentially Isolated? Yes or No

Remarks: Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PSS
 Transect/Flag ID: BB 1-12
 Plot ID: BB 1 Wet

SOILS

Series and Phase: (C1B) Chautauq silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|-----------------|------------------------|---------------------------|
| <u>0-A</u> | <u>A</u> | <u>10YR 3/3</u> | <u>—</u> | <u>Silt clay</u> |
| <u>A-16</u> | <u>B</u> | <u>10YR 3/2</u> | | <u>Silt clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

ND Ground Surface Inundated _____ inches.
ND Soil Saturated _____ inches.
 Depth to Free Water 716 inches.
 Depth to Saturated Soils 716 inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input checked="" type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: Hummocky

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/25/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>BB1 WCA</u> |

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|----------------|-----------|
| 1 <u>Wetland willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FAW/OBL</u> | <u>70</u> |
| 2 <u>Meadow sweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>40</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>Sphagnum</u> | <input checked="" type="radio"/> H S/S T V | <u>FAW/OBL</u> | <u>00</u> |
| 5 <u>Clayx scoparia</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>10</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

| | |
|---|---|
| Percent of Dominant Species OBL, FACW, FAC <u>100%</u> | Percent of Dominant Species OBL, FACW <u>100%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks: Sparsely herb layer

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or No |
| Remarks: | Photo Reference Number: |

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *plantation* Community: White spruce plantation
 Is the site significantly disturbed? Yes No Transect/Flag ID: BB
 Is the area a potential Problem Area? Yes No Plot ID: BB 1 UPL

SOILS

Series and Phase: (WNB) Wilpoinit silty clay loam Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aquic Hapludalfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-4"</u> | <u>A</u> | <u>10YR 3/3</u> | <u>none</u> | <u>silty clay</u> |
| <u>4-16"</u> | <u>B</u> | <u>10YR 3/2</u> | <u>none</u> | <u>silty clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no wetland hydrology

Project Number: 05030

Applicant: Horse Creek Windpower

Date: 10/25/07

Plot ID Number: BB1 UPL

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|------------|----------|
| 1 Q. Aspen | H S/S <input checked="" type="radio"/> T V | FACU | 40 |
| 2 White spruce | H S/S <input checked="" type="radio"/> T V | FACU | 80 |
| 3 | H S/S T V | | |
| 4 White spruce | H <input checked="" type="radio"/> S/S T V | FACU | 35 |
| 5 grey dogwood | H <input checked="" type="radio"/> S/S T V | FAC | 50 |
| 6 | H S/S T V | | |
| 7 Wild strawberry | <input checked="" type="radio"/> H S/S T V | FACU | 5 |
| 8 Common Spiderweel | <input checked="" type="radio"/> H S/S T V | FACU- | 5 |
| 9 | H S/S T V | | |
| 10 | H S/S T V | | |
| 11 | H S/S T V | | |
| 12 | H S/S T V | | |
| 13 | H S/S T V | | |
| 14 | H S/S T V | | |
| 15 | H S/S T V | | |
| 16 | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 17%

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

sparse herb layer

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No

Hydic Soils Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No

Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No Transect/Flag ID: CC-1-22
 Is the area a potential Problem Area? Yes No Plot ID: CC 4 wet

SOILS

Series and Phase: (Gv) Buffin clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-9 | A | 10YR 3/1 | none | clay |
| 9-16 | B | 10YR 4/1 | 10YR 4/4, 10YR 7/6 | clay |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated N/A inches.
 Soil Saturated. - moist

Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Hummocky

| | |
|---|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/25/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>CC4 wet</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-------------|
| 1 <u>Am elm</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW-</u> | <u>20</u> - |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>wetland willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>50</u> - |
| 4 <u>gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>50</u> - |
| 5 <u>red osier dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>25</u> |
| 6 <u>meadow sweet</u> | H <input checked="" type="radio"/> S/S T V | <u>FAW+</u> | <u>20</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 9 <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> - |
| 10 <u>lotus corn</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>30</u> - |
| 11 <u>moss</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>30</u> - |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 83%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Hydric Soils Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or <input type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes or <input type="radio"/> No |

Remarks: _____ Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/25/07
 Investigator: Pippin/Stebbins Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No *pputatio* Community: Upland forest - white pine
 Is the site significantly disturbed? Yes No Transect/Flag ID: CC
 Is the area a potential Problem Area? Yes No Plot ID: CC 4 UPL

SOILS

Series and Phase: (WnB) Wilpoint silty clay loam Drainage Class: WD MVD SPD PD VPD
 Subgroup: Aquic Hapludalfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 4/2</u> | <u>none</u> | <u>Silty clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave _____ convex _____ sloping _____
 flat undulating _____ Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:
no wetland hydrology

Project Number: 05030 Date: 10/25/07
 Applicant: Horse Creek Windpower Plot ID Number: CC4 UPL

| VEGETATION | | | |
|----------------------------------|-----------------------|--------------|-----------|
| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 <u>White spruce</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>80</u> |
| 2 <u>P. aspen</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>35</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>Narrow honeysuckle</u> | H <u>S/S</u> T V | <u>FACU</u> | <u>25</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 <u>Prunella vulgaris</u> | <u>H</u> S/S T V | <u>FACU+</u> | <u>5</u> |
| 9 <u>Fragaria virginiana</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>5</u> |
| 10 <u>Veronica oppositifolia</u> | <u>H</u> S/S T V | <u>FACU-</u> | <u>5</u> |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes No

Remarks: sparse herb layer

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/29/07
 Investigator: Pippin/Trombath Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: Wet meadow
 Is the site significantly disturbed? Yes No No Transect/Flag ID: Wetland DD
 Is the area a potential Problem Area? Yes No No Plot ID: WSP-DD

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|----------------|-----------------------------|---------------------------|
| <u>0-7</u> | <u>A</u> | <u>10YR3/2</u> | <u>10YR5/6, Few >4"</u> | <u>Silt loam</u> |
| <u>7+</u> | <u>B</u> | <u>10YR5/2</u> | <u>10YR5/6; 5/8, Common</u> | <u>Clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated 24 inches.
 Soil Saturated.
 Depth to Free Water 4-5 inches. 0 inches
 Depth to Saturated Soils 4-5 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:
Hummocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/29/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-DD</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|---------------------------|--|--------------|--------------|
| 1 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>50</u> |
| 2 | <u>Swamp beggars-tick</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 3 | <u>reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> |
| 4 | <u>Euthamia</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>20</u> |
| 5 | <u>soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u><5</u> |
| 6 | | H S/S T V | | |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100 % Percent of Dominant Species OBL, FACW 67 %

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No

Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/29/07
 Investigator: Pippin / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Old field
 Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland DD
 Is the area a potential Problem Area? Yes No Plot ID: USP-DD

SOILS
 Series and Phase: (CIA) Chammont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraquartz Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-----------------|--------------------------------|---------------------------|
| <u>0-6</u> | <u>A</u> | <u>10YR 3/3</u> | <u>None</u> | <u>Silt loam</u> |
| <u>6+</u> | <u>B</u> | <u>10YR 4/1</u> | <u>10YR 5/8, Mod. Abundant</u> | <u>Silt Clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: No hydric soil indicators noted except a few mottles in a clay/silt B-Horizon

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated inches.
 Soil Saturated.
 Depth to Free Water inches.
 Depth to Saturated Soils inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 05030 Date: 10/29/07
 Applicant: Horse Creek Windpower Plot ID Number: USP-DD

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-------------|-----------|
| 1 <u>Canada goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>80</u> |
| 2 <u>Queen Anne's lace</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> |
| 3 <u>Timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>mossy / bur oak</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC-</u> | <u>25</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 25% Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Yes No
 Wetland Hydrology Present? Yes or No Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Yes No
 Hydric Soils Present? Yes No ^{BT}
 Is this Sampling Point Within a Wetland? Yes or No Yes No
 Is this Wetland Potentially Isolated? Yes or No Yes No N/A

Remarks:

Photo Reference Number:

Flags 1-10

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/29/07
 Investigator: Pippin / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Wet meadow/PSS
 Is the site significantly disturbed? Yes No - moved to edge Transect/Flag ID: Wetland EE
 Is the area a potential Problem Area? Yes No Plot ID: WSP-EE

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWI SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-6 | A | 10YR 3/2 | None | Silt-Clay loam |
| 6+ | B | 10YR 5/2 | 10YR 5/6, Common | Clay loam |

Hydric Soil Indicators:

- Histisols
- Histisols
- Sulfidic Odor
- Reducing Conditions
- Concretions
- High Org. Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Gleyed or Low Chroma color
- Listed on Local Hydric Soils List
- Listed as Potential for Hydric Inclusions Only
- Other (Explain in Remarks)
- Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils 1-2 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Hummocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/29/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-EE</u> |

| VEGETATION | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|------------|---------------------------|--|--------------|-----------|
| 1 | <u>pussy willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW</u> | <u>25</u> |
| 2 | | H S/S T V | | |
| 3 | <u>reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>70</u> |
| 4 | <u>flat top goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>10</u> |
| 5 | <u>late goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>20</u> |
| 6 | | H S/S T V | | |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

| | |
|---|---|
| Percent of Dominant Species OBL, FACW, FAC <u>100%</u> | Percent of Dominant Species OBL, FACW <u>100%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks:

| | |
|---|--|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No | Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes <input type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes <input type="radio"/> No |

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/29/07
 Investigator: Pippin / Trembath Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Successional Shrub
 Transect/Flag ID: Wetland EE
 Plot ID: USP-EE

SOILS

Series and Phase: (CIB) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-------------------|------------------------|---------------------------|
| <u>0-9</u> | <u>A</u> | <u>10YR 2 3/3</u> | <u>None</u> | <u>Silt loam</u> |
| <u>9+</u> | <u>B</u> | <u>10YR 2 4/4</u> | <u>None</u> | <u>Silt Clay loam</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Oleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: No hydric soil indicators noted.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 05030 Date: 10/29/07
 Applicant: Horse Creek Windpower Plot ID Number: USP-EE

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|---------------------------|-----------------------|-------------|-----------|
| 1 <u>gray dogwood</u> | H <u>(S/S)</u> T V | <u>FAC</u> | <u>30</u> |
| 2 <u>honey suckle</u> | H <u>(S/S)</u> T V | <u>FACU</u> | <u>30</u> |
| 3 <u>buck thorn</u> | H <u>(S/S)</u> T V | <u>NL</u> | <u>30</u> |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>Canada goldenrod</u> | <u>(H)</u> S/S T V | <u>FACU</u> | <u>30</u> |
| 6 <u>daisy fleabane</u> | <u>(H)</u> S/S T V | <u>FACU</u> | <u>30</u> |
| 7 <u>common milkweed</u> | <u>(H)</u> S/S T V | <u>NL</u> | <u>20</u> |
| 8 <u>fescues</u> | <u>(H)</u> S/S T V | <u>FACU</u> | <u>20</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 14% Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? (Yes) No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No) Hydric Soils Present? Yes or (No)
 Wetland Hydrology Present? Yes or (No) Is this Sampling Point Within a Wetland? Yes or (No)
 Hydrologic Connectivity to Off-site Wetlands? Yes or (No) Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks: Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/29/07
 Investigator: Pippin / Trembath Town: Clayton
Flags 1-9 County: Jefferson
 State: NY
 Do normal circumstances exist on site? Yes No Community: Wm/PSS
 Is the site significantly disturbed? Yes No - ruts Transect/Flag ID: Wetland FF
 Is the area a potential Problem Area? Yes No Plot ID: WSP-FF

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MVD PD VPD
 Subgroup: Aeric Ochraqual fs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-6 | A | 10YR 3/2 | 10YR 5/6, Mod Abund | Silt-Clay loam |
| 6+ | B | 10YR 5/2 | 10YR 5/6, Common | Clay |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water 1-2 inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

| | |
|---|--|
| Primary Indicators <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in upper 12 inches. <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetland | Secondary Indicators (2 or more required) <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches <input checked="" type="checkbox"/> Water-Stained leaves <input type="checkbox"/> Local Soil Survey <input checked="" type="checkbox"/> Morphological Plant Adaptations <input type="checkbox"/> Other (Explain in Remarks) |
|---|--|

Remarks:

Inundated in vehicle ruts > 6"
 Hummocky, buttressing

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/29/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-FF</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|--------------------------|--|-----------------|-----------|
| 1 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>25</u> |
| 2 | <u>reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>60</u> |
| 3 | <u>Euthamia</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>15</u> |
| 4 | | H S/S T V | | |
| 5 | | H S/S T V | | |
| 6 | <u>shrub/scrub</u> | H S/S T V | | |
| 7 | <u> pussy willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW</u> | |
| 8 | <u>willow herb</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | |
| 9 | <u>Sedges</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/DBL</u> | |
| 10 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/29
 Investigator: Pippin ~~Smith~~ / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: NDF
 Transect/Flag ID: Wetland FF
 Plot ID: USP-FF

SOILS

Series and Phase: (CIB) chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Acric Ochraqualfs Confirm Mapped Type: No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-7 | A | 10YR 3/3 | None | Silt loam |
| 7+ | B | 10YR 4/4 | None | Silt-clay loam |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: No hydric soil indicators noted.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

| | |
|---|--|
| Project Number: <u>05030</u> Applicant: <u>Horse Creek Windpower</u> | Date: <u>10/29/07</u> Plot ID Number: <u>USP-FF</u> |
|---|--|

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|-----------------------|--------------|-----------|
| 1 | shagbark hickory | H S/S <u>T</u> V | <u>FACU-</u> | <u>75</u> |
| 2 | | H S/S T V | | |
| 3 | honey suckle | H <u>S/S</u> T V | <u>FACU</u> | <u>20</u> |
| 4 | shagbark hickory | H <u>S/S</u> T V | <u>FACU-</u> | <u>50</u> |
| 5 | | H S/S T V | | |
| 6 | fescues | <u>H</u> S/S T V | <u>FACU</u> | <u>50</u> |
| 7 | wood fern | <u>H</u> S/S T V | <u>FACU</u> | <u>25</u> |
| 8 | Solidago (burned out) | <u>H</u> S/S T V | | <u>25</u> |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

| | |
|---|--|
| Percent of Dominant Species OBL, FACW, FAC <u>0</u> | Percent of Dominant Species OBL, FACW <u>0</u> |
| 50/20 Rule Applied? <u>Yes</u> No | |

Remarks:

WETLAND DETERMINATION

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes or <u>No</u> | Hydric Soils Present? Yes or <u>No</u> |
| Wetland Hydrology Present? Yes or <u>No</u> | Is this Sampling Point Within a Wetland? Yes or <u>No</u> |
| Hydrologic Connectivity to Off-site Wetlands? Yes or <u>No</u> | Is this Wetland Potentially Isolated? Yes or No <u>N/A</u> |

Remarks: _____ Photo Reference Number: _____

Stream Inventory



Observer:
Name: Pippin/Trembath
Weather: 40s, overcast

Project Information:
Name: Horse Creek
Number: 05030 Date: 10/29/07

Stream Name: IC-GG

Stream Location (nearest road, structure, etc.):
Interconnect near Turbine 25; South of Hart Rd.

Adjacent Community: Spruce Plantation; Active Ag (Hay)

Stream Gradient - gentle
- moderate
- steep

Bank Width: 8-10 ft.

Stream Width: 1-2 ft.

Water Depth: 1-2 inches

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other

Flow: - Permanent
- Intermittent

Photo # _____
Flag #'s IC-1-10

Additional Comments: Intermittent channel collecting runoff from Ag fields, draining through 24 inch corrugated steel culvert at existing farm lane crossing to spruce plantation and successional shrubland communities.

Soils = (Gv) Guffin clay, PD/NPD, Mollic Haplagnets Clayton Twpshp, Jefferson Cty

Stream Inventory



Observer:

Name: Pippin / Trembly
Weather: cloudy, windy, cold

Project Information:

Name: Clayton Wind Farm
Number: 85630 Date: 10-29-07

Stream Name: unnamed

Stream Location (nearest road, structure, etc.):

Foskey Auto Sales on Rt. 12
Adjacent Community: Ag field & Old Field

Stream Gradient - gentle
- moderate
- steep

Bank Width: 8-10'

Stream Width: 5-6'

Water Depth: 3-5"

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other completely vegetated - seed canopy grass & cattail

Flow: - Permanent
- Intermittent

Photo # 2 photos taken
Flag #'s 11 HH 1-11

Additional Comments: Intermittent channel flowing between an old field/meadow
and an active ag field. Ag field is planted with feed crop
grass and is dominating the stream channel. Channel has been
disturbed from Ag operations.

soils = (Gv) Guffin clay, PD/VPD, mollic Haploagnpts
Clayton Twnshp, Jefferson City

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
Investigator: Pippin / Trembath Town: Clayton
County: Jefferson State: NY
Do normal circumstances exist on site? Yes No Community: PSS
Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland II
Is the area a potential Problem Area? Yes No Plot ID: WSP- II

SOILS
Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-7 | A | 10YR 3/2 | 10YR 5/6, Mod. Abund | Silt Clay loam |
| 7+ | B | 10YR 5/2 | 10YR 5/6, 5/8, Common | Clay loam |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils 4-5 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Hummocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/30/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-II</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: | |
|----|--------------------------|--|-----------------|-----------|---|
| 1 | <u>Silky dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>75</u> | - |
| 2 | <u>Willow shrubs</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>20</u> | - |
| 3 | | H S/S T V | | | |
| 4 | <u>meadow sweet</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> | - |
| 5 | <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> | - |
| 6 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> | - |
| 7 | <u>late goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>30</u> | - |
| 8 | <u>small white aster</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>10</u> | - |
| 9 | | H S/S T V | | | |
| 10 | | H S/S T V | | | |
| 11 | | H S/S T V | | | |
| 12 | | H S/S T V | | | |
| 13 | | H S/S T V | | | |
| 14 | | H S/S T V | | | |
| 15 | | H S/S T V | | | |
| 16 | | H S/S T V | | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No
 Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
 Investigator: Pippin / Trombath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Spruce plantation in Shrubland
 Transect/Flag ID: Wetland II
 Plot ID: USP-II

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-6 | A | 10YR 3/3 | None | Silt loam |
| 6+ | B | 10YR 4/3 | None | Silt Clay loam |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave _____ convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating

Remarks: No Hydric Soil indicators noted.

HYDROLOGY

Recorded Data (Describe in Remarks):
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations:
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators:
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required):
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/30/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>USP-II</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|-----------------------|-------------|-----------|
| 1 | <u>white spruce</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>60</u> |
| 2 | <u>blackthorn</u> | H S/S <u>T</u> V | <u>NL</u> | <u>20</u> |
| 3 | | H S/S T V | | |
| 4 | <u>gray dogwood</u> | H <u>S/S</u> T V | <u>FAC</u> | <u>90</u> |
| 5 | | H S/S T V | | |
| 6 | <u>Canada goldenrod</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>40</u> |
| 7 | <u>fescues</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>40</u> |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No N/A

Remarks:

Photo Reference Number:

Flags 1-11

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: Oct 30, 2007
 Investigator: Pippin/Sullivan/Teebath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS/wat. meadow
 Is the site significantly disturbed? Yes No Ag. disturbance Transect/Flag ID: JJ-1-55
 Is the area a potential Problem Area? Yes No Plot ID: JJ-2 WSP

SOILS

Series and Phase: (Gv) Giffin Clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haplaquents Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-16+ | A | 10YR 4/1 | 10YR 3/4 few faint | silt clay |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping: _____ Approximate slope: _____

Remarks: typical hydric soil on this project site

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

Ground Surface Inundated _____ inches.
 Soil Saturated.

Depth to Free Water 7 1/2 inches.
 Depth to Saturated Soils 7 1/6 inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input checked="" type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: Hummocky soils moist.

| | |
|---|---------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-30-07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP JJ-2</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-----------|
| 1 <u>American Elm</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW-</u> | <u>5</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>Gray Dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>10</u> |
| 4 <u>Salix sp</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 <u>meadow sweet</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>36</u> |
| 7 <u>blue vervane</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>5</u> |
| 8 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | _____ | <u>10</u> |
| 9 <u>reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>40</u> |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 80%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? Yes or <input checked="" type="radio"/> No |

Remarks: _____ Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 16-30-07
 Investigator: Pippin ~~XXXX~~ / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: Upland Scrub Shrub
 Transect/Flag ID: 551-85
 Plot ID: USP@ JJ-2

SOILS

Series and Phase: (Gv) Guffin Clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haplaquents Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16+</u> | <u>A</u> | <u>10YR 3/2</u> | <u>NO</u> | <u>silt clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: This soil has hydric characteristics but not as defined as soil sample within the wetland.

HYDROLOGY

K Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.

Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
- Saturated in upper 12 inches.
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
- Water-Stained leaves
- Local Soil Survey
- Morphological Plant Adaptations
- Other (Explain in Remarks)

Remarks:

No hydrology indicators observed.

| | |
|---|-----------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-30-07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP @ J1-2</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|--------------|-------------|
| 1 <u>American Elm</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW-</u> | <u>5</u> |
| 2 <u>White Spruce</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>10</u> |
| 3 <u>gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>30</u> - |
| 4 <u>Buck thorn</u> | H <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>15</u> - |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | _____ | <u>20</u> |
| 7 <u>upland grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>40</u> - |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: Dominated by not hydrophytic vegetation.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: Not a wetland. Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
 Investigator: Pippin/Sullivan/Tiemblak Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PEM / Wet meadow
 Is the site significantly disturbed? Yes No - Ag operations Transect/Flag ID: J51-55
 Is the area a potential Problem Area? Yes No Plot ID: WSP @ J1-39

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 8/1</u> | <u>-</u> | <u>silt clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: Wet saturated soils.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated inches.
 Soil Saturated.
 Depth to Free Water 10 inches.
 Depth to Saturated Soils 2 inches.

Wetland Hydrology Indicators:

| | |
|---|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input checked="" type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input checked="" type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input checked="" type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: hummocky wet soils

| | |
|---|-----------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-30/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>USF@ 11-79</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|--------------|-----------|
| 1 <u>Cory Dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>5</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | _____ | <u>30</u> |
| 4 <u>Cattail</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>20</u> |
| 5 <u>reed canopy grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 33%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? Yes or <input checked="" type="radio"/> No |

Remarks: Wetland area associated with channel flowing from In Steam Pond.

Photo Reference Number: _____

Stream Inventory



Observer:

Name: Pippa / Trembath
Weather: sunny/calm/wild

Project Information:

Name: Clayton Wind Farm
Number: 05030 Date: 10-30-07

Stream Name: unnamed Ag channel

Stream Location (nearest road, structure, etc.):

Fred Matthews Property near turbine 43
Adjacent Community: Ag field w/ upland forest / scrub shrub.

Stream Gradient - gentle
- moderate
- steep

Bank Width: 10-12'

Stream Width: 3-5'

Water Depth: 5-6"

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Completely vegetated

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other Completely vegetated

Flow: - Permanent
- Intermittent - ephemeral

Photo # _____
Flag #'s 556-10 476-52

Additional Comments: An ephemeral channel that has been
disturbed by Ag operations. This is a jurisdictional
convergence between two wetlands - 55

soils = (Gv) Guffin clay, PD/NPD, mollic haplaquepts
Clayton Township, Jefferson City

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
 Investigator: Pippin/Sullivan / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Wet meadow
 Is the site significantly disturbed? Yes No Transsect/Flag ID: wetland KK
 Is the area a potential Problem Area? Yes No Plot ID: WSP-11K

SOILS
 Series and Phase: (Gv) Guffin Clay Drainage Class: WD MWD SPD VPD
 Subgroup: Mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|----------------------|------------------------------|---------------------------|
| 0-1L+ | A | 10YR ³ /2 | 10YR ⁵ /6, Common | Silt-Clay loam |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating X Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water 5-6 inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Hummocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/30/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-KK</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|---------------------------|--|-----------------|-----------|
| 1 | <u>reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>50</u> |
| 2 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>10</u> |
| 3 | <u>late goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>10</u> |
| 4 | <u>flat top goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>10</u> |
| 5 | <u>sedges</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>10</u> |
| 6 | <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 83%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
 Investigator: Pippin / Trembath Town: Clayton
Flags 1-10 County: Jefferson
 State: NY
 Do normal circumstances exist on site? Yes No Community: Spruce plantation w/ Shrub.
 Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland KK
 Is the area a potential Problem Area? Yes No Plot ID: USP-KK

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|---------------------------|------------------------|---------------------------|
| <u>0-5</u> | <u>A</u> | <u>10YR³/3</u> | <u>None</u> | <u>Silt-clay loam</u> |
| <u>5+</u> | <u>B</u> | <u>10YR⁵/2</u> | <u>None</u> | <u>Clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: low chroma clay in B horizon, no mottling.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 05030 Date: 10/30/07
 Applicant: Horse Creek Windpower Plot ID Number: USP-KK

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|-----------------------|-------------|-------------|
| 1 <u>white spruce</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>75</u> - |
| 2 <u>Quaking Aspen</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>20</u> - |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>gray dogwood</u> | H <u>S/S</u> T V | <u>FAC</u> | <u>40</u> - |
| 5 <u>honeysuckle</u> | H <u>S/S</u> T V | <u>FACU</u> | <u>30</u> - |
| 6 <u>Rubus sp.</u> | H <u>S/S</u> T V | _____ | <u>10</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 <u>No herbs.</u> | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 25% Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No N/A
 Remarks: Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10-30-07
 Investigator: Pippin/Trembach Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No - spruce plantation Transect/Flag ID: LL 1-16
 Is the area a potential Problem Area? Yes No Plot ID: wsp @ LL-1

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16"</u> | <u>A</u> | <u>10YR 4/1</u> | <u>-</u> | <u>Silt clay</u> |
| | | | | |

Hydric Soil Indicators:

- Histisols
- Histic Epipedon
- Sulfidic Odor
- Reducing Conditions
- Concretions
- High Org. Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Gleyed or Low Chroma color
- Listed on Local Hydric Soils List
- Listed as Potential for Hydric Inclusions Only
- Other (Explain in Remarks)
- Aquic Moisture Regime

Landscape position: concave _____ convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating

Remarks:

HYDROLOGY

- Recorded Data (Describe in Remarks)
- No Recorded Data Available
- Stream, Lake or Tide Gauge
- Aerial Photographs

Field Observations
 Ground Surface Inundated 0 inches.
 Soil Saturated.
 Depth to Free Water >16 inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
- Saturated in upper 12 inches.
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
- Water-Stained leaves
- Local Soil Survey
- Morphological Plant Adaptations
- Other (Explain in Remarks)

Remarks:

Hummocky, saturated soils

| | |
|---|----------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-30-07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>USPC LL-1</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-----------|
| 1 <u>Salix sp.</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>70</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | _____ | <u>20</u> |
| 4 <u>Soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 5 <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> |
| 6 <u>meadow sweet</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No
 Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10-30-07
Investigator: Pippin/Trembath Town: Clayton
County: Jefferson
State: NY

Do normal circumstances exist on site? Yes No Community: Upland forest
Is the site significantly disturbed? Yes No Space Plantation Transect/Flag ID: LL-1-16
Is the area a potential Problem Area? Yes No Plot ID: WSJ @ LL-1 / MM-1

SOILS

Series and Phase: (ab) Chaumont silt clay Drainage Class: WD MWD SPD PD VPD
Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16+</u> | <u>A</u> | <u>10YR 3/2</u> | <u>-</u> | <u>Silt clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks: Soils are moist.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
NO Ground Surface Inundated _____ inches.
NO Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No hydrology characteristics

| | |
|---|----------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-30-07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>usp@ LL-1</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|--------------------------------|-----------------------|--------------|--------------|
| 1 <u>White Spruce</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>25</u> - |
| 2 <u>Quaking Aspen</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>16</u> - |
| 3 <u>American Elm</u> | H S/S <u>T</u> V | <u>FACW-</u> | <u>10</u> - |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>Gray Dogwood</u> | H <u>S/S</u> T V | <u>FAC</u> | <u>100</u> - |
| 6 <u>Tatarian Honey Suckle</u> | H <u>S/S</u> T V | <u>FACU</u> | <u>10</u> |
| 7 <u>Duckthorn</u> | H <u>S/S</u> T V | <u>NL</u> | <u>10</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 <u>Solidago sp.</u> | <u>H</u> S/S T V | _____ | <u>30</u> |
| 10 <u>Wild Strawberry</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>10</u> - |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 20% Percent of Dominant Species OBL, FACW 20%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: Not a wetland. Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
Investigator: Pippin ~~XXXXXX~~ / Trembath Town: Clayton
Flags 1-12 County: Jefferson
State: NY
Do normal circumstances exist on site? Yes No Community: PSS/EME
Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland MM
Is the area a potential Problem Area? Yes No Plot ID: WSP-MM

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPD
Subgroup: Mollic Haplaqupts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-16" | A | 10YR 3/2 | 10YR 5/4, Common > 5" | silty-clay loam |
| | | | | |
| | | | | |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave _____ convex _____ sloping _____ Approximate slope: _____
flat _____ undulating X

Remarks: * WSP-LL ; WSP-MM - shared data pt.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs
Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
Depth to Free Water 3-4 inches.
Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
- Saturated in upper 12 inches.
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
- Water-Stained leaves
- Local Soil Survey
- Morphological Plant Adaptations
- Other (Explain in Remarks)

Remarks:

Hummocky

Project Number: 05030
 Applicant: Horse Creek Windpower

Date: 10/30/07
 Plot ID Number: WSP-MM

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-----------|
| 1 <u>Willow shrubs</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>90</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>meadow sweet</u> | <input checked="" type="radio"/> S/S T V | <u>FACWT</u> | <u>25</u> |
| 4 <u>green bulrush</u> | <input checked="" type="radio"/> S/S T V | <u>OBL</u> | <u>15</u> |
| 5 <u>reed canary grass</u> | <input checked="" type="radio"/> S/S T V | <u>FACWT</u> | <u>40</u> |
| 6 <u>wool grass</u> | <input checked="" type="radio"/> S/S T V | <u>FALWT</u> | <u>10</u> |
| 7 <u>sedges</u> | <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>10</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: * Shared USP with wetland LL. Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10-30-07
 Investigator: Pippin/Stebbins/Tienboth Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: PFO/PS
 Is the site significantly disturbed? Yes No Transsect/Flag ID: NN 1-17
 Is the area a potential Problem Area? Yes No Plot ID: WSP @ NN-1

SOILS

Series and Phase: (Kgt) Kingsbury silty clay Drainage Class: WD MWR SPD PD VPD
 Subgroup: Acric Ochraqualts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-16t</u> | <u>A</u> | <u>10YR 4/1</u> | <u>10YR 5/8</u> | <u>silt clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

NO Ground Surface Inundated _____ inches.
yes Soil Saturated.
 Depth to Free Water 10 inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

| | |
|---|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input checked="" type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input checked="" type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: Hummocky, saturated soils.

| | |
|---|----------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-30-07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSPC MN-1</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|--------------------------|--|-----------------|-------------|
| 1 | <u>Red maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u> </u> |
| 2 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |
| 3 | <u>Red osier Dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> |
| 4 | <u>Puck thorn</u> | H <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> |
| 5 | <u>salix sp.</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>50</u> |
| 6 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |
| 7 | <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>20</u> |
| 8 | <u>aster sp.</u> | <input checked="" type="radio"/> H S/S T V | <u> </u> | <u>15</u> |
| 9 | <u>Spidaya Sp</u> | <input checked="" type="radio"/> H S/S T V | <u> </u> | <u>20</u> |
| 10 | <u>carex sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 11 | <u>Soft Rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>5</u> |
| 12 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |
| 13 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |
| 14 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |
| 15 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |
| 16 | <u> </u> | H S/S T V | <u> </u> | <u> </u> |

| | |
|---|--|
| Percent of Dominant Species OBL, FACW, FAC <u>100%</u> | Percent of Dominant Species OBL, FACW <u>75%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes or No | Is this Wetland Potentially Isolated? Yes or <input checked="" type="radio"/> No |
| Remarks: | Photo Reference Number: |

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10-70-07
 Investigator: Pippin/Stebbins / Tenbath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: upland Pine/spruce forest
 Is the site significantly disturbed? Yes No Transect/Flag ID: NW 1-17
 Is the area a potential Problem Area? Yes No Plot ID: USPA @ NW-1

SOILS

Series and Phase: (KqA) Kingsbury silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs^u Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-10t | A | 10YR 3/3 | — | Silt clay |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave _____ convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating γ

Remarks: soils moist

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No hydrology indicators.

| | |
|---|----------------------------------|
| Project Number: <u>05030</u> | Date: <u>10-50-07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>USP@ NW-1</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|----------------------------|--|--------------|-----------|
| 1 | <u>White Pine</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>30</u> |
| 2 | <u>White Spruce</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>30</u> |
| 3 | <u>Quaking Aspen</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>10</u> |
| 4 | <u>Shagbark Hickory</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU-</u> | <u>10</u> |
| 5 | <u>Red Oak</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU-</u> | <u>10</u> |
| 6 | | H S/S T V | | |
| 7 | <u>NO Shrub/Herb layer</u> | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

Not a wetland.

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 10/30/07
 Investigator: Pippin/Stebbins / Trembath Town: Clayton
Flags 1-9 County: Jefferson
 State: NY
 Do normal circumstances exist on site? Yes No Community: Emergent Marsh
 Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland 00
 Is the area a potential Problem Area? Yes No Plot ID: WSP-00

SOILS

Series and Phase: (WnB) Wilpoint silty clay loam Drainage Class: WD MUD SPD PD VPD
 Subgroup: Aquic Hapludalfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| 0-5 | A | 10YR 2/2 | None | Muck, Fine silt |
| 5+ | B | 10YR 5/2 | 10YR 5/6; 5/8, Common | Clay loam |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated 1-2 inches.
 Soil Saturated.
 Depth to Free Water 0 inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Hammocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/30/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-00</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|---------------------------|--|--------------|-----------|
| 1 | <u>Common cattail</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>85</u> |
| 2 | <u>flat top goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>5</u> |
| 3 | <u>Euthamia</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>5</u> |
| 4 | <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>5</u> |
| 5 | | H S/S T V | | |
| 6 | | H S/S T V | | |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No
 Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 10/30/07
 Investigator: Pippin/Stebbins / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Old Field / SS
 Is the site significantly disturbed? Yes No - mowed to edge Transect/Flag ID: Wetland 00
 Is the area a potential Problem Area? Yes No Plot ID: USP-00

SOILS

Series and Phase: (WNB) Wilpoint silty clay loam Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aquic Hapludalfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-----------------|------------------------|---------------------------|
| <u>0-9</u> | <u>A</u> | <u>10YR 3/3</u> | <u>None</u> | <u>Silt loam</u> |
| <u>9+</u> | <u>B</u> | <u>10YR 4/3</u> | <u>None</u> | <u>Silt-clay loam</u> |

Hydric Soil Indicators:

- Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position:

- concave _____ convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating X

Remarks: No hydric soil indicators noted

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

| | |
|------------------------------------|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>10/30/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>USP-00</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-------------|-----------|
| 1 <u>gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>35</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>orchard grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>75</u> |
| 4 <u>timothy</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>5</u> |
| 5 <u>teasel</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>5</u> |
| 6 <u>common burdock</u> | <input checked="" type="radio"/> H S/S T V | <u>NL</u> | <u>15</u> |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 33% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No N/A

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 11/5/07
 Investigator: Pippin/Stebbins / Trembath Town: Clayton
 County: Jefferson
 State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: PSS
 Transect/Flag ID: Wetland PP
 Plot ID: WSP-PP

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|----------------|-----------------------------------|---------------------------|
| <u>0-14</u> | <u>A</u> | <u>10YR3/2</u> | <u>10YR5/6, Mod Abund > 8"</u> | <u>Silt-clay loam</u> |
| <u>14+</u> | <u>B</u> | <u>10YR5/2</u> | <u>10YR5/6, Common</u> | <u>Clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 NO Ground Surface Inundated _____ inches.
 NO Soil Saturated.
 Depth to Free Water >16 inches.
 Depth to Saturated Soils >16 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 X Drift Lines
 Sediment Deposits
 X Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 X Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 X Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Hummocky

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP-PP</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|--|-----------------|-----------|
| 1 | <u>white spruce</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU</u> | <u>25</u> |
| 2 | | H S/S T V | | |
| 3 | <u>willow shrubs</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>85</u> |
| 4 | | H S/S T V | | |
| 5 | <u>Sedges</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>30</u> |
| 6 | <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>30</u> |
| 7 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>DBL</u> | <u>40</u> |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 80% Percent of Dominant Species OBL, FACW 80%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No
 Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 11/5/07
 Investigator: Pippin/Stebbins / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No
 Is the site significantly disturbed? Yes No
 Is the area a potential Problem Area? Yes No
 Community: spruce plantation
 Transect/Flag ID: Wetland PP
 Plot ID: USP- PP

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWB SPD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|-----------------|------------------------|---------------------------|
| <u>0-11</u> | <u>A</u> | <u>10YR 2/2</u> | <u>None</u> | <u>Silt-clay loam</u> |
| <u>11+</u> | <u>B</u> | <u>10YR 4/4</u> | <u>None</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks: No hydric soil indicators noted.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

| | |
|---|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>USP-PP</u> |

| VEGETATION | | | | |
|------------|--------------------------|-----------------------|-------------|-------------|
| | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 | <u>white spruce</u> | H S/S <u>T</u> V | <u>FACU</u> | <u>80</u> - |
| 2 | | H S/S T V | | |
| 3 | <u>gray dogwood</u> | H <u>S/S</u> T V | <u>FAC</u> | <u>60</u> - |
| 4 | <u>buckthorn</u> | H <u>S/S</u> T V | <u>NL</u> | <u>25</u> - |
| 5 | | H S/S T V | | |
| 6 | <u>fescues</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>40</u> - |
| 7 | <u>timothy</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>20</u> - |
| 8 | <u>Queen-Anne's Lace</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>20</u> - |
| 9 | <u>Canada goldenrod</u> | <u>H</u> S/S T V | <u>FACU</u> | <u>20</u> - |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 14% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? (Yes) No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No N/A

Remarks: Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Windpower Date: 11/5/07
 Investigator: Pippin/Suttons Tiembath Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No Transect/Flag ID: QQ1-17
 Is the area a potential Problem Area? Yes No Plot ID: WSP0 QQ

SOILS

Series and Phase: (C1B) Chammont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|-----------------|------------------------|---------------------------|
| <u>0-4"</u> | <u>A</u> | <u>10YR 3/2</u> | <u>—</u> | <u>Silt clay</u> |
| <u>4-16"</u> | <u>B</u> | <u>10YR 6/1</u> | <u>10YR 5/6</u> | <u>Clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated inches.
 Soil Saturated.
 Depth to Free Water 7 inches.
 Depth to Saturated Soils inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Humidity within drainage Swale

| | |
|---|---------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Windpower</u> | Plot ID Number: <u>WSP @ QR</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-----------|
| 1 <u>American Elm</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW-</u> | <u>5</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>Salix sp.</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>30</u> |
| 4 <u>Red osier dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW+</u> | <u>10</u> |
| 5 <u>Gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>10</u> |
| 6 <u>Wet grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>50</u> |
| 7 <u>meadow Sweet</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 8 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | _____ | <u>10</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

| | |
|---|---|
| Percent of Dominant Species OBL, FACW, FAC <u>100%</u> | Percent of Dominant Species OBL, FACW <u>100%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks:

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes or No | Hydric Soils Present? <input checked="" type="radio"/> Yes or No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes or No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes or No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: Willow shrub drainage on the edge of an ag. field.

Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/5/07
 Investigator: Pippin/Rembath Town: Clayton
 County: Jefferson State: NY

Do normal circumstances exist on site? Yes No Community: Shunk sptd
 Is the site significantly disturbed? Yes No Transsect/Flag ID: AA1-17
 Is the area a potential Problem Area? Yes No Plot ID: USP 00

SOILS

Series and Phase: (CIA) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------------|----------|----------------|------------------------|---------------------------|
| <u>0-16</u> | <u>A</u> | <u>10YR3/2</u> | <u>—</u> | <u>Silt clay</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex sloping flat undulating Approximate slope:

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

Ground Surface Inundated inches.
 Soil Saturated.
 Depth to Free Water inches.
 Depth to Saturated Soils inches.

Wetland Hydrology Indicators:

| | |
|--|--|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: no hydrology

| | |
|------------------------------------|---------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>USP 0 RR</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|-----------------------|------------|------------|
| 1 <u>Gray Sycamore</u> | H <u>S/S</u> T V | <u>FAC</u> | <u>100</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>oak</u> | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

not a wetland.

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/5/07
 Investigator: Pippin / Trembath Town: Dayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No - mowed to edge Transect/Flag ID: Wetland RR
 Is the area a potential Problem Area? Yes No Plot ID: WSP-RR

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD PD VPD
 Subgroup: Aeric Ochraqualls Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottled color/abundance | Texture, Structure, Other |
|-------|---------|--------------|--------------------------|---------------------------|
| 0-10 | A | 10YR 3/2 | 10YR 5/6, Med Abund > 6" | Silt-clay loam |
| 10+ | B | 10YR 5/2 | 10YR 5/6, Common | Clay |

Hydric Soil Indicators:

Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex _____ sloping _____ Approximate slope: _____
 flat _____ undulating _____

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water 3-4 inches.
 Depth to Saturated Soils 1-2 inches.

Wetland Hydrology Indicators:

Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Hummocky

| | |
|------------------------------------|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>WSP-RR</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|--------------------------|--|-----------------|-----------|
| 1 | <u>willow shrubs</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>90</u> |
| 2 | | H S/S T V | | |
| 3 | <u>reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>40</u> |
| 4 | <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>45</u> |
| 5 | <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>15</u> |
| 6 | | H S/S T V | | |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 100%
 50/20 Rule Applied? Yes No

Remarks: Area mowed at end where it breaks out of shrubland into active ag field.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: _____ Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/5/07
 Investigator: Pippin/~~Swoboda~~ / Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Active Ag. (Hay)
 Is the site significantly disturbed? Yes No - mowed Transect/Flag ID: Wetland RR
 Is the area a potential Problem Area? Yes No Plot ID: USP-RR

SOILS

Series and Phase: (C1B) Chaumont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Acric ochraquartz Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|--------------|----------|---------------------------|------------------------|---------------------------|
| <u>0-16+</u> | <u>A</u> | <u>10YR³/2</u> | <u>None</u> | <u>Silt-clay loam</u> |
| | | | | |
| | | | | |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position:

- concave flat convex undulating sloping Approximate slope:

Remarks:

No hydric soil indicators noted.

HYDROLOGY

- Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

- Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

No wetland hydrology noted.

| | |
|------------------------------------|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>USP-RR</u> |

| VEGETATION | | | |
|------------------------------|--|--------------|-----------|
| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 <u>orchard grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>60</u> |
| 2 <u>perennial rye grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>10</u> |
| 3 <u>Queen Annes Lace</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>10</u> |
| 4 <u>red clover</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU-</u> | <u>20</u> |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No N/A

Remarks: _____ Photo Reference Number: _____

DATA FORM
ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/5/07
 Investigator: Pippin Trembath Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: SSS
 Is the site significantly disturbed? Yes No Transect/Flag ID: SS1-
 Is the area a potential Problem Area? Yes No Plot ID: WSP @ SS

SOILS

Series and Phase: (Cp) Conington siltyclay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Mollic Ochraqualta Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|----------|-----------------|------------------------|---------------------------|
| 0-4 | <u>A</u> | <u>10YR 5/2</u> | <u>-</u> | <u>silt clay</u> |
| 4-16 | <u>B</u> | <u>10YR 4/1</u> | <u>10YR 5/8</u> | <u>silt clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave flat convex undulating sloping Approximate slope: _____

Remarks: Soils moist but not saturated at ~10"

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

NO Ground Surface Inundated _____ inches.
NO Soil Saturated.
 Depth to Free Water 716 inches.
 Depth to Saturated Soils 716 inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input checked="" type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input checked="" type="checkbox"/> Water-Stained leaves |
| <input checked="" type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: Hummocks with drainage swale.

| | |
|------------------------------------|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>wspe 55</u> |

| VEGETATION | | | |
|-------------------------|--|-----------------|-----------|
| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 <u>Salix sp.</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 2 <u>Gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>30</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | _____ | <u>30</u> |
| 5 <u>Soft rush</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>30</u> |
| 6 <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>16</u> |
| 7 <u>Carex sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 75%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No

Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks: Willow shrub drainage off of ag. land.

Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/5/07
 Investigator: Pippin ~~AS~~ Trembath Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Ag Field (active)
 Is the site significantly disturbed? Yes No Transect/Flag ID: ex SS 1-
 Is the area a potential Problem Area? Yes No Plot ID: usp @ SS

SOILS
 Series and Phase: (cp) Covington silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: mollic Ochraqualts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks: Soils disturbed due to active ag on adjacent field

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No hydrology.

| | |
|------------------------------------|--------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/5/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>WSP@ SS</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|--|-------------|-------------|
| 1 | <u>Hay</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>100%</u> |
| 2 | | <input type="radio"/> H S/S T V | | |
| 3 | | <input type="radio"/> H S/S T V | | |
| 4 | | <input type="radio"/> H S/S T V | | |
| 5 | | <input type="radio"/> H S/S T V | | |
| 6 | | <input type="radio"/> H S/S T V | | |
| 7 | | <input type="radio"/> H S/S T V | | |
| 8 | | <input type="radio"/> H S/S T V | | |
| 9 | | <input type="radio"/> H S/S T V | | |
| 10 | | <input type="radio"/> H S/S T V | | |
| 11 | | <input type="radio"/> H S/S T V | | |
| 12 | | <input type="radio"/> H S/S T V | | |
| 13 | | <input type="radio"/> H S/S T V | | |
| 14 | | <input type="radio"/> H S/S T V | | |
| 15 | | <input type="radio"/> H S/S T V | | |
| 16 | | <input type="radio"/> H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: non hydrophytic

WETLAND DETERMINATION

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes or <input checked="" type="radio"/> No | Hydric Soils Present? Yes or No |
| Wetland Hydrology Present? Yes or <input checked="" type="radio"/> No | Is this Sampling Point Within a Wetland? Yes or <input checked="" type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No | Is this Wetland Potentially Isolated? Yes or No |

Remarks: not a wetland. Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/6/07
 Investigator: Pippin ~~Quinn~~ / Trembath Town: ~~Chenango~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS/EME
 Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland TT
 Is the area a potential Problem Area? Yes No Plot ID: WSP-TT

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: mollic haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|------------------------------------|--|---------------------------|
| 0-9 | A | 10YR 2 ³ / ₂ | 10YR 5 ⁵ / ₆ , Mod Abund 76" | Silt-clay loam |
| 9+ | B | 10YR 5 ⁵ / ₆ | 10YR 5 ⁵ / ₆ , Common | Clay |

Hydric Soil Indicators:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position:

concave flat convex undulating sloping Approximate slope:

Remarks:

HYDROLOGY

- Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

- Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water 7-8 inches.
 Depth to Saturated Soils 1 inches.

Wetland Hydrology Indicators:

- Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

Hummocky

| | |
|------------------------------------|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/6/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>WSP-TT</u> |

| VEGETATION | | | |
|-------------------------|--|-----------------|-----------|
| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 <u>green bulrush</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>50</u> |
| 2 <u>common cattail</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>20</u> |
| 3 <u>wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 4 <u>Sedges</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>10</u> |
| 5 <u>meadow sweet</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>willow shrubs</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>50</u> |
| 8 <u>silky dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW</u> | <u>25</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

| | |
|---|---|
| Percent of Dominant Species OBL, FACW, FAC <u>100%</u> | Percent of Dominant Species OBL, FACW <u>100%</u> |
| 50/20 Rule Applied? <input checked="" type="radio"/> Yes <input type="radio"/> No | |

Remarks:

| | |
|---|--|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No | Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? <input checked="" type="radio"/> Yes <input type="radio"/> No | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes <input type="radio"/> No |

Remarks: Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Date: 11/6/07
 Investigator: Pippia/~~Sullivan~~ / Trembath Town: ~~Orleans~~ Orleans
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: NDF
 Is the site significantly disturbed? Yes No Transect/Flag ID: Wetland TT
 Is the area a potential Problem Area? Yes No Plot ID: USP-TT

SOILS

Series and Phase: (Gv) Guffin clay Drainage Class: WD MWD SPD PD VPI
 Subgroup: mollic Haplaquepts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|--|------------------------|---------------------------|
| <u>0-6</u> | <u>A</u> | <u>10YR 2³/₃</u> | <u>None</u> | <u>Silt-clay loam</u> |
| <u>6+</u> | <u>B</u> | <u>10YR 4/4</u> | <u>None</u> | <u>Silt-clay loam</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating X Approximate slope: _____

Remarks: No hydric soil indicators noted.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

| | |
|------------------------------------|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>11/6/07</u> |
| Applicant: <u>Horse Creek Wind</u> | Plot ID Number: <u>USP-TT</u> |

| VEGETATION | | | |
|-------------------------|--|--------------|-----------|
| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
| 1 <u>Bur oak</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC-</u> | <u>90</u> |
| 2 <u>Sugar maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FACU-</u> | <u>10</u> |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 <u>Bur oak</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC-</u> | <u>40</u> |
| 5 <u>Sugar maple</u> | H <input checked="" type="radio"/> S/S T V | <u>FACU-</u> | <u>20</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 67% Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: No herbaceous layer; likely due to dense canopy in overstory.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No N/A

Remarks: Flags TT 1-12

Photo Reference Number: _____

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/17/2008
 Investigator: Pippin/Schwabenbauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Upland SS/meadow
 Is the site significantly disturbed? Yes No Transect/Flag ID: SA-30
 Is the area a potential Problem Area? Yes No Plot ID: Upland SP-1

SOILS

Series and Phase: (C1B) Chammoit silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-----------------|------------------------|---------------------------|
| <u>0-6</u> | <u>A</u> | <u>2.5Y 3/2</u> | <u>None</u> | <u>Silt loam</u> |
| <u>6+</u> | <u>B</u> | <u>2.5Y 3/2</u> | <u>10YR 5/8</u> | <u>Silt clay loam</u> |

Hydric Soil Indicators:

- Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks: Hydric Soil characteristics present

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
NO Ground Surface Inundated _____ inches.
NO Soil Saturated.
 Depth to Free Water 712 inches.
 Depth to Saturated Soils 712 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No hydrology present

Project Number: 05030
 Applicant: Horse Creek Wind Power Project

Date: 4/17/2008
 Plot ID Number: Upland Sp-1

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-----------|
| 1 <u>Buckthorn</u> | H <input checked="" type="radio"/> S/S T V | <u>NL</u> | <u>10</u> |
| 2 <u>Gray Dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>10</u> |
| 3 <u>American Elm</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW-</u> | <u>10</u> |
| 4 <u>Aster Sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC/FACU</u> | <u>30</u> |
| 5 <u>Solidago Sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC/FACU</u> | <u>30</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 80%

Percent of Dominant Species OBL, FACW 20%

50/20 Rule Applied? Yes No

Remarks: non hydrophytic vegetation present.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No
 Wetland Hydrology Present? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No
 Hydric Soils Present? Yes No
 Is this Sampling Point Within a Wetland? Yes or No
 Is this Wetland Potentially Isolated? Yes or No

Remarks: Not a wetland. Photo Reference Number: _____

Stream Inventory

EDR

Observer:

Name: JBP / BJS
Weather: Clear - Sunny, 70°F 10-20 mph S wind

Project Information:

Name: Horse Creek Wind
Number: OSD30 Date: 04/17/08

Stream Name: stream within delineated wetland SA

Stream Location (nearest road, structure, etc.):

Adjacent Community: inland meadow

Stream Gradient - gentle
- moderate
- steep

Bank Width: 720'

Stream Width: 5-8'

Water Depth: 8" - 12"

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation
- Logs/woody debris
- Deep pools
- Other

Flow: - Permanent
- Intermittent

Photo # _____

Flag #'s _____

Additional Comments: _____

soils = (Gv) Guffin clay

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/17/2008
 Investigator: Pippin Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS
 Is the site significantly disturbed? Yes No Transect/Flag ID: S8-18
 Is the area a potential Problem Area? Yes No Plot ID: Wetland Sampling Point #1

SOILS

Series and Phase: (CP) Covington silty clay Drainage Class: WD MWD SPD PD YPD
 Subgroup: Mollic Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-------------------|------------------------|---------------------------|
| <u>0-7</u> | <u>A</u> | <u>2.5Y 2.5/1</u> | <u>None</u> | <u>Silt clay</u> |
| <u>7+</u> | <u>B</u> | <u>2.5Y 2.5/1</u> | <u>Some, 10YR 5/8</u> | <u>clay</u> |

Hydric Soil Indicators:

- Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks:

HYDROLOGY

- Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

Yes Ground Surface Inundated 1 inches.
Yes Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators

- Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks:

| | |
|--|-------------------------------------|
| Project Number: <u>05030</u> | Date: <u>4/17/2008</u> |
| Applicant: <u>Horse Creek Wind Power Project</u> | Plot ID Number: <u>Wetland SP-1</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|--|-----------------|-----------|
| 1 <u>Red Maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u>25</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 <u>Pussy Willow</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW</u> | <u>40</u> |
| 4 <u>Silky dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW</u> | <u>30</u> |
| 5 <u>gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>10</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>20</u> |
| 8 <u>Sedges</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 9 <u>Rushes</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW/OBL</u> | <u>20</u> |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 83%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No

Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/17/2008
 Investigator: Pippin Town: Clayton
 County: Jefferson
 State: NY

Do normal circumstances exist on site? Yes No Community: Upland SS/meadow
 Is the site significantly disturbed? Yes No Transect/Flag ID: SB-18
 Is the area a potential Problem Area? Yes No Plot ID: Upland Sampling Point-1

SOILS

Series and Phase: (Cp) Conington Silty clay Drainage Class: WD MWD SPD PD YPD
 Subgroup: Mollic Ochraqual Ps Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-------------------|------------------------|---------------------------|
| <u>0-6</u> | <u>A</u> | <u>2.5Y 2.5/1</u> | <u>none</u> | <u>Silt Clay</u> |
| <u>6+</u> | <u>B</u> | <u>2.5Y 2.5/1</u> | <u>Faint, 10YR 5/8</u> | <u>Clay</u> |

Hydric Soil Indicators:

| | | |
|--|--|---|
| <input type="checkbox"/> Histisols | <input type="checkbox"/> Concretions | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Org. Content in Surface Layer of Sandy Soils | <input type="checkbox"/> Listed as Potential for Hydric Inclusions Only |
| <input type="checkbox"/> Sulfid Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Gleyed or Low Chroma color | <input type="checkbox"/> Aquic Moisture Regime |

Landscape position: concave convex
 flat undulating sloping Approximate slope:

Remarks: hydric characteristics present

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations

Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:

| | |
|--|---|
| Primary Indicators | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized Root Channels in upper 12 inches |
| <input type="checkbox"/> Saturated in upper 12 inches. | <input type="checkbox"/> Water-Stained leaves |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Local Soil Survey |
| <input type="checkbox"/> Drift Lines | <input checked="" type="checkbox"/> Morphological Plant Adaptations ✓ |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Drainage Patterns in Wetland | |

Remarks: hummocks

| | |
|--|--|
| Project Number: <u>05030</u> Applicant: <u>Horse Creek Wind Power Project</u> | Date: <u>4/17/2008</u> Plot ID Number: <u>SB-18 USP-1</u> |
|--|--|

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|--|-----------------|-----------|
| 1 | <u>Red Maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u>25</u> |
| 2 | | H S/S T V | | |
| 3 | <u>Gray dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FAC</u> | <u>90</u> |
| 4 | | H S/S T V | | |
| 5 | <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC/FACU</u> | <u>20</u> |
| 6 | <u>Aster sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC/FACU</u> | <u>20</u> |
| 7 | <u>orchard grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>20</u> |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC 80% Percent of Dominant Species OBL, FACW 0%
 50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No Hydric Soils Present? Yes or No
 Wetland Hydrology Present? Yes or No Is this Sampling Point Within a Wetland? Yes or No
 Hydrologic Connectivity to Off-site Wetlands? Yes or No Is this Wetland Potentially Isolated? Yes or No

Remarks: not a wetland. Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/22/2008
 Investigator: Pippin/Schwabenbauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PFO
 Is the site significantly disturbed? Yes No Transect/Flag ID: UU-6
 Is the area a potential Problem Area? Yes No Plot ID: Wetland Sampling Point #1

SOILS
 Series and Phase: (KGA) Kingsbury silty clay Drainage Class: WD MWD ~~SPD~~ PD VPD
 Subgroup: Aeric ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-----------------|-------------------------------|---------------------------|
| <u>0-6</u> | <u>A</u> | <u>2.5Y 3/2</u> | <u>None</u> | <u>silt clay</u> |
| <u>6+</u> | <u>B</u> | <u>2.5Y 3/2</u> | <u>some/distinct 10YR 5/8</u> | <u>clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping W Approximate slope: east 1/8
 flat undulating

Remarks:

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water 6 inches.
 Depth to Saturated Soils 1 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations *
 Other (Explain in Remarks)

Remarks:
* Hummocks

| | |
|--|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>4/22/2008</u> |
| Applicant: <u>Horse Creek Wind Power Project</u> | Plot ID Number: <u>WSP #1</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|------------------------------|--|-----------------|-------------|
| 1 <u>Wool grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW</u> | <u>20</u> - |
| 2 <u>wild strawberry</u> | <input checked="" type="radio"/> H S/S T V | <u>FACU</u> | <u>20</u> - |
| 3 <u>Reed canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>40</u> - |
| 4 <u>Soft lusk</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>10</u> |
| 5 <u>thin leaf goldenrod</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC</u> | <u>10</u> |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 <u>Silky dogwood</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW-</u> | <u>40</u> - |
| 8 <u>Salix sp.</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>50</u> |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 <u>Red maple</u> | H S/S <input checked="" type="radio"/> T V | <u>FAC</u> | <u>80</u> - |
| 11 <u>green Ash</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW</u> | <u>20</u> - |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 86% Percent of Dominant Species OBL, FACW 71%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

| | |
|---|--|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No | Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No | Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Hydrologic Connectivity to Off-site Wetlands? Yes or No <u>2</u> | Is this Wetland Potentially Isolated? <input checked="" type="radio"/> Yes <input type="radio"/> No |

Remarks:

Photo Reference Number:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/22/2008
 Investigator: Pippin/Schwabenbauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: upland Ag. field (Active)
 Is the site significantly disturbed? Yes No Transect/Flag ID: well-6
 Is the area a potential Problem Area? Yes No Plot ID: upland sampling point #1

SOILS
 Series and Phase: (KGA) Kingsbury silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aenic ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping Approximate slope: _____
 flat undulating

Remarks: Soils disturbed due to Active Ag.

HYDROLOGY
 Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils _____ inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: No hydrology characteristics observed.

s:\edr office files\forms\Data Form Routine Wetland Determination.xls

| | |
|--|-------------------------------|
| Project Number: <u>05030</u> | Date: <u>4/22/2008</u> |
| Applicant: <u>Horse Creek Wind Power Project</u> | Plot ID Number: <u>WSP #1</u> |

VEGETATION

| # | Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----|-------------------------|--|-----------------|------------|
| 1 | <u>Hay</u> | <input checked="" type="radio"/> H <input type="radio"/> S/S <input type="radio"/> T <input type="radio"/> V | <u>FAC/FACU</u> | <u>100</u> |
| 2 | | H S/S T V | | |
| 3 | | H S/S T V | | |
| 4 | | H S/S T V | | |
| 5 | | H S/S T V | | |
| 6 | | H S/S T V | | |
| 7 | | H S/S T V | | |
| 8 | | H S/S T V | | |
| 9 | | H S/S T V | | |
| 10 | | H S/S T V | | |
| 11 | | H S/S T V | | |
| 12 | | H S/S T V | | |
| 13 | | H S/S T V | | |
| 14 | | H S/S T V | | |
| 15 | | H S/S T V | | |
| 16 | | H S/S T V | | |

Percent of Dominant Species OBL, FACW, FAC _____

Percent of Dominant Species OBL, FACW

50/20 Rule Applied? Yes No

Remarks:

Active Hay field

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or No

Hydric Soils Present? Yes or No

Wetland Hydrology Present? Yes or No

Is this Sampling Point Within a Wetland? Yes or No

Hydrologic Connectivity to Off-site Wetlands? Yes or No

Is this Wetland Potentially Isolated? Yes or No

Remarks:

Photo Reference Number:

Active Hay field.

DATA FORM
 ROUTINE WETLAND DETERMINATION
 1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/22/2008
 Investigator: Pippia/Schwabenbauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: PSS/PFO/RUP
 Is the site significantly disturbed? Yes No Transect/Flag ID: VV-1
 Is the area a potential Problem Area? Yes No Plot ID: Wetland Sampling Point #1

SOILS
 Series and Phase: (Cp) Covington silty clay Drainage Class: WD MWD SPD VPD
 Subgroup: Mollic Ochraqualfs Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|------------|----------|-------------------------------------|------------------------|---------------------------|
| <u>0-6</u> | <u>O</u> | <u>N/A</u> | <u>N/A</u> | <u>organic</u> |
| <u>6+</u> | <u>A</u> | <u>2.5^B/₂</u> | <u>N/A</u> | <u>silt clay</u> |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave convex sloping flat undulating Approximate slope: _____

Remarks:
High organic, dark mucky soils.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated 6-10 inches.
 Soil Saturated.
 Depth to Free Water N/A inches.
 Depth to Saturated Soils N/A inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations *
 Other (Explain in Remarks)

Remarks:
* hummocks

| | |
|--|---------------------------------|
| Project Number: <u>05030</u> | Date: <u>4/22/2008</u> |
| Applicant: <u>Horse Creek Wind Power Project</u> | Plot ID Number: <u>L2SP # 1</u> |

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|----------------------------|--|-----------------|-------------|
| 1 <u>Cattail</u> | <input checked="" type="radio"/> H S/S T V | <u>OBL</u> | <u>50</u> - |
| 2 <u>Reed Canary grass</u> | <input checked="" type="radio"/> H S/S T V | <u>FACW+</u> | <u>30</u> - |
| 3 <u>Solidago sp.</u> | <input checked="" type="radio"/> H S/S T V | <u>FAC/FACW</u> | <u>20</u> - |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 <u>Salix sp. - 1</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>80</u> - |
| 6 <u>Salix sp. - 2</u> | H <input checked="" type="radio"/> S/S T V | <u>FACW/OBL</u> | <u>20</u> - |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 <u>Black willow</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW+</u> | <u>45</u> - |
| 9 <u>Green Ash</u> | H S/S <input checked="" type="radio"/> T V | <u>FACW</u> | <u>45</u> - |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC 100% Percent of Dominant Species OBL, FACW 86%

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No

Wetland Hydrology Present? Yes No Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No Is this Wetland Potentially Isolated? Yes No

Remarks:

Photo Reference Number:

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 05030 Applicant: Horse Creek Wind Power Project Date: 4/22/2008
 Investigator: Pippin/Schwabenbauer Town: Clayton
 County: Jefferson State: NY
 Do normal circumstances exist on site? Yes No Community: Upland (old hay field)
 Is the site significantly disturbed? Yes No Transect/Flag ID: VV-1
 Is the area a potential Problem Area? Yes No Plot ID: upland sampling point #1

SOILS
 Series and Phase: (CIA) Chautmont silty clay Drainage Class: WD MWD SPD PD VPD
 Subgroup: Aeric Ochraqualts Confirm Mapped Type: Yes No

| Depth | Horizon | Matrix color | Mottle color/abundance | Texture, Structure, Other |
|-------|---------|--------------|------------------------|---------------------------|
| | | | | |
| | | | | |

Hydric Soil Indicators:
 Histisols Concretions Listed on Local Hydric Soils List
 Histic Epipedon High Org. Content in Surface Layer of Sandy Soils Listed as Potential for Hydric Inclusions Only
 Sulfidic Odor Organic Streaking in Sandy Soils Other (Explain in Remarks)
 Reducing Conditions Gleyed or Low Chroma color Aquic Moisture Regime

Landscape position: concave flat convex undulating sloping Approximate slope:

Remarks: Soils disturbed due to Ag. operation.

HYDROLOGY

Recorded Data (Describe in Remarks)
 No Recorded Data Available
 Stream, Lake or Tide Gauge
 Aerial Photographs

Field Observations
 Ground Surface Inundated _____ inches.
 Soil Saturated.
 Depth to Free Water _____ inches.
 Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:
 Primary Indicators
 Inundated
 Saturated in upper 12 inches.
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
 Oxidized Root Channels in upper 12 inches
 Water-Stained leaves
 Local Soil Survey
 Morphological Plant Adaptations
 Other (Explain in Remarks)

Remarks: Soils saturated due to recent spring snow melt.

s:\edr office files\forms\Data Form Routine Wetland Determination.xls

Project Number: 05030
 Applicant: Horse Creek Wind Power Project

Date: 4/22/2008
 Plot ID Number: USP #1

VEGETATION

| Dominant Plant Species: | Stratum: (circle one) | Indicator: | % Cover: |
|-------------------------|-----------------------|-----------------|------------|
| 1 <u>Hay</u> | <u>H</u> S/S T V | <u>FAC/FACU</u> | <u>100</u> |
| 2 _____ | H S/S T V | _____ | _____ |
| 3 _____ | H S/S T V | _____ | _____ |
| 4 _____ | H S/S T V | _____ | _____ |
| 5 _____ | H S/S T V | _____ | _____ |
| 6 _____ | H S/S T V | _____ | _____ |
| 7 _____ | H S/S T V | _____ | _____ |
| 8 _____ | H S/S T V | _____ | _____ |
| 9 _____ | H S/S T V | _____ | _____ |
| 10 _____ | H S/S T V | _____ | _____ |
| 11 _____ | H S/S T V | _____ | _____ |
| 12 _____ | H S/S T V | _____ | _____ |
| 13 _____ | H S/S T V | _____ | _____ |
| 14 _____ | H S/S T V | _____ | _____ |
| 15 _____ | H S/S T V | _____ | _____ |
| 16 _____ | H S/S T V | _____ | _____ |

Percent of Dominant Species OBL, FACW, FAC ? Percent of Dominant Species OBL, FACW 0
 50/20 Rule Applied? Yes ~~No~~

Remarks: Hay field - inactive ~ 2 years.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or ~~No~~ Hydric Soils Present? Yes or ~~No~~
 Wetland Hydrology Present? Yes or ~~No~~ Is this Sampling Point Within a Wetland? Yes or ~~No~~
 Hydrologic Connectivity to Off-site Wetlands? Yes or ~~No~~ Is this Wetland Potentially Isolated? Yes or ~~No~~

Remarks: _____ Photo Reference Number: _____

Upland - Old hay field.

Stream Inventory

EDR

Observer:

Name: Pippin/Schwabenbauer
Weather: Clear, warm 75°F, Wind SW 10 mph

Project Information:

Name: Horse Creek Wind
Number: 05030 Date: 04/22/08

Stream Name: Horse Creek - Stream passes through delineated wetland VV

Stream Location (nearest road, structure, etc.):

Stephen Nagy Property, Miller Road (Wetland VV)
Adjacent Community: Ag. fields

Stream Gradient - gentle
- moderate
- steep

Bank Width: 5'

Stream Width: 3'

Water Depth: 10"

Substrate: - Bed Rock
- Boulder
- Cobble
- Gravel
- Sand
- Silt
- Clay

Instream Cover: - Undercut bank
- Overhanging vegetation * willow shrubs
- Logs/woody debris
- Deep pools
- Other

Flow: - Permanent
- Intermittent

Photo #

Flag #'s

Additional Comments: Horse creek along this stretch is very discrete with some areas not utilizing a defined base flow channel. Substantial floodplain / riparian wetlands associated with horse creek.

soils = (Cp) Covington silty clay

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030 Town: Clayton Sampling Date: 10/26/10
Applicant: Horse Creek Wind Farm County: Jefferson
State: New York Community: Wet Meadow
Data Point ID (i.e. 2W@Wet. G): W @ Wetland WW Nearest Flag to Data Point: WW-10

Investigator(s): Pippin / Lockard
Landform: Hillside/Seep Toe of Slope Depressional Riparian
Landscape Position: Flat Undulating Sloping Convex Concave
Is the area a potential problem area? Yes No
Is the site significantly disturbed? Yes No
Approximate Slope (%): 0-2%
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No
Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations
Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 5-6"
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Perennial Morphology: Bank Width Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/26/10
 Data Point ID: 1W@ wetland WW

Vegetation

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Tree Stratum (Plot size: 30-foot radius) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| = 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 (A/B)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Herb Stratum (Plot size: 5-foot radius) | | | |
| 1. | <u>100</u> | <u>yes</u> | <u>FACW</u> |
| 2. | <u>50</u> | <u>yes</u> | <u>OBL</u> |
| 3. | <u>15</u> | <u>no</u> | <u>FACW</u> |
| 4. | <u>15</u> | <u>no</u> | <u>FACW</u> |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| = Total Cover | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index ≤ 3.0 ¹

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

some willow (Salix sp) present sporadically throughout wetland. Grey dogwood on edges in some places.

Large hawk flew over wetland.

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| = Total Cover | | | |

Project Number: 05030

Sampling Date: 10/26/10

Applicant: Horse Creek Wind Farm

Data Point ID: 1000 wetland ww

Soil Map Unit: Kingsbury silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|------|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10Y 2/1 | 100% | — | — | — | clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F10)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
 Depth (inches): _____

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

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/26/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Hay Field - Ag.

Data Point ID (I.e. 2W@Wet. G): W@wetland WW

Nearest Flag to Data Point: WW-10

Investigator(s): Rippon / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Perennial Morphology: Bank Width Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Sleep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

NO hydrology present

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/26/10
 Data Point ID: 10@ wetland ww

Vegetation

| | Tree Stratum (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|--|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = 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: 0 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

| | Sapling/Shrub Stratum (Plot size: 16-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|---|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = Total Cover | | |

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by:
 OBL species _____ x 1 = _____
 FACW species _____ x 2 = _____
 FAC species _____ x 3 = _____
 FACU species _____ x 4 = _____
 UPL species _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

| | Herb Stratum (Plot size: 6-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----|---|------------------|-------------------|------------------|
| 1. | <u>Purple clover</u> | <u>50</u> | <u>yes</u> | <u>UPL</u> |
| 2. | <u>Mix of upland hay field grasses</u> | <u>60</u> | <u>yes</u> | <u>UPL</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | = Total Cover | | |

Hydrophytic Vegetation Indicators:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test >50%
 Prevalence Index is $\leq 3.0^1$
 Morphological Adaptations¹ (provide supporting data in remarks)
 Problematic Hydrophytic Vegetation¹ (explain in remarks)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

| | Woody Vine Stratum (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|--|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = Total Cover | | |

Definitions of Vegetation Strata:
 Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
 Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
 Woody vines - All woody vines greater than 3.28 ft in height.

Remarks
Active hay field

Project Number: 05030

Sampling Date: 10/20/10

Applicant: Horse Creek Wind Farm

Data Point ID: 100 water ww

Soil Map Unit: Kingsbury silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|------|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10YR 3/2 | 100% | — | — | — | clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators⁴

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (If observed)

Type: _____
Depth (inches): _____

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Shows hydric characteristics

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No

Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION

274 North Goodman Street
Rochester, New York 14607

Northcentral and Northeast Regional Supplement

Project Number: 05030

Town: Clayton

Sampling Date: 10/26/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: wet meadow

Data Point ID (i.e. 2W@Wet. G): 1w0 wetland xx

Nearest Flag to Data Point: XX-10

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 3"
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Intermittent Morphology: Bank Width Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Perennial Stream Width Moderate Boulder Silt Gentle
Intermittent Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/26/10
 Data Point ID: lower wetland XX

| Vegetation | | | | Dominance Test worksheet: | |
|--|--------------------------|-------------------|------------------|--|--|
| | Absolute % Cover | Dominant Species? | Indicator Status | | |
| Tree Stratum (Plot size: 30-foot radius) | | | | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | |
| 1. | <u>N/A</u> | | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) | |
| 2. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| = Total Cover | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: _____ Multiply by: | |
| | | | | OBL species _____ x 1 = _____ | |
| | | | | FACW species _____ x 2 = _____ | |
| | | | | FAC species _____ x 3 = _____ | |
| | | | | FACU species _____ x 4 = _____ | |
| | | | | UPL species _____ x 5 = _____ | |
| | | | | Column Totals: _____ (A) _____ (B) | |
| | | | | Prevalence Index = B/A = _____ | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Hydrophytic Vegetation Indicators: | |
| 1. | <u>N/A</u> | | | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| 2. | | | | <input type="checkbox"/> Dominance Test >50% | |
| 3. | | | | <input type="checkbox"/> Prevalence Index ≤ 3.0 ¹ | |
| 4. | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | |
| 5. | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | Definitions of Vegetation Strata: | |
| | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | |
| | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | |
| | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vines - All woody vines greater than 3.28 ft in height. | |
| | | | | Remarks | |
| Herb Stratum (Plot size: 5-foot radius) | | | | | |
| 1. | | | | | |
| 2. | <u>Red top grass</u> | <u>yes</u> | <u>OBL</u> | | |
| 3. | | | | | |
| 4. | <u>green bulrush</u> | <u>30</u> | <u>yes</u> | <u>OBL</u> | |
| 5. | <u>Spirea alba</u> | <u>10</u> | <u>no</u> | <u>FACW</u> | |
| 6. | <u>reed canary grass</u> | <u>10</u> | <u>no</u> | <u>FACW</u> | |
| 7. | <u>Solidago sp.</u> | <u>20</u> | <u>no yes</u> | <u>FACU</u> | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | <u>N/A</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

Project Number: 05030

Sampling Date: 10/20/10

Applicant: Horse Creek Wind Farm

Data Point ID: 1w@ wetland xx

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redux Features | | | Texture, Structure, Other |
|----------------|---------------|------|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-60+ | 10YR 2/1 | 100% | ~ | ~ | ~ | Clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|--|--------------------------------------|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Type: _____ Depth (Inches): _____ |
| <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | | |

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

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/26/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Upland hay field

Data Point ID (i.e. 2W@Wet. G): 140 XY-10

Nearest Flag to Data Point: XY-10

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): _____
Depth to Sat. Soil (Inches): _____
Depth to Water (Inches): _____

Stream Characteristics

Stream type: Perennial Morphology: Bank Width Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Intermittent Stream Width _____ Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth _____ Steep _____ Cobble _____ Clay _____ Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

no hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/26/16
 Data Point ID: W@ XX-10

| Vegetation | | | | Dominance Test worksheet: | |
|--|-------------------------|-------------------|------------------|--|-------|
| | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: | (A) |
| Tree Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | N/A | | | 0 | |
| 2. | | | | 0 | (B) |
| 3. | | | | 0 | (A/B) |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | | |
| 1. | N/A | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |
| Herb Stratum (Plot size: 5-foot radius) | | | | | |
| 1. | Hay field grasses/algae | 100% | yes | UPL | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | N/A | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test >50%

___ Prevalence Index ≤ 3.0¹

___ Morphological Adaptations¹ (provide supporting data in remarks)

___ Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/26/10
 Data Point ID: 1u@ wetland 8x

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|------|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-65 | 10YR7/1 | 100% | — | — | — | Clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|--|--------------------------------------|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Type: _____ Depth (inches): _____ |
| <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: Soil not saturated but shows some hydric characteristics

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/27/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: lat. channel

Data Point ID (i.e. 2W@Wet. G): Stream @ YY

Nearest Flag to Data Point: YY-6

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 2-3%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 6-8"
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Intermittent Morphology: 3' Stream Gradient: Gentle Substrate: Bed Rock Flow: Heavy
Perennial Bank Width 3' Gentle Bed Rock No Flow _____
Intermittent Stream Width 2' Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth 6" Steep _____ Cobble _____ Clay Moderate _____
Gravel _____ Vegetation Heavy due to recent rain reactions evening

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks (bedrock row)
- Eroded/Uncut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other bedrock

Remarks

Hydrologic conditions were abnormal due to heavy rains in past 2-3 weeks. At bank full stage.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/27/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PEM / POW

Data Point ID (I.e. 2W@Wet. G): 1W@Wet#22

Nearest Flag to Data Point: 22-2

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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 (B16)
- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 3-6" PEM / 2-3' Pond
Depth to Sat. Soil (Inches): 0
Depth to Water (Inches): 0

Stream Characteristics

Stream type: Morphology: Stream Gradient: Substrate: Flow:
Perennial Bank Width _____ Gentle _____ Bed Rock _____ Sand _____ No Flow _____
Intermittent Stream Width _____ Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth _____ Steep _____ Cobble _____ Clay _____ Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Pond is located on edge of PEM wetland.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/27/10
 Data Point ID: 77-2 1w@ wetland 22

| Vegetation | | | | Dominance Test worksheet: | |
|--|--------------------------|-------------------|------------------|--|---------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status | | |
| Tree Stratum (Plot size: 30-foot radius) | | | | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) | |
| 1. | <u>N/A</u> | | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) | |
| 2. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: | Multiply by: |
| | | | | OBL species | x 1 = |
| | | | | FACW species | x 2 = |
| | | | | FAC species | x 3 = |
| | | | | FACU species | x 4 = |
| | | | | UPL species | x 5 = |
| | | | | Column Totals: | (A) _____ (B) _____ |
| | | | | Prevalence Index = B/A = _____ | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | | |
| 1. | <u>N/A</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |
| Herb Stratum (Plot size: 5-foot radius) | | | | | |
| 1. | <u>leaf canopy grass</u> | <u>90%</u> | <u>yes</u> | <u>facw</u> | |
| 2. | <u>wood grass</u> | <u>5%</u> | <u>no</u> | <u>facw</u> | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | <u>N/A</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index is <3.0¹

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

areas of mown grass adjacent to plot.

Sample point on pond edge.

Project Number: 05030

Sampling Date: 10/27/10

Applicant: Horse Creek Wind Farm

Data Point ID: 101 @ wetland 22

Soil Map Unit: Chamont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10YR 7/1 | 100 | - | - | - | Clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| | | | |
|--|--|---|--|
| Hydric Soil Indicators <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Problematic Hydric Soil Indicators⁴ <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F10) <input type="checkbox"/> Mescic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | Restrictive Layer (if observed) Type: _____ Depth (Inches): _____ |
|--|--|---|--|

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 If yes, indicate classification PUBH
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/27/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: upland meadow

Data Point ID (i.e. 2W@Wet. G): 1u@ wetland 22

Nearest Flag to Data Point: 22-2

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 7-5%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

| Stream type: | Morphology: | Stream Gradient: | Substrate: | Flow: |
|--------------|--------------------|------------------|---------------------------|----------------|
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ Sand _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ Silt _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ Clay _____ | Moderate _____ |
| | | | Gravel _____ | Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- | | | |
|---|--|---|
| <input type="checkbox"/> Obscured Banks | <input type="checkbox"/> Deep Pools | <input type="checkbox"/> Overhanging Vegetation |
| <input type="checkbox"/> Well Defined Banks | <input type="checkbox"/> Riffles & Pools | <input type="checkbox"/> Vegetated Channel |
| <input type="checkbox"/> Eroded/Undercut Bank | | <input type="checkbox"/> Other _____ |

Remarks

NO hydrology observed

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/27/10
 Data Point ID: 112 @ wetland 22

| Vegetation | | | |
|--|------------------|-------------------|------------------|
| Tree Stratum (Plot size: 30-foot radius) | | | |
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | N/A | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | | = 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 (A/B)

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
|---|------------------|-------------------|------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | N/A | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | | = Total Cover | |

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by:
 OBL species _____ x 1 = _____
 FACW species _____ x 2 = _____
 FAC species _____ x 3 = _____
 FACU species _____ x 4 = _____
 UPL species _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

| Herb Stratum (Plot size: 5-foot radius) | | | | |
|---|----------------------|-------------------|------------------|------|
| | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. | Orchard grass | 90 | yes | Facw |
| 2. | milkweed, common | 20 | yes | Upl |
| 3. | blackberry Rubus sp. | 10 | NO | Facw |
| 4. | Reed Canary Grass | 410 | NO | Facw |
| 5. | Solidago sp. | 65 | NO | Fac |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | = Total Cover | | |

Hydrophytic Vegetation Indicators:
 ___ Rapid Test for Hydrophytic Vegetation
 ___ Dominance Test >50%
 ___ Prevalence Index <3.0¹
 ___ Morphological Adaptations¹ (provide supporting data in remarks)
 ___ Problematic Hydrophytic Vegetation¹ (explain in remarks)
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 3.28 ft (1 m) tall.
 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
 Woody vines - All woody vines greater than 3.28 ft in height.

| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
|--|------------------|-------------------|------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | N/A | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | | = Total Cover | |

Remarks

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/27/10
 Data Point ID: 1u@wetland 33

Soil Map Unit: Chauvaud silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|-----------------|------------|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| <u>0-2</u> | <u>10YR 2/4</u> | <u>100</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>Clay loam</u> |
| <u>A+</u> | <u>10YR 5/4</u> | <u>100</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>Clay loam</u> |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|---|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| <input type="checkbox"/> Type: _____ <input type="checkbox"/> Depth (inches): _____ | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____
 Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/28/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PFO/PSS

Data Point ID (i.e. 2W@Wet. G): W@Wetland AAA

Nearest Flag to Data Point: AAA-2

Investigator(s): Rippin/Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 2"
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Intermittent Morphology: Bank Width 2 Stream Gradient: Gentle Substrate: Bed Rock Flow: Gentle
Intermittent Stream Width 1 Moderate _____ Boulder _____ Silt _____
Intermittent Water Depth 2" Steep _____ Cobble _____ Clay _____ Heavy _____
Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

* PSS includes flags AAA 1-3
AAA 14-17

PFO all others.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/28/10
 Data Point ID: 1w0 wetland Adj

Vegetation

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Tree Stratum (Plot size: 30-foot radius) | | | |
| 1. <u>Red Maple</u> | <u>30</u> | <u>yes</u> | <u>fac</u> |
| 2. <u>Bonwood / A. Hornbeam</u> | <u>30</u> | <u>yes</u> | <u>fac</u> |
| 3. <u>Green Ash</u> | <u>20</u> | <u>NO</u> | <u>facw</u> |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| = 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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
| 1. <u>Pussy Willow</u> | <u>5</u> | <u>NO</u> | <u>facw</u> |
| 2. <u>Salix sp.</u> | <u>5</u> | <u>NO</u> | <u>facw</u> |
| 3. <u>Silky Dogwood</u> | <u>20</u> | <u>yes</u> | <u>facw</u> |
| 4. <u>Cory Dogwood</u> | <u>20</u> | <u>yes</u> | <u>fac</u> |
| 5. <u>red maple</u> | <u>10</u> | <u>NO</u> | <u>fac</u> |
| = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Herb Stratum (Plot size: 5-foot radius) | | | |
| 1. <u>Solidago sp.</u> | <u>30</u> | <u>yes</u> | <u>facw</u> |
| 2. <u>Aster sp.</u> | <u>20</u> | <u>yes</u> | <u>facw</u> |
| 3. <u>Common Rush</u> | <u>20</u> | <u>yes</u> | <u>obl</u> |
| 4. <u>Green bulrush</u> | <u>10</u> | <u>NO</u> | <u>obl</u> |
| 5. <u>Wool grass</u> | <u>10</u> | <u>NO</u> | <u>facw</u> |
| 6. <u>Carex sp.</u> | <u>30</u> | <u>yes</u> | <u>facw</u> |
| 7. <u>Blue Veronica (Veronica hastata)</u> | <u>10</u> | <u>NO</u> | <u>facw</u> |
| 8. _____ | _____ | _____ | _____ |
| 9. _____ | _____ | _____ | _____ |
| 10. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index is $\leq 3.0^1$

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
| 1. <u>N/A</u> | _____ | _____ | _____ |
| 2. _____ | _____ | _____ | _____ |
| 3. _____ | _____ | _____ | _____ |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/29/10
 Data Point ID: W02 Wetland AAA

Soil Map Unit: Kingsbury silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|------|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-5 | 10YR 2/2 | 100% | - | - | - | - | Silt Clay |
| 5+ | 10YR 5/1 | 100 | 10YR 5/8 | C | C | M | Clay |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| <input type="checkbox"/> Type: _____ <input type="checkbox"/> Depth (Inches): _____ | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A by way of ephemeral channel
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 10/28/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: uptal old field/forest edge

Data Point ID (i.e. 2W@Wet. G): 1uP wetland AAA

Nearest Flag to Data Point: AAA-2

Investigator(s): Rippin / Lockett

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Perennial Morphology: Bank Width Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Intermittent Stream Width _____ Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth _____ Steep _____ Cobble _____ Clay _____ Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

No hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 10/28/10
 Data Point ID: W&Wetland AAA

| Vegetation | | | | Dominance Test worksheet: | | | |
|--|------------------|----|-----|------------------------------------|--|--|--|
| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A) |
| 1. | Red oak | 20 | yes | fac | Total Number of Dominant Species Across All Strata: 8 (B) | Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5 (A/B) | |
| 2. | Shagbark Hickory | 20 | yes | fac | | | |
| 3. | Red maple | 20 | yes | fac | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Prevalence Index worksheet: | | Total % Cover of: Multiply by: | |
| 1. | N/A | | | | OBL species | x 1 = | |
| 2. | gray dogwood | 20 | yes | fac | FACW species | x 2 = | |
| 3. | Red maple | 20 | yes | fac | FAC species | x 3 = | |
| 4. | | | | | FACU species | x 4 = | |
| 5. | | | | | UPL species | x 5 = | |
| | | | | = Total Cover | | Column Totals: | (A) (B) |
| | | | | | | Prevalence Index = B/A = | |
| Herb Stratum (Plot size: 5-foot radius) | | | | Hydrophytic Vegetation Indicators: | | <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index <3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| 1. | Solidago | 40 | yes | fac | Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. | | |
| 2. | Aster | 40 | yes | fac | | | |
| 3. | Timothy grass | 20 | yes | fac | | | |
| 4. | Rubus sp. | 5 | NO | fac | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |
| | | | | = Total Cover | | Remarks | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | | | |
| 1. | N/A | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030

Sampling Date: 10/28/10

Applicant: Horse Creek Wind Farm

Data Point ID: 100 wetland AAA

Soil Map Unit: Kingsbury silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10YR 7/1 | 100 | - | - | - | Silt clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common

²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mestic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (If observed)

Type: _____

Depth (inches): _____

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

Remarks

Dark clay soil. Has hydric characteristics

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/4/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PFO wetland

Data Point ID (i.e. 2W@Wet. G): lwa wetland BBB

Nearest Flag to Data Point: BBB-2

Investigator(s): Pippin / Luckard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquifer (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 3"
Depth to Sat. Soil (Inches): 0
Depth to Water (Inches): 0

Stream Characteristics

| Stream type: | Morphology: | Stream Gradient: | Substrate: | Flow: | |
|--------------|--------------------|------------------|----------------|------------|----------------|
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ | Sand _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ | Silt _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ | Clay _____ | Moderate _____ |
| | | | Gravel _____ | | Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- | | | |
|---|--|---|
| <input type="checkbox"/> Obscured Banks | <input type="checkbox"/> Deep Pools | <input type="checkbox"/> Overhanging Vegetation |
| <input type="checkbox"/> Well Defined Banks | <input type="checkbox"/> Riffles & Pools | <input type="checkbox"/> Vegetated Channel |
| <input type="checkbox"/> Eroded/Undercut Bank | | <input type="checkbox"/> Other _____ |

Remarks

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/9/10
 Data Point ID: W@ wetland B&B

Vegetation

| Tree Stratum (Plot size: 30-foot radius) | | | |
|--|------------------|-------------------|------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. Red Maple | 30 | yes | fac |
| 2. American Elm | 20 | yes | facw |
| 3. Silver Maple | 10 | NO | facw |
| 4. | | | |
| 5. | | | |
| = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

| Sapling/Shrub Stratum (Plot size: 16-foot radius) | | | |
|---|------------------|-------------------|------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. Silky dogwood | 20 | yes | facw |
| 2. Honey Suckle | 10 | NO | fac |
| 3. Gray dogwood | 10 | NO | fac |
| 4. | | | |
| 5. | | | |
| = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species x 1 = _____

FACW species x 2 = _____

FAC species x 3 = _____

FACU species x 4 = _____

UPL species x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| Herb Stratum (Plot size: 5-foot radius) | | | |
|---|------------------|-------------------|------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. Spirea alba | 20 | yes | facw |
| 2. Carex sp. | 40 | yes | facw |
| 3. Sensitive fern | 20 | yes | facw |
| 4. Green bulrush | 10 | NO | facw |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| = Total Cover | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index is $\leq 3.0^1$

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
|--|------------------|-------------------|------------------|
| | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. N/A | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| = Total Cover | | | |

Project Number: 05030

Sampling Date: 11/4/10
Data Point ID: 10@ wetland EBB

Applicant: Horse Creek Wind Farm

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-4 | 10YR 3/1 | ~ | | | | | Silt loam |
| 4+ | 10YR 4/1 | 100 | 7.5YR 4/4 | ma | C | M | Silt loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (If observed) |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| <input type="checkbox"/> Type: _____ <input type="checkbox"/> Depth (inches): _____ | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/4/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: upland forest

Data Point ID (i.e. 2W@Wet. G): 1u@wetland BBB

Nearest Flag to Data Point: BBB-2

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C6)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 0"
Depth to Sat. Soil (Inches): 5"
Depth to Water (Inches): 5"

Stream Characteristics

| Stream type: | Morphology: | Stream Gradient: | Substrate: | Flow: | |
|--------------|--------------------|------------------|----------------|------------|----------------|
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ | Sand _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ | Silt _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ | Clay _____ | Moderate _____ |
| | | | Gravel _____ | | Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Some standing water in soil pit. * Note: It has been a wet fall. This region has received 6" in the last 2-3 weeks.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 12/4/10
 Data Point ID: W@1 wetland BBB

Vegetation

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Tree Stratum (Plot size: 30-foot radius) | | | |
| 1. white oak | 30 | yes | facu |
| 2. Shagbark hickory | 20 | yes | facu |
| 3. Redstart Hickory (mockernut) | 20 | yes | facu |
| 4. | | | |
| 5. | | | |
| _____ = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 10 (A/B)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
| 1. Hickory Saplings | 30 | yes | facu |
| 2. Oak Saplings | 30 | yes | facu |
| 3. Gray dogwood (in edge) | 20 | NO | fac |
| 4. | | | |
| 5. | | | |
| _____ = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Herb Stratum (Plot size: 5-foot radius) | | | |
| 1. Carex | 15 | yes | facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| _____ = Total Cover | | | |

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test >50%

___ Prevalence Index is $\leq 3.0^1$

___ Morphological Adaptations¹ (provide supporting data in remarks)

___ Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

Distinct clay from maple/elm in wetland w/ oak/hickory in adjacent upland.

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
| 1. N/A | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| _____ = Total Cover | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10/10
 Data Point ID: W@ wetland 133B

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-A | 10YR 7/2 | 100 | — | — | — | — | Silt loam |
| 4+ | 10YR 6/2 | 100 | — | — | — | — | Silt loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|---|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A10) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| Type: _____ Depth (inches): _____ | | |

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

Remarks
 gray soils. Soils do not show a distinct change as seen in veg layer

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/4/2010

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Intermittent Channel

Data Point ID (i.e. 2W@Wet. G): 1w@Wetland CCC

Nearest Flag to Data Point: CCC-1

Investigator(s): Rippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B8)
- 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 (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Intermittent Morphology: 3' Stream Gradient: Gentle Substrate: Bed Rock Flow: Gentle
Perennial Bank Width 3' Gentle Bed Rock _____ Sand _____ No Flow _____
Stream Width 1-2' Moderate _____ Boulder _____ Silt Gentle
Water Depth 2-3" Sleep _____ Cobble _____ Clay Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: Active

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

conditions at time of site visit were very wet. Channel banks are disturbed at broadened within an active ag. area. The remaining section is more of an ag. ditch between active ag. fields.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/4/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PSS

Data Point ID (i.e. 2W@Wet. G): 1w@ wetland DDD

Nearest Flag to Data Point: DDD-1

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 2-3"
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Intermittent Morphology: 2-3' Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Perennial Bank Width 2-3' Gentle Bed Rock Sand
 Intermittent Stream Width 1-2" Moderate Boulder Silt
Water Depth 2-3" Steep Cobble Clay
Gravel Heavy

Adjacent Community Type: Aq Field (Hay Field)

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

Intermittent extends out of PSS wetland into Aq. Field. This channel drains from NE into the PSS wetland.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/4/10
 Data Point ID: Wetland DDD

Vegetation

| Tree Stratum (Plot size: 30-foot radius) | | Absolute % Cover | Dominant Species? | Indicator Status |
|--|-----|------------------|-------------------|------------------|
| 1. | N/A | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---------------|------------------|-------------------|------------------|
| 1. | Willow | 60 | yes | facw |
| 2. | Silky Dogwood | 10 | no | facw |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = Total Cover | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| Herb Stratum (Plot size: 5-foot radius) | | Absolute % Cover | Dominant Species? | Indicator Status |
|---|-------------------|------------------|-------------------|------------------|
| 1. | Solidago | 30 | yes | facw |
| 2. | Aster | 30 | yes | facw |
| 3. | green burdock | 10 | no | obl |
| 4. | Soft ash | 10 | no | obl |
| 5. | Woolgrass | 10 | no | facw |
| 6. | Carex | 10 | no | facw |
| 7. | reed canopy grass | 10 | no | facw |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | = Total Cover | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index is <3.0¹

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

| Woody Vine Stratum (Plot size: 30-foot radius) | | Absolute % Cover | Dominant Species? | Indicator Status |
|--|-----|------------------|-------------------|------------------|
| 1. | N/A | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = Total Cover | | |

Remarks

wetland has recently been mowed. This area would normally be a scrub/shrub wetland. Adjacent wetland is a undisturbed PSS.

Project Number: 05030

Sampling Date: 11/4/10
 Data Point ID: 1WA wetland DDD.

Applicant: Horse Creek Wind Farm

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-5 | 10YR 6/1 | 100 | - | - | - | - | S:lt loam |
| 5+ | 10YR 6/1 | 100 | 7.5YR 4/4 | ma | c | m | S:lt loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators

- Histisol (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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators⁴

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Solis F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (If observed)

Type: _____
 Depth (Inches): _____

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification: _____
 If yes, indicate wetland ID: _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/4/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Ag Field

Data Point ID (i.e. 2W@Wet. G): Wetland DDD

Nearest Flag to Data Point: DDD-1

Investigator(s): Rippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): _____
Depth to Sat. Soil (Inches): _____
Depth to Water (Inches): _____

Stream Characteristics

| | | | | |
|---------------------|--------------------|-------------------------|---------------------------|----------------|
| <u>Stream type:</u> | <u>Morphology:</u> | <u>Stream Gradient:</u> | <u>Substrate:</u> | <u>Flow:</u> |
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ Sand _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ Silt _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ Clay _____ | Moderate _____ |
| | | | Gravel _____ | Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks: No Hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10
 Data Point ID: 100 wetland DDD

Vegetation

| <u>Tree Stratum</u> (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B) |
|---|------------|--|--|------------------|-------------------|------------------|--|
| 1. | <u>N/A</u> | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| | | | | = Total Cover | | | |

| <u>Sapling/Shrub Stratum</u> (Plot size: 15-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
|--|-----------------------------|-----------|------------|------------------|-------------------|------------------|---|
| 1. | <u>Willow (mowed)</u> | <u>15</u> | <u>yes</u> | <u>facw</u> | | | |
| 2. | <u>gray dogwood (mowed)</u> | <u>15</u> | <u>yes</u> | <u>fac</u> | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| | | | | = Total Cover | | | |

| <u>Herb Stratum</u> (Plot size: 5-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index is <3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
|--|--|-----------|------------|------------------|-------------------|------------------|--|
| 1. | <u>Hayfield (Ag.) grass species (recently mowed)</u> | <u>80</u> | <u>yes</u> | <u>facu</u> | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| | | | | = Total Cover | | | |

Definitions of Vegetation Strata:
 Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
 Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
 Woody vines - All woody vines greater than 3.28 ft in height.

| <u>Woody Vine Stratum</u> (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Remarks Hayfield and shrub area has been recently mowed. Id of veg. species is difficult with just basal stems left standing. However a distinct difference between veg. species was observed that correspond with upland and wetland area. |
|---|------------|--|--|------------------|-------------------|------------------|---|
| 1. | <u>N/A</u> | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030

Sampling Date: 11/4/10
Data Point ID: 12 @ Wetland DDD

Applicant: Horse Creek Wind Farm

Soil Map Unit: Chaumont silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16ft | 10YR 6/2 | 100 | - | - | - | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators⁴

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: None hydric

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No

Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/5/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Wet Meadow

Data Point ID (i.e. 2W@Wet. G): 1w@Wetland

Nearest Flag to Data Point: EEE-3

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 3%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 2"
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Intermittent Morphology: Bank Width 2' Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Perennial Bank Width 2' Gentle Bed Rock Sand
Intermittent Stream Width 1' Moderate Boulder Silt
Water Depth 2-3" Steep Cobble Clay
Gravel Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

A small intermittent channel that drains from an old field through a small wet meadow into a perennial channel.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/5/10
 Data Point ID: W@ wetland CEE

| Vegetation | | | | Dominance Test worksheet: | |
|--|-------------------|-------------------|------------------|--|---------|
| | Absolute % Cover | Dominant Species? | Indicator Status | | |
| Tree Stratum (Plot size: 30-foot radius) | | | | Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) | |
| 1. | N/A | | | Total Number of Dominant Species Across All Strata: 4 (B) | |
| 2. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) | |
| Sapling/Shrub Stratum (Plot size: 16-foot radius) | | | | Prevalence Index = B/A = _____ | |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index is <3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| Herb Stratum (Plot size: 6-foot radius) | | | | Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. | |
| 1. | Solidago | 15 | yes | FACW | Remarks |
| 2. | Aster | 15 | yes | SAPW | |
| 3. | reed canopy grass | 10 | NO | FACW | |
| 4. | Spikea alba | 10 | NO | FACW | |
| 5. | Juncus tenuis | 35 | yes | FAC | |
| 6. | wetland grass | 25 | yes | FACW | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| _____ = Total Cover | | | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| _____ = Total Cover | | | | | |

Project Number: 05030

Sampling Date: 11/5/10

Applicant: Horse Creek Wind Farm

Data Point ID: W02 Wetland BEE

Soil Map Unit: Guffin Clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other | |
|----------------|---------------|---|---------------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| 0-A | 10YR 6/1 | | 10YR 5/8 | — | — | ✓ | Silt loam |
| A ₁ | 10YR 6/1 | | 10YR 5/8 | F | D | M | Silt loam |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|--|--|--------------------------------------|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Type: _____ Depth (inches): _____ |
| <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils (F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | | |

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

Remarks: Soils disturbed from past Ag. activities.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No

If yes, indicate classification: PSS1A
 If yes, indicate wetland ID: _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/5/10

Applicant: Horse Creek Wind Farm

County: Jefferson

Community: Old Field

Data Point ID (i.e. 2W@Wet. G): 1 up wetland EEE

Nearest Flag to Data Point: EEE-3

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-3%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

| | | | | |
|---------------------|--------------------|-------------------------|---------------------------|----------------|
| <u>Stream type:</u> | <u>Morphology:</u> | <u>Stream Gradient:</u> | <u>Substrate:</u> | <u>Flow:</u> |
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ Sand _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ Silt _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ Clay _____ | Moderate _____ |
| | | | Gravel _____ | Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Some standing water due to rain at time of site visit. Otherwise no signs of persistent hydrology.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/5/10
 Data Point ID: 106 Wetland EEE

Vegetation

| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) |
|---|--------------------------|-----------|------------|------------------|-------------------|------------------|---|
| 1. | <u>N/A</u> | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| | | | | = Total Cover | | | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. | <u>N/A</u> | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |
| Herb Stratum (Plot size: 5-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. |
| 1. | <u>Reed Canary grass</u> | <u>90</u> | <u>yes</u> | <u>FACW</u> | | | |
| 2. | <u>Solidago sp.</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | | | |
| 3. | <u>Aster sp.</u> | <u>10</u> | <u>NO</u> | <u>FACU</u> | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |
| | | | | = Total Cover | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Remarks <u>Old field with dominance of reed canary grass.</u> <u>*Field has been planted with tree saplings.</u> <u>Survivorship of these tree saplings is low.</u> |
| 1. | <u>N/A</u> | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/5/10
 Data Point ID: 11 @ wetland-666

Soil Map Unit: Guffin Clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|------|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10YR2/6/1 | 100% | — | — | — | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|---|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| Type: _____ Depth (inches): _____ | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: Soils disturbed from past agricultural activities.

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No

If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/5/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PSS/DC

Data Point ID (i.e. 2W@Wet. G): 1w@wetland FFF

Nearest Flag to Data Point: FFF-37

Investigator(s): Pippin / Lockard

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 3-4"
Depth to Sat. Soil (Inches): 0"
Depth to Water (Inches): 0"

Stream Characteristics

Stream type: Intermittent Morphology: Bank Width 1 foot Stream Gradient: Gentle Substrate: Bed Rock Flow: Gentle
Water Depth 3-4" Moderate Steep Boulder Sand Silt Clay Heavy
Gravel

Adjacent Community Type: Spruce Forest/Ag land

Instream Conditions:

- Obscured Banks in certain areas
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

Hydrology present throughout wetland.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/5/10
 Data Point ID: Wet Wetland FFF

| Vegetation | | | | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--------------|
| Tree Stratum (Plot size: 30-foot radius) | | | | Number of Dominant Species That Are OBL, FACW, or FAC: | 8 (A) |
| 1. | Absolute % Cover | Dominant Species? | Indicator Status | Total Number of Dominant Species Across All Strata: | 8 (B) |
| 2. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: | 100 (A/B) |
| 3. | | | | Prevalence Index worksheet: | |
| 4. | | | | Total % Cover of: | Multiply by: |
| 5. | | | | OBL species | x 1 = |
| | | | | FACW species | x 2 = |
| | | | | FAC species | x 3 = |
| | | | | FACU species | x 4 = |
| | | | | UPL species | x 5 = |
| | | | | Column Totals: | (A) (B) |
| | | | | Prevalence Index = B/A = | |

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
|---|---------------|----|---------------|
| 1. | Silky dogwood | 35 | yes facw |
| 2. | Gray dogwood | 10 | no fac |
| 3. | Salix sp | 25 | yes facw |
| 4. | Alder sp | 10 | no NT |
| 5. | | | |
| | | | = Total Cover |

| Herb Stratum (Plot size: 5-foot radius) | | | |
|---|--------------------|----|---------------|
| 1. | Beak canopy grass | 25 | yes facw |
| 2. | Juncus effusus | 35 | yes obl |
| 3. | Golidago spp. | 15 | no facw |
| 4. | Aster spp. | 15 | no facw |
| 5. | Juncus tenuis | 15 | no fac |
| 6. | Scirpus Atrovirens | 10 | no obl |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| | | | = Total Cover |

| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
|--|-----|--|---------------|
| 1. | N/A | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | | | = Total Cover |

Hydrophytic Vegetation Indicators:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test >50%
 Prevalence Index <3.0¹
 Morphological Adaptations¹ (provide supporting data in remarks)
 Problematic Hydrophytic Vegetation¹ (explain in remarks)
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 3.28 ft (1 m) tall.
 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
 Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

Some American elm in (sporadic) in areas.

A typical drainage along Ag. field ad forest (wet) that is linear as it traverses a spruce forest stand.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/5/10
 Data Point ID: 120 Wetland FFF

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-6 | 10YR 6/1 | | — | — | — | Silt Clay |
| 6-8 | 10YR 6/1 | | 10YR 5/8 | | | Silt Clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| Type: _____ Depth (Inches): _____ | | |

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

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No
 If yes, indicate wetland ID _____

Project Number: 05030

Sampling Date: 11/5/10

Applicant: Horse Creek Wind Farm

Data Point ID: 1u@ wetland FFF

Vegetation

| Tree Stratum (Plot size: 30-foot radius) | | | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|---------------------|--|------------------|-------------------|------------------|---|--------------|
| 1. | <i>Picea glauca</i> | | 100 | yes | True | Number of Dominant Species That Are OBL, FACW, or FAC: | 0 (A) |
| 2. | | | | | | Total Number of Dominant Species Across All Strata: | 0 (B) |
| 3. | | | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: | 0 (A/B) |
| 4. | | | | | | Prevalence Index worksheet: | |
| 5. | | | | | | Total % Cover of: | Multiply by: |
| 6. | | | | | | OBL species | x 1 = |
| | | | | | | FACW species | x 2 = |
| | | | | | | FAC species | x 3 = |
| | | | | | | FACU species | x 4 = |
| | | | | | | UPL species | x 5 = |
| | | | | | | Column Totals: | (A) (B) |
| | | | | | | Prevalence Index = B/A = | |

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | Absolute % Cover | Dominant Species? | Indicator Status |
|---|-----|--|------------------|-------------------|------------------|
| 1. | n/a | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | | | = Total Cover |

| Herb Stratum (Plot size: 5-foot radius) | | | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|--|------------------|-------------------|------------------|
| 1. | <i>Carex sp.</i> | | 10 | NO KIND | False |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | | | = Total Cover |

Hydrophytic Vegetation Indicators:

- Rapid Test for Hydrophytic Vegetation
- Dominance Test >50%
- Prevalence Index $\leq 3.0^1$
- Morphological Adaptations¹ (provide supporting data in remarks)
- Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.
- Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
- Woody vines - All woody vines greater than 3.28 ft in height.

| Woody Vine Stratum (Plot size: 30-foot radius) | | | Absolute % Cover | Dominant Species? | Indicator Status |
|--|--|--|------------------|-------------------|------------------|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | | | | = Total Cover |

Remarks

Dense white spruce stand. No structural shrub or herb. layer.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 4/5/10
 Data Point ID: In @ wetland FFF

Soil Map Unit: Chaumont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-6" | 10YR 6/1 | 100 | — | — | — | clay loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|---|--|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19 <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| Type: _____ Depth (Inches): _____ | | |

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

Remarks: Non-hydric soil

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Is the wetland mapped in the NWI? Yes No

Is the wetland a mapped state wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

If yes, indicate classification _____

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/10/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PFO

Data Point ID (i.e. 2W@Wet. G): 1w@wetland 666

Nearest Flag to Data Point: G66-1

Investigator(s): Pippin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 6-8"
Depth to Sal. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics N/A

Stream type: Morphology: Stream Gradient: Substrate: Flow:
Perennial Bank Width Gentle Bed Rock Sand No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type:

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

inundated low area in forest drains east into a larger PFO/PSS wetland

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10/10
 Data Point ID: 1w@ Wetland G6/G7

Vegetation

Tree Stratum (Plot size: 30-foot radius)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|------------------------|------------------|-------------------|------------------|
| 1. <u>American elm</u> | <u>60</u> | <u>yes</u> | <u>facw</u> |
| 2. <u>Acer rubrum</u> | <u>25</u> | <u>NO</u> | <u>fac</u> |
| 3. _____ | _____ | _____ | _____ |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Sapling/Shrub Stratum (Plot size: 15-foot radius)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------------|------------------|-------------------|------------------|
| 1. <u>Buck thorn</u> | <u>5</u> | <u>NO</u> | <u>upl</u> |
| 2. <u>American Elm</u> | <u>25</u> | <u>yes</u> | <u>facw</u> |
| 3. <u>Musclewood, (A. floridana)</u> | <u>10</u> | <u>yes</u> | <u>fac</u> |
| 4. <u>Acer rubrum</u> | <u>10</u> | <u>yes</u> | <u>fac</u> |
| 5. _____ | _____ | _____ | _____ |
| 6. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Herb Stratum (Plot size: 5-foot radius)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------|------------------|-------------------|------------------|
| 1. <u>Sensitive fern</u> | <u>10</u> | _____ | _____ |
| 2. _____ | _____ | _____ | _____ |
| 3. _____ | _____ | _____ | _____ |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| 6. _____ | _____ | _____ | _____ |
| 7. _____ | _____ | _____ | _____ |
| 8. _____ | _____ | _____ | _____ |
| 9. _____ | _____ | _____ | _____ |
| 10. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index is <3.0¹

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

Herb layer not substantial due to time of season.

Woody Vine Stratum (Plot size: 30-foot radius)

| | | | |
|---------------|-------|-------|-------|
| 1. <u>N/A</u> | _____ | _____ | _____ |
| 2. _____ | _____ | _____ | _____ |
| 3. _____ | _____ | _____ | _____ |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Project Number: 05030

Sampling Date: 11/16/10

Applicant: Horse Creek Wind Farm

Data Point ID: 1w@wetland 05030

Soil Map Unit: Charent silty loam clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|-------------------|---------------|-----|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-10 ⁺ | 10YR 2/1 | 100 | — | — | — | Clay loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| Type: _____ Depth (inches): _____ | | |

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

Remarks

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/10/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: forested upland

Data Point ID (i.e. 2W@Wet. G): 1u@Wetland G66

Nearest Flag to Data Point: G66-1

Investigator(s): Rippin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No

Saturated Conditions? Yes No

Depth of Water (inches): 0
Depth to Sat. Soil (inches): 216"
Depth to Water (inches): 216"

Stream Characteristics

| | | | | |
|---------------------|--------------------|-------------------------|---------------------------|----------------|
| <u>Stream type:</u> | <u>Morphology:</u> | <u>Stream Gradient:</u> | <u>Substrate:</u> | <u>Flow:</u> |
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ Sand _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ Silt _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ Clay _____ | Moderate _____ |
| | | | Gravel _____ | Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

NO hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10/10
 Data Point ID: 1w@wetland 666

| Vegetation | | | | Dominance Test worksheet: | | | |
|--|---------------|----|-----|---------------------------|--|---|---|
| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) |
| 1. | American elm | 20 | yes | faw | | | Total Number of Dominant Species Across All Strata: <u>5</u> (B) |
| 2. | Acer rubrum | 20 | yes | pac | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B) |
| 3. | Quercus rubra | 25 | yes | faw | | | |
| 4. | Sugar maple | 15 | NO | faw | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | | | Prevalence Index worksheet: | |
| 1. | Buckthorn | 10 | no | upl | Total % Cover of: | Multiply by: | |
| 2. | Acer rubrum | 15 | yes | faw | OBL species | x 1 = | |
| 3. | American elm | 15 | yes | faw | FACW species | x 2 = | |
| 4. | | | | | FAC species | x 3 = | |
| 5. | | | | | FACU species | x 4 = | |
| | | | | = Total Cover | | UPL species | |
| | | | | | | x 5 = | |
| | | | | | | Column Totals: (A) (B) | |
| | | | | | | Prevalence Index = B/A = | |
| Herb Stratum (Plot size: 5-foot radius) | | | | | | Hydrophytic Vegetation Indicators: | |
| 1. | | | | | <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation | | |
| 2. | | | | | <input type="checkbox"/> Dominance Test >50% | | |
| 3. | | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 4. | | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | | |
| 5. | | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | | |
| 6. | | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 7. | | | | | Definitions of Vegetation Strata: | | |
| 8. | | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 9. | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 10. | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| | | | | = Total Cover | | Woody vines - All woody vines greater than 3.28 ft in height. | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | | Remarks | |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10/10
 Data Point ID: 100 Wetland 666

Soil Map Unit: Chauquant silty ~~clay~~ clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10YR 4/3 | | — | — | — | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils (F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
 Depth (inches): _____

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

Remarks: Non-hydric

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____
 Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION

274 North Goodman Street
Rochester, New York 14607

Northcentral and Northeast Regional Supplement

Project Number: 05030

Town: Clayton

Sampling Date: 11/10/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PFO

Data Point ID (i.e. 2W@Wet. G): 1W@Wetland HHH

Nearest Flag to Data Point: HHH-1

Investigator(s):

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 6-8
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Perennial Morphology: N/A Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Bank Width Gentle Bed Rock Sand
Intermittent Moderate Boulder Silt
Water Depth Steep Cobble Clay
Gravel Heavy

Adjacent Community Type:

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

Like 066, this forested wetland drains to the east into a forested / scrub shrub wetland. PFO/PSS.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10/10
 Data Point ID: W@weHul HHH

Vegetation

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Tree Stratum (Plot size: 30-foot radius) | | | |
| 1. American Elm | 60 | yes | few |
| 2. Acer rubrum | 25 | NO | fac |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| = 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: 50 (A/B)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
| 1. Buckthorn | 50 | yes | upl |
| 2. muscadewood | 10 | NO | fac |
| 3. American elm | 10 | NO | few |
| 4. | | | |
| 5. | | | |
| = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Herb Stratum (Plot size: 5-foot radius) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| = Total Cover | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index <3.0¹

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

NO herb layer present.

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| = Total Cover | | | |

Project Number: 05030

Sampling Date: 11/10/10

Applicant: Horse Creek Wind Farm

Data Point ID: 1020 wetland HHP

Soil Map Unit: Chautauq silty loam clay

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-16" | 10YR 4/1 | 100 | — | — | — | — | Clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators⁴

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
 Depth (Inches): _____

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Dark hydric soil.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION

274 North Goodman Street
Rochester, New York 14607

Northcentral and Northeast Regional Supplement

Project Number: 05030

Town: Clayton

Sampling Date: 11/10/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Forested Upland

Data Point ID (i.e. 2W@Wet. G): W@Wet@ RHH

Nearest Flag to Data Point: RHH-1

Investigator(s): Pippin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0.2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 0"
Depth to Sat. Soil (inches): 716"
Depth to Water (inches): 716"

Stream Characteristics

Stream type: Intermittent Morphology: N/A Stream Gradient: Sleep Substrate: Gravel Flow: Gentle
Perennial Bank Width Gentle Bed Rock Sand No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Sleep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

No hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/10/10
 Data Point ID: LWC West of HHH

| Vegetation | | | | Dominance Test worksheet: | | | |
|--|-----------------------|-----------|------------|---------------------------|-------------------|------------------|--|
| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) |
| 1. | <u>Quercus rubra</u> | <u>20</u> | <u>yes</u> | <u>facw</u> | | | Total Number of Dominant Species Across All Strata: <u>6</u> (B) |
| 2. | <u>Acer rubrum</u> | <u>20</u> | <u>yes</u> | <u>fac</u> | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B) |
| 3. | <u>American beech</u> | <u>20</u> | <u>yes</u> | <u>facw</u> | | | |
| 4. | <u>Sugar maple</u> | <u>20</u> | <u>yes</u> | <u>facw</u> | | | |
| 5. | <u>American elm</u> | <u>10</u> | <u>no</u> | <u>facw</u> | | | |
| | | | | = Total Cover | | | |
| Sapling/Shrub Stratum (Plot size: 16-foot radius) | | | | | | | |
| 1. | <u>Black Gum</u> | <u>10</u> | <u>yes</u> | <u>upl</u> | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. | <u>Acer rubrum</u> | <u>10</u> | <u>yes</u> | <u>fac</u> | | | |
| 3. | <u>American elm</u> | <u>5</u> | <u>no</u> | <u>facw</u> | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |
| Herb Stratum (Plot size: 6-foot radius) | | | | | | | |
| 1. | <u>N/A</u> | | | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index is <3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |
| | | | | = Total Cover | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | | | |
| 1. | <u>N/A</u> | | | | | | Remarks |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030

Sampling Date: 11/10/10

Applicant: Horse Creek Wind Farm

Data Point ID: 120 wetland RPHH

Soil Map Unit: Chaumont silty loam clay

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-10 | 10YR4/3 | . | — | — | — | — | Silt loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

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

Remarks

Non wetland hydric soil.

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No

Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

Community: Wet meadow / PSS

Data Point ID (i.e. 2W@Wet. G): 1W@Wetland III

State: New York

Nearest Flag to Data Point: III-2

Investigator(s): Pippin Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 3-4
Depth to Sat. Soil (Inches): 0
Depth to Water (Inches): 0

Stream Characteristics

Stream type: Morphology n/a Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Perennial Bank Width _____ Gentle _____ Bed Rock _____ Sand _____ No Flow _____
Intermittent Stream Width _____ Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth _____ Steep _____ Cobble _____ Clay _____ Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Wet meadow/PSS wetland in active pasture that drains to the east adjacent so upland forest, all continues off-site.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: 1WA Wetland III

| Vegetation | | | | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|--|--------------|
| Tree Stratum (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: | (A) |
| 1. N/A | | | | 4 | |
| 2. | | | | 4 | (B) |
| 3. | | | | 100 | (A/B) |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: | Multiply by: |
| | | | | OBL species | x 1 = |
| | | | | FACW species | x 2 = |
| | | | | FAC species | x 3 = |
| | | | | FACU species | x 4 = |
| | | | | UPL species | x 5 = |
| | | | | Column Totals: | (A) (B) |
| | | | | Prevalence Index = B/A = | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | | |
| 1. Salix sp. | 25 | yes | facw | | |
| 2. Sicky dogwood | 15 | yes | facw | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | Hydrophytic Vegetation Indicators: | |
| | | | | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| | | | | <input type="checkbox"/> Dominance Test >50% | |
| | | | | <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ | |
| | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| Herb Stratum (Plot size: 8-foot radius) | | | | Definitions of Vegetation Strata: | |
| 1. Juncus effusus | 40 | yes | obl | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | |
| 2. Wetland grasses | 50 | yes | facw | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | |
| 3. Scirpus cyperinus | 10 | NO | facw | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| 4. | | | | Woody vines - All woody vines greater than 3.28 ft in height. | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | Remarks | |
| | | | | Wetland III located in active pasture and heavily browsed. | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. N/A | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

Project Number: 05030

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

Data Point ID: 14 @ wetland TST

Soil Map Unit: Guffin Clay

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

| Depth (inches) | Matrix | | Redux Features | | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-16 | 10YR 4/1 | 100 | 10YR 5/6 | C | D | M | Clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

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

Remarks

hydric soils

Wetland Determination

Hydrophytic Vegetation Present? Yes No Yes No

Hydric Soil Present? Yes No Yes No

Wetland Hydrology Present? Yes No Yes No

Is this Sampling Point Within a Wetland? Yes No Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A Yes No N/A

Is the wetland mapped in the NWI? Yes No Yes No

Is the wetland a mapped state wetland? Yes No Yes No

If yes, indicate classification _____

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Pasture / Forest edge

Data Point ID (i.e. 2W@Wet. G): 1A@Wetland III

Nearest Flag to Data Point: III-2

Investigator(s): Pippin / Nocton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No

Saturated Conditions? Yes No

Depth of Water (inches): 0
Depth to Sat. Soil (Inches): 716"
Depth to Water (inches): 716"

Stream Characteristics

Stream type: Morphology: N/A
Stream Gradient: Gentle Moderate Steep
Substrate: Bed Rock Sand Silt Clay Gravel
Flow: No Flow Gentle Moderate Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/24/10
 Data Point ID: 110 @ wetland ICI

| Vegetation | | | | Dominance Test worksheet: | | | |
|---|-------------------------|------------|------------|---|--|---|---|
| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) |
| 1. | <u>Quercus Alba</u> | <u>20</u> | <u>yes</u> | <u>Saw</u> | Total Number of Dominant Species Across All Strata: <u>1</u> (B) | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B) | |
| 2. | <u>Quercus rubra</u> | <u>15</u> | <u>yes</u> | <u>Saw</u> | | | |
| 3. | <u>Acer rubrum</u> | <u>15</u> | <u>yes</u> | <u>Fac</u> | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | Prevalence Index worksheet: | | | |
| | | | | Total % Cover of: | Multiply by: | | |
| | | | | OBL species | x 1 = | | |
| | | | | FACW species | x 2 = | | |
| | | | | FAC species | x 3 = | | |
| | | | | FACU species | x 4 = | | |
| | | | | UPL species | x 5 = | | |
| | | | | Column Totals: | (A) | (B) | |
| | | | | Prevalence Index = B/A = _____ | | | |
| | | | | Hydrophytic Vegetation Indicators: | | | |
| | | | | <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index $\leq 3.0^1$ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | |
| | | | | Definitions of Vegetation Strata: | | | |
| | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. | | | |
| | | | | Remarks | | | |
| | | | | This sampling point is located in active pasture with heavy browsing. Just to the SE is an upland forest. The tree species listed comprise of a portion of the forest stand. | | | |
| | | | | Herb Stratum (Plot size: 6-foot radius) | | | |
| 1. | <u>Pasture grasses.</u> | <u>100</u> | <u>yes</u> | <u>Saw</u> | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |
| | | | | Woody Vine Stratum (Plot size: 30-foot radius) | | | |
| 1. | <u>N/A</u> | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: _____
 Data Point ID: _____

Soil Map Unit: Guffia Clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other | |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| 0-10t | 10YR 4/4 | | — | ✓ | — | — | Silt loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|---|--|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S6) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mestic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| | | Type: _____ Depth (inches): _____ |

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

Remarks
Non-Hydric - soils.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION

274 North Goodman Street
Rochester, New York 14607

Northcentral and Northeast Regional Supplement

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

Community: Wet Meadow / PSS

State: New York

Data Point ID (i.e. 2W@Wet. G): 1w@wetland 333

Nearest Flag to Data Point: 333-10

Investigator(s): Pippin / Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 3-4"
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Morphology N/A Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Perennial Bank Width Gentle Bed Rock Sand No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type:

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

wetland adjacent to road flowing/drainage west to culvert which passes under the road at off site

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: lw@wetland 00

| Vegetation | | | | Dominance Test worksheet: | | | |
|--|---------------------------------|-----------|------------|------------------------------------|--|------------------|--|
| <u>Tree Stratum</u> (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: |
| 1. | <u>Mossy Cup Oak (char oak)</u> | <u>25</u> | <u>NO</u> | <u>fac</u> | <u>4</u> (A) | | |
| 2. | <u>American elm</u> | <u>25</u> | <u>NO</u> | <u>facw</u> | <u>4</u> (B) | | |
| 3. | | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: 16-foot radius) | | | | Prevalence Index worksheet: | | | |
| 1. | <u>Salix sp.</u> | <u>25</u> | <u>yes</u> | <u>facw</u> | Total % Cover of: _____ Multiply by: _____ | | |
| 2. | | | | | OBL species _____ x 1 = _____ | | |
| 3. | | | | | FACW species _____ x 2 = _____ | | |
| 4. | | | | | FAC species _____ x 3 = _____ | | |
| 5. | | | | | FACU species _____ x 4 = _____ | | |
| | | | | = Total Cover | | | |
| | | | | UPL species _____ x 6 = _____ | | | |
| | | | | Column Totals: _____ (A) _____ (B) | | | |
| | | | | Prevalence Index = B/A = _____ | | | |
| <u>Herb Stratum</u> (Plot size: 5-foot radius) | | | | Hydrophytic Vegetation Indicators: | | | |
| 1. | <u>Typha latifolia</u> | <u>20</u> | <u>yes</u> | <u>obl</u> | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | | |
| 2. | <u>Juncus effusus</u> | <u>30</u> | <u>yes</u> | <u>obl</u> | <input type="checkbox"/> Dominance Test >50% | | |
| 3. | <u>wetland grasses</u> | <u>25</u> | <u>yes</u> | <u>facw</u> | <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ | | |
| 4. | <u>Scirpus cyperinus</u> | <u>20</u> | <u>no</u> | <u>facw</u> | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | | |
| 5. | <u>Scirpus atrovirens</u> | <u>10</u> | <u>no</u> | <u>obl</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | | |
| 6. | | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |
| | | | | = Total Cover | | | |
| <u>Woody Vine Stratum</u> (Plot size: 30-foot radius) | | | | Definitions of Vegetation Strata: | | | |
| 1. | <u>N/A</u> | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 2. | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 3. | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| 4. | | | | | Woody vines - All woody vines greater than 3.28 ft in height. | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |
| Remarks | | | | | | | |
| <p>Approx. a half dozen of standing trees within this farm/PS wetland. would not consider it a forested wetland. located in active pasture. heavily browsed.</p> | | | | | | | |

Project Number: 05030

Sampling Date: 11/30/10
Data Point ID: 1W@ wetland SJJ

Applicant: Horse Creek Wind Farm

Soil Map Unit: Chaumont silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-1/2" | 10YR 4/1 | | 10YR 5/6 | C | D | M | Clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|---|--------------------------------------|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Type: _____ Depth (inches): _____ |
| | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks
hydric soils

Wetland Determination

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No
If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York Community: Active Pasture

Data Point ID (i.e. 2W@Wet. G): 1u@Wetland JJ

Nearest Flag to Data Point: JJ-10

Investigator(s): Pippin / Anton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 0
Depth to Sat. Soil (Inches): 716"
Depth to Water (Inches): 716"

Stream Characteristics

Stream type: Morphology: n/a Stream Gradient: Substrate: Flow:
Perennial Bank Width Gentle Bed Rock Sand No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type:

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks: No hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: 12@ Wetland 111

Vegetation

| | <u>Tree Stratum</u> (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|---|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = 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: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

| | <u>Sapling/Shrub Stratum</u> (Plot size: 15-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|--|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = Total Cover | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | <u>Herb Stratum</u> (Plot size: 5-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----|--|------------------|-------------------|------------------|
| 1. | <u>Pasture grasses</u> | <u>100</u> | <u>yes</u> | <u>Full</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | = Total Cover | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >50%

Prevalence Index <3.0¹

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

Heavily browsed pasture grasses. Difficult to identify due to pasture condition.

| | <u>Woody Vine Stratum</u> (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|---|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = Total Cover | | |

Project Number: 05030

Sampling Date: 11/30/0
Data Point ID: 1u@wetland JJ

Applicant: Horse Creek Wind Farm

Soil Map Unit: Charmont silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16" | 10YR 4/4 | | — | — | — | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators⁴

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (Inches): _____

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

Non hydric.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____
 Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Wet meadow / PSS

Data Point ID (I.e. 2W@Wet. G): 1w@Wetland KKK

Nearest Flag to Data Point: KKK-5

Investigator(s): Pippin Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 1-2
Depth to Sat. Soil (Inches): 0
Depth to Water (Inches): 0

Stream Characteristics

Stream type: Intermittent Morphology: N/A Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Perennial Bank Width Gentle Bed Rock Sand No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type:

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

Potentially isolated wetland that drains NE into a roadside ditch with no outlet or culvert.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: W@ Wetland KKK

| Vegetation | | | | Dominance Test worksheet: | | | |
|--|-----|--|--|---------------------------|-------------------|------------------|--|
| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: |
| 1. | N/A | | | | | | 3 (A) |
| 2. | | | | | | | 3 (B) |
| 3. | | | | | | | 100 (A/B) |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Prevalence Index worksheet: | | | |
|---|-----------|----|-----|--------------------------------|--------------|----------------|---------------------|
| | | | | Total % Cover of: | Multiply by: | | |
| 1. | Salix sp. | 20 | yes | FACW | OBL species | x 1 = | |
| 2. | | | | | FACW species | x 2 = | |
| 3. | | | | | FAC species | x 3 = | |
| 4. | | | | | FACU species | x 4 = | |
| 5. | | | | | UPL species | x 5 = | |
| | | | | = Total Cover | | Column Totals: | (A) _____ (B) _____ |
| | | | | Prevalence Index = B/A = _____ | | | |

| Herb Stratum (Plot size: 5-foot radius) | | | | Hydrophytic Vegetation Indicators: | | | | |
|---|-------------------|----|-----|--|--|--|--|--|
| | | | | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | |
| 1. | Wetland Grasses | 30 | yes | FACW | Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. | | | |
| 2. | Juncus effusus | 30 | yes | OBL | | | | |
| 3. | Scirpus cyperinus | 10 | no | FACW | | | | |
| 4. | | | | | | | | |
| 5. | | | | | | | | |
| 6. | | | | | | | | |
| 7. | | | | | | | | |
| 8. | | | | | | | | |
| 9. | | | | | | | | |
| 10. | | | | | | | | |
| | | | | = Total Cover | | | | |

| Woody Vine Stratum (Plot size: 30-foot radius) | | | | Remarks | | | |
|--|-----|--|--|---------------|--|--|--|
| 1. | N/A | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030

Sampling Date: 11/30/10
Data Point ID: 1w@wetland RRR

Applicant: Horse Creek Wind Farm

Soil Map Unit: W: 1 point silty clay loam

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other | |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| 0-6" | 10YR 2/1 | | 10YR 5/1 | C | D | M | Clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| | | | |
|--|--|--|--|
| Hydric Soil Indicators <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Problematic Hydric Soil Indicators⁴ <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | Restrictive Layer (if observed) Type: _____ Depth (Inches): _____ |
|--|--|--|--|

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: Hydric Soils.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
 217 Montgomery Street, Suite 1000
 Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
 Northcentral and Northeast Regional Supplement

274 North Goodman Street
 Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Pasture - Active

Data Point ID (i.e. 2W@Wet. G): 1u@wetland KKK

Nearest Flag to Data Point: KKK-5

Investigator(s): Rippin / Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
 Saturated Conditions? Yes No

Depth of Water (Inches): _____
 Depth to Sat. Soil (Inches): _____
 Depth to Water (Inches): _____

Stream Characteristics

| | | | | |
|---------------------|--------------------|-------------------------|-------------------|----------------|
| <u>Stream type:</u> | <u>Morphology:</u> | <u>Stream Gradient:</u> | <u>Substrate:</u> | <u>Flow:</u> |
| Perennial | Bank Width _____ | Gentle _____ | Bed Rock _____ | No Flow _____ |
| Intermittent | Stream Width _____ | Moderate _____ | Boulder _____ | Gentle _____ |
| | Water Depth _____ | Steep _____ | Cobble _____ | Moderate _____ |
| | | | Gravel _____ | Heavy _____ |
| | | | | Sand _____ |
| | | | | Silt _____ |
| | | | | Clay _____ |

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks no hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: 1u@ Wetland RFF

Vegetation

| | Tree Stratum (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|--|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | = 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 (A/B)

| | Sapling/Shrub Stratum (Plot size: 15-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|---|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | = Total Cover | | |

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by:
 OBL species _____ x 1 = _____
 FACW species _____ x 2 = _____
 FAC species _____ x 3 = _____
 FACU species _____ x 4 = _____
 UPL species _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | Herb Stratum (Plot size: 5-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----|---|------------------|-------------------|------------------|
| 1. | <u>Pasture grasses</u> | <u>100</u> | <u>yes</u> | <u>facw</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | = Total Cover | | |

Hydrophytic Vegetation Indicators:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test >50%
 Prevalence Index $\leq 3.0^1$
 Morphological Adaptations¹ (provide supporting data in remarks)
 Problematic Hydrophytic Vegetation¹ (explain in remarks)
 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
 Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
 Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
 Woody vines - All woody vines greater than 3.28 ft in height.

Remarks
Active Pasture with browsed grasses.
unable to accurately identify.

| | Woody Vine Stratum (Plot size: 30-foot radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|----|--|------------------|-------------------|------------------|
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | = Total Cover | | |

Project Number: 05030

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

Data Point ID: W@Wetland CFC

Soil Map Unit: Wilpoint silty clay loam

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16+ | 10YR 7/4 | | — | — | — | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (If observed)

Type: _____
Depth (inches): _____

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

Remarks

non-hydric

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION

274 North Goodman Street
Rochester, New York 14607

Northcentral and Northeast Regional Supplement

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

Community: Wet meadow / PSS

State: New York

Data Point ID (i.e. 2W@Wet. G): LW@WetWU

Nearest Flag to Data Point: UU-12

Investigator(s): Pippin / Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes _____ No _____
Saturated Conditions? Yes _____ No _____

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

| Stream type: | Morphology: | Stream Gradient: | Substrate: | Flow: | |
|---------------------------------------|--------------------|---|---|-------------------------------------|---|
| <input type="checkbox"/> Perennial | Bank Width _____ | <input type="checkbox"/> Gentle _____ | <input type="checkbox"/> Bed Rock _____ | <input type="checkbox"/> Sand _____ | <input type="checkbox"/> No Flow _____ |
| <input type="checkbox"/> Intermittent | Stream Width _____ | <input type="checkbox"/> Moderate _____ | <input type="checkbox"/> Boulder _____ | <input type="checkbox"/> Silt _____ | <input type="checkbox"/> Gentle _____ |
| | Water Depth _____ | <input type="checkbox"/> Steep _____ | <input type="checkbox"/> Cobble _____ | <input type="checkbox"/> Clay _____ | <input type="checkbox"/> Moderate _____ |
| | | | <input type="checkbox"/> Gravel _____ | | <input type="checkbox"/> Heavy _____ |

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Similar to KKK but flows to SW to road and culvert.

Project Number: 05030

Applicant: Horse Creek Wind Farm

Sampling Date: 11/20/10

Data Point ID: 1w@wetal U

| Vegetation | | | | Dominance Test worksheet: | |
|--|--------------------------|-------------------|------------------------|--|--|
| | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) | |
| Tree Stratum (Plot size: 30-foot radius) | | | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | |
| 1. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) | |
| 2. | | | | Prevalence Index worksheet: | |
| 3. | | | | Total % Cover of: _____ Multiply by: _____ | |
| 4. | | | | OBL species _____ x 1 = _____ | |
| 5. | | | | FACW species _____ x 2 = _____ | |
| | | | = Total Cover | FAC species _____ x 3 = _____ | |
| | | | | FACU species _____ x 4 = _____ | |
| | | | | UPL species _____ x 5 = _____ | |
| | | | | Column Totals: _____ (A) _____ (B) | |
| | | | | Prevalence Index = B/A = _____ | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Hydrophytic Vegetation Indicators: | |
| 1. | <u>Salix sp.</u> | <u>20</u> | <u>yes</u> <u>FACW</u> | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| 2. | | | | <input type="checkbox"/> Dominance Test >50% | |
| 3. | | | | <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ | |
| 4. | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | |
| 5. | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| 7. | | | | Definitions of Vegetation Strata: | |
| 8. | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | |
| 9. | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | |
| 10. | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vines - All woody vines greater than 3.28 ft in height. | |
| | | | = Total Cover | Remarks | |
| Herb Stratum (Plot size: 5-foot radius) | | | | | |
| 1. | <u>Scirpus cyperinus</u> | <u>30</u> | <u>yes</u> <u>FACW</u> | | |
| 2. | <u>Juncus eximius</u> | <u>20</u> | <u>yes</u> <u>OBL</u> | | |
| 3. | <u>wetland grasses</u> | <u>20</u> | <u>yes</u> <u>FACW</u> | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | = Total Cover | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | | = Total Cover | | |

Project Number: 05030

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

Data Point ID: 1w@ 11-12

Soil Map Unit: Wipoint silty clay loam

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other | |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| 0-16" | 10YR 4/1 | | 10YR 5/6 | C | D | m | clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

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

Remarks: odydic soils.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
Is the wetland a mapped state wetland? Yes No
If yes, indicate classification _____
If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION

274 North Goodman Street
Rochester, New York 14607

Northcentral and Northeast Regional Supplement

Project Number: 05030

Town: Clayton

Sampling Date: 11/20/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Ag. Field / Active Pasture

Data Point ID (i.e. 2W@Wet. G): 1nd wetland III

Nearest Flag to Data Point: III-12

Investigator(s): Pippin / Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Morphology: Stream Gradient: Substrate: Flow:
Perennial Bank Width _____ Gentle / _____ Bed Rock _____ Sand _____ No Flow _____
Intermittent Stream Width _____ Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth _____ Steep _____ Cobble _____ Clay _____ Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks: no hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: 10@wetland 44

| Vegetation | | | | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) |
|--|------------|--|------------------|------------------|--|
| Tree Stratum (Plot size: 30-foot radius) | | | Absolute % Cover | | |
| 1. | <u>N/A</u> | | | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | | | = Total Cover | |

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Indicator Status | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ |
|---|------------|--|------------------|------------------|---|
| | | | Absolute % Cover | | |
| 1. | <u>N/A</u> | | | | OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | | | = Total Cover | |

| Herb Stratum (Plot size: 5-foot radius) | | | | Indicator Status | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index $\leq 3.0^1$ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small> |
|---|------------------------|------------|------------------|------------------|---|
| | | | Absolute % Cover | | |
| 1. | <u>Pasture grasses</u> | <u>100</u> | <u>yes</u> | <u>FACU</u> | Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | | = Total Cover | |

Remarks
Active Pasture with browsed vegetation.
Unable to accurately identify.

| Woody Vine Stratum (Plot size: 30-foot radius) | | | | Indicator Status |
|--|------------|--|------------------|------------------|
| | | | Absolute % Cover | |
| 1. | <u>N/A</u> | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | | | = Total Cover |

Project Number: 05030

Sampling Date: _____

Applicant: Horse Creek Wind Farm

Data Point ID: _____

Soil Map Unit: Wilpact silty clay loam

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-10F | 10YR 4/4 | | — | — | — | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common

²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators⁴

- 2 cm Muck (A10)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks

non-hydric soils.

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/30

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Wet meadow

Data Point ID (i.e. 2W@Wet. G): 1W@Wetland MMM

Nearest Flag to Data Point: MMM-1A

Investigator(s): Rippin / Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 0-2"
Depth to Sat. Soil (Inches): 0"
Depth to Water (Inches): 0"

Stream Characteristics

Stream type: N/A Morphology: _____ Stream Gradient: _____ Substrate: _____ Flow: _____
Perennial Bank Width _____ Gentle _____ Bed Rock _____ Sand _____ No Flow _____
Intermittent Stream Width _____ Moderate _____ Boulder _____ Silt _____ Gentle _____
Water Depth _____ Steep _____ Cobble _____ Clay _____ Moderate _____
Gravel _____ Heavy _____

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

hydrologic connection with wetland (forested) E. Wetland E drains out of the forested area in to this ag. field/wm and east in to a PFO/PSS wetland at the edge of the field.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/20/10
 Data Point ID: 160 mmm-1A

| Vegetation | | | | Dominance Test worksheet: | |
|--|-----------------------------|-------------------|------------------|--|---|
| | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: | (A) |
| Tree Stratum (Plot size: 30-foot radius) | | | | Total Number of Dominant Species Across All Strata: | |
| 1. | N/A | | | 2 | (A) |
| 2. | | | | 2 | (B) |
| 3. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) | |
| 4. | | | | Prevalence Index worksheet: | |
| 5. | | | | Total % Cover of: | Multiply by: |
| _____ = Total Cover | | | | OBL species _____ | x 1 = _____ |
| | | | | FACW species _____ | x 2 = _____ |
| | | | | FAC species _____ | x 3 = _____ |
| | | | | FACU species _____ | x 4 = _____ |
| | | | | UPL species _____ | x 5 = _____ |
| | | | | Column Totals: _____ | (A) _____ (B) |
| | | | | Prevalence Index = B/A = _____ | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Hydrophytic Vegetation Indicators: | |
| 1. | N/A | | | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| 2. | | | | <input type="checkbox"/> Dominance Test >50% | |
| 3. | | | | <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ | |
| 4. | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | |
| 5. | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| 7. | | | | Definitions of Vegetation Strata: | |
| 8. | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | |
| 9. | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | |
| 10. | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| _____ = Total Cover | | | | Woody vines - All woody vines greater than 3.28 ft in height. | |
| Herb Stratum (Plot size: 5-foot radius) | | | | Remarks | |
| 1. | <u>Lanius excubitorides</u> | <u>60</u> | <u>yes</u> | <u>OH</u> | This wetland is hydrologically connected with wetland E (PTD). Wetland mmm is located in a hay field and has been recently cut. Plant id was minimal. |
| 2. | <u>Carex sp.</u> | <u>10</u> | <u>no</u> | <u>SAW</u> | |
| 3. | <u>wetland grasses</u> | <u>40</u> | <u>yes</u> | <u>SAW</u> | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| _____ = Total Cover | | | | | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | N/A | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| _____ = Total Cover | | | | | |

Project Number: 05030

Sampling Date: 11/20/10

Applicant: Horse Creek Wind Farm

Data Point ID: Under wetland margin

Soil Map Unit: Chocoma silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other | |
|-------------------|---------------|---|----------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| 0-16 ⁴ | 10YR 4/1 | | 10YR 5/6 | L | MA D | M | clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: 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)

- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Problematic Hydric Soil Indicators³

- 2 cm Muck (A10)
- Coast Prairie Redox (A10)
- 5 cm Mucky Peat or Peat (S3)
- Dark Surface (S7)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils F19)
- Mesic Spodic (TA6)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

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

Remarks: hydric soils similar to wetlands III → ULL

Wetland Determination

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
If yes, indicate classification PFOIE
Is the wetland a mapped state wetland? Yes No
If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 11/30/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Wet meadow Ag field

Data Point ID (i.e. 2W@Wet. G): 100@Wetland Mmm

Nearest Flag to Data Point: MMM-14

Investigator(s): Rippia/Norton

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Perennial Morphology: Bank Width Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Non-hydric soils in active ag. field (Hay)

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: 11A0 wetland mmm

| Vegetation | | | | Dominance Test worksheet: | |
|--|------------------------------|-------------------|------------------|--|--|
| | Absolute % Cover | Dominant Species? | Indicator Status | | |
| Tree Stratum (Plot size: 30-foot radius) | | | | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) | |
| 1. | <u>N/A</u> | | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) | |
| 2. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: _____ Multiply by: | |
| | | | | OBL species _____ x 1 = _____ | |
| | | | | FACW species _____ x 2 = _____ | |
| | | | | FAC species _____ x 3 = _____ | |
| | | | | FACU species _____ x 4 = _____ | |
| | | | | UPL species _____ x 5 = _____ | |
| | | | | Column Totals: _____ (A) _____ (B) | |
| | | | | Prevalence Index = B/A = _____ | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | | |
| 1. | <u>N/A</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |
| Herb Stratum (Plot size: 5-foot radius) | | | | Hydrophytic Vegetation Indicators: | |
| 1. | <u>Hay field Ag. grasses</u> | <u>100</u> | <u>yes</u> | <u>FACU</u> | <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation |
| 2. | | | | | <input type="checkbox"/> Dominance Test >50% |
| 3. | | | | | <input type="checkbox"/> Prevalence Index <3.0 ¹ |
| 4. | | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) |
| 5. | | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) |
| 6. | | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | Definitions of Vegetation Strata: | |
| | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | |
| | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | |
| | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vines - All woody vines greater than 3.28 ft in height. | |
| | | | | Remarks | |
| | | | | <u>Active ag. field (Hay) recently cut.</u> | |
| | | | | <u>Difficult to identify individual plants.</u> | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | | |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 11/30/10
 Data Point ID: W2 Wetland MUM

Soil Map Unit: Chaumont silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other | |
|----------------|-----------------|---|----------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| <u>0-16"</u> | <u>10YR 4/1</u> | | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>Silt loam</u> |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|---|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| <input type="checkbox"/> Type: _____ <input type="checkbox"/> Depth (inches): _____ | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: Ag. soils - non-hydric

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No

Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____

If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 12/01/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: PFO/PSS

Data Point ID (i.e. 2W@Wet. G): 1W@Wetland NNN

Nearest Flag to Data Point: NNN-6

Investigator(s): Pippin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-1%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): 6-8"
Depth to Sat. Soil (Inches): 0
Depth to Water (Inches): 0

Stream Characteristics

Stream type: N/A Morphology: N/A Stream Gradient: N/A Substrate: N/A Flow: N/A
Perennial Bank Width Gentle Bed Rock Sand No Flow
Intermittent Stream Width Moderate Boulder Silt Gentle
Water Depth Steep Cobble Clay Moderate
Gravel Heavy

Adjacent Community Type:

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other

Remarks

Wetland located in low corner of field at stub area near road edge of property boundary. Area completely inundated due to recent heavy rains.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 12/01/10
 Data Point ID: 1W2 Wetland NNN

| Vegetation | | | | Dominance Test worksheet: | | | |
|--|---------------------------------|-----------|------------|---|--|--|--|
| Tree Stratum (Plot size: 30-foot radius) | | | | Absolute % Cover | Dominant Species? | Indicator Status | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) |
| 1. | <u>American elm</u> | <u>10</u> | <u>yes</u> | <u>facw</u> | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | Prevalence Index worksheet: | |
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | | | Total % Cover of: | Multiply by: |
| 1. | <u>Willow Shrub (Salix sp.)</u> | <u>20</u> | <u>yes</u> | <u>facw</u> | | OBL species _____ x 1 = _____ | |
| 2. | <u>Spirea alba</u> | <u>10</u> | <u>no</u> | <u>facw</u> | | FACW species _____ x 2 = _____ | |
| 3. | | | | | | FAC species _____ x 3 = _____ | |
| 4. | | | | | | FACU species _____ x 4 = _____ | |
| 5. | | | | | | UPL species _____ x 5 = _____ | |
| | | | | = Total Cover | | Column Totals: _____ (A) | _____ (B) |
| | | | | | | Prevalence Index = B/A = _____ | |
| Herb Stratum (Plot size: 5-foot radius) | | | | Hydrophytic Vegetation Indicators: | | | |
| 1. | <u>Scirpus cyperinus</u> | <u>30</u> | <u>yes</u> | <u>facw</u> | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | | |
| 2. | <u>Juncus effusus</u> | <u>50</u> | <u>yes</u> | <u>obl</u> | <input type="checkbox"/> Dominance Test >50% | | |
| 3. | <u>reed canary grass</u> | <u>5</u> | <u>no</u> | <u>facw</u> | <input type="checkbox"/> Prevalence Index <3.0 ¹ | | |
| 4. | | | | | <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) | | |
| 5. | | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) | | |
| 6. | | | | | Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 7. | | | | | Definitions of Vegetation Strata: | | |
| 8. | | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 9. | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 10. | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| | | | | | Woody vines - All woody vines greater than 3.28 ft in height. | | |
| | | | | = Total Cover | | Remarks | |
| Woody Vine Stratum (Plot size: 30-foot radius) | | | | <p><u>most of wetland was recently brush logged. unable to perform complete plant id.</u></p> | | | |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| | | | | = Total Cover | | | |

Project Number: 05030

Sampling Date: 12/01/00
Data Point ID: 1W@ Wetland NW1

Applicant: Horse Creek Wind Farm

Soil Map Unit: Chasmont silty clay

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

| Depth (Inches) | Matrix | | Redux Features | | | Texture, Structure, Other | |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | | Loc ³ |
| | 10YR 6/1 | | 10YR 5/8 | C | D | M | clay loam |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ³ | Restrictive Layer (if observed) |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. | | Type: _____ Depth (Inches): _____ |

Remarks: Hydric soils.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 12/01/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: P50/P55 - Ag field

Data Point ID (i.e. 2W@Wet. G): 1620 Wetland NNN

Nearest Flag to Data Point: NNN-6

Investigator(s): Pippin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 0-2%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (Inches): _____
Depth to Sat. Soil (Inches): _____
Depth to Water (Inches): _____

Stream Characteristics

Stream type: Perennial Morphology: N/A Stream Gradient: Gentle Substrate: Bed Rock Flow: No Flow
Intermittent Bank Width: _____ Moderate Boulder Sand Gentle
Water Depth: _____ Steep Cobble Silt Moderate
Gravel Clay Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

No hydrology observed.

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 12/01/10
 Data Point ID: LU@ wetland NWN

| Vegetation | | | | Indicator Status | 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 (A/B) |
|--|-----|--|------------------|------------------|--|
| Tree Stratum (Plot size: 30-foot radius) | | | Absolute % Cover | | |
| 1. | N/A | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | | Indicator Status | 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 (A/B) |
|---|-----|--|------------------|------------------|---|
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | Absolute % Cover | | |
| 1. | N/A | | | | Prevalence Index = B/A = _____ |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

| Herb Stratum (Plot size: 5-foot radius) | | | | Indicator Status | 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 (A/B) |
|---|------------------------|-----|------------------|------------------|---|
| Herb Stratum (Plot size: 5-foot radius) | | | Absolute % Cover | | |
| 1. | Ag field (Hay) grasses | 100 | yes | FACU | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test >50% <input type="checkbox"/> Prevalence Index <3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in remarks) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain in remarks) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. Remarks Active hay field that has been recently cut. |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| = Total Cover | | | | | |

| Woody Vine Stratum (Plot size: 30-foot radius) | | | | Indicator Status | 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 (A/B) |
|--|-----|--|------------------|------------------|---|
| Woody Vine Stratum (Plot size: 30-foot radius) | | | Absolute % Cover | | |
| 1. | N/A | | | | Prevalence Index = B/A = _____ |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| = Total Cover | | | | | |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 12/01/10
 Data Point ID: SW2 Wetland NW

Soil Map Unit: Chamont silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------|---|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-6" | 10YR2/4 | | ✓ | ✓ | ✓ | Silt loam |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|---|--------------------------------------|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Type: _____ Depth (inches): _____ |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: Non-hydric soils in hay field.

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No
 Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A
 Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No
 If yes, indicate classification _____
 If yes, indicate wetland ID _____

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 12/01/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: Wm/PSS/PFO

Data Point ID (i.e. 2W@Wet. G): Wetland 000

Nearest Flag to Data Point: 000-10

Investigator(s): Rippin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave

Approximate Slope (%): 3.4%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): 2-3"
Depth to Sat. Soil (Inches): 0
Depth to Water (inches): 0

Stream Characteristics

Stream type: Intermittent Morphology: Bank Width 4' Stream Gradient: Gentle Substrate: Bed Rock Flow: Gentle
Perennial Stream Width 2' Moderate Boulder Sand Silt No Flow Gentle
Water Depth 2-3" Steep Cobble Clay Clay Moderate Moderate
Gravel Gravel Heavy Heavy

Adjacent Community Type: _____

Instream Conditions:

- Obscured Banks
- Well Defined Banks
- Eroded/Undercut Bank
- Deep Pools
- Riffles & Pools
- Overhanging Vegetation
- Vegetated Channel
- Other _____

Remarks

Wetland begins in forested (wet) portion flows through a narrow shrub community and into an intermittent channel amongst a wet meadow community. Adjacent community is upland forest and old field.
Wetland very similar to wetland AAA (adjacent to SE)

Project Number: 06030
 Applicant: Horse Creek Wind Farm

Sampling Date: 12/01/10
 Data Point ID: Lower Wellhead 000

Vegetation

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Tree Stratum (Plot size: 30-foot radius) | | | |
| 1. <u>Red Maple</u> | <u>30</u> | <u>yes</u> | <u>fac</u> |
| 2. <u>Ironwood (A. Macrocarpum)</u> | <u>30</u> | <u>yes</u> | <u>fac</u> |
| 3. <u>Green Ash</u> | <u>20</u> | <u>yes</u> | <u>facw</u> |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Sapling/Shrub Stratum (Plot size: 15-foot radius) | | | |
| 1. <u>Salix sp.</u> | <u>30</u> | <u>yes</u> | <u>facw</u> |
| 2. <u>Silky Dogwood</u> | <u>30</u> | <u>yes</u> | <u>facw</u> |
| 3. <u>Gray Dogwood</u> | <u>20</u> | <u>yes</u> | <u>fac</u> |
| 4. <u>Red maple saplings</u> | <u>5</u> | <u>no</u> | <u>fac</u> |
| 5. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------|-------------------|------------------|
| Herb Stratum (Plot size: 5-foot radius) | | | |
| 1. <u>Solidago sp.</u> | <u>20</u> | <u>yes</u> | <u>facw</u> |
| 2. <u>Aster sp.</u> | <u>20</u> | <u>yes</u> | <u>facw</u> |
| 3. <u>Suncus effusus</u> | <u>20</u> | <u>yes</u> | <u>obl</u> |
| 4. <u>Scirpus cyperinus</u> | <u>10</u> | <u>no</u> | <u>facw</u> |
| 5. <u>Carex sp.</u> | <u>20</u> | <u>yes</u> | <u>facw</u> |
| 6. <u>Scirpus atrovirens</u> | <u>5</u> | <u>no</u> | <u>obl</u> |
| 7. _____ | _____ | _____ | _____ |
| 8. _____ | _____ | _____ | _____ |
| 9. _____ | _____ | _____ | _____ |
| 10. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test >60%

Prevalence Index $\leq 3.0^1$

Morphological Adaptations¹ (provide supporting data in remarks)

Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

| | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|-------------------|------------------|
| Woody Vine Stratum (Plot size: 30-foot radius) | | | |
| 1. <u>N/A.</u> | _____ | _____ | _____ |
| 2. _____ | _____ | _____ | _____ |
| 3. _____ | _____ | _____ | _____ |
| 4. _____ | _____ | _____ | _____ |
| 5. _____ | _____ | _____ | _____ |
| = Total Cover | | | |

Project Number: 05030

Sampling Date: 12/01/10

Applicant: Horse Creek Wind Farm

Data Point ID: 100 wetland 000

Soil Map Unit: Chautauq silty clay

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture, Structure, Other |
|----------------|---------------|-----|----------------|------------------------|-------------------|------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | Loc ³ | |
| 0-5 | 10YR 7/2 | 100 | — | — | — | — | silt clay |
| 5t | 10YR 5/1 | 60 | 10YR 5/9 | C | C | m | clay |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|--|--------------------------------------|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | Type: _____ Depth (Inches): _____ |
| <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks: Hydric soil

Wetland Determination

Hydrophytic Vegetation Present? Yes No
 Hydric Soil Present? Yes No
 Wetland Hydrology Present? Yes No
 Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
 Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
 Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No
 Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
 If yes, indicate wetland ID _____

Flows through 1c to bedrock at dog lights into stream.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 05030

Town: Clayton

Sampling Date: 12/11/10

Applicant: Horse Creek Wind Farm

County: Jefferson

State: New York

Community: upland old field / forest edge

Data Point ID (I.e. 2W@Wet. G): 1nd wetland 000

Nearest Flag to Data Point: 000-10

Investigator(s): Rignin

Is the area a potential problem area? Yes No

Landform: Hillside/Seep Toe of Slope Depressional Riparian

Is the site significantly disturbed? Yes No

Landscape Position: Flat Undulating Sloping Convex Concave Moderate slope

Approximate Slope (%): 0-1%

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No

Do Normal Circumstances exist on site? Yes No

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- 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)

Secondary Indicators (min. - 2 required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D-1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes No
Saturated Conditions? Yes No

Depth of Water (inches): _____
Depth to Sat. Soil (inches): _____
Depth to Water (inches): _____

Stream Characteristics

Stream type: Perennial Intermittent
Morphology: Bank Width _____ Stream Width _____ Water Depth _____
Stream Gradient: Gentle Moderate Steep
Substrate: Bed Rock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Silt _____ Clay _____
Flow: No Flow Gentle Moderate Heavy

Adjacent Community Type: _____

Instream Conditions:

Obscured Banks Well Defined Banks Eroded/Undercut Bank
Deep Pools Riffles & Pools
Overhanging Vegetation Vegetated Channel Other _____

Remarks

no hydrology observed in upland communities.

Project Number: 05030

Sampling Date: 12/01/10

Applicant: Horse Creek Wind Farm

Data Point ID: SW @ Wetland 000

Vegetation

| <u>Tree Stratum</u> (Plot size: 30-foot radius) | | | | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|--|------------------|---------------------------|-------|
| | Absolute % Cover | Dominant Species? | Number of Dominant Species That Are OBL, FACW, or FAC: | | | |
| 1. | Red Oak | 20 | yes | facw | 2 | (A) |
| 2. | Shagbark Hickory | 20 | yes | facw | 5 | (B) |
| 3. | Red Maple | 10 | no | fac | 40 | (A/B) |
| 4. | | | | | | |
| 5. | | | | | | |
| | | | | = Total Cover | | |

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

| <u>Sapling/Shrub Stratum</u> (Plot size: 15-foot radius) | | | | |
|--|-----------|--|--|---------------|
| 1. | Red Maple | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | | | = Total Cover |

| <u>Herb Stratum</u> (Plot size: 6-foot radius) | | | | |
|--|---------------|----|----------|---------------|
| 1. | Solidago sp. | 30 | yes fac | |
| 2. | Aster sp. | 30 | yes fac | |
| 3. | Timothy grass | 20 | yes facu | |
| 4. | Rubus sp. | 15 | facu | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | | | = Total Cover |

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test >50%

___ Prevalence Index is <3.0¹

___ Morphological Adaptations¹ (provide supporting data in remarks)

___ Problematic Hydrophytic Vegetation¹ (explain in remarks)

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 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Remarks

Similar same old field as wetland AAA.

| <u>Woody Vine Stratum</u> (Plot size: 30-foot radius) | | | | |
|---|-----|--|--|---------------|
| 1. | N/A | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | | | = Total Cover |

Project Number: 05030
 Applicant: Horse Creek Wind Farm

Sampling Date: 12/01/10
 Data Point ID: W@Wetland 000

Soil Map Unit: Chaumont silty clay

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

| Depth (inches) | Matrix | | Redox Features | | | Texture, Structure, Other |
|----------------|---------------------|-----|----------------|------------------------|-------------------|---------------------------|
| | Color (moist) | % | Color (moist) | Frequency ¹ | Type ² | |
| 0-16+ | 10YR ^{2/1} | 100 | - | - | - | Silt clay |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

¹Frequency: F=Few, MA=Moderately Abundant, C=Common
²Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
³Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators | Problematic Hydric Soil Indicators ⁴ | Restrictive Layer (if observed) |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) <input type="checkbox"/> Thin Dark Surface (S9) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Piedmont Floodplain Soils F19) <input type="checkbox"/> Mesic Spodic (TA6) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in remarks) |
| Type: _____ Depth (inches): _____ | | |

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks
Dark soil but not wet.

Wetland Determination

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is this Sampling Point Within a Wetland? Yes No

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A

Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A

Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____

Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

APPENDIX C

PHOTOS OF REPRESENTATIVE WETLAND COMMUNITIES



PHOTO 01:

Wetland A.



PHOTO 02:

Stream A.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 03:

Wetland B.



PHOTO 04:

Wetland C.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 05:

Wetland D.



PHOTO 06:

Wetland E.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 07:

Wetland F.



PHOTO 08:

Intermittent Stream G.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 09:

Wetland H.



PHOTO 10:

Wetland I.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 11:

Wetland J.



PHOTO 12:

Wetland K.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 13:

Wetland L.



PHOTO 14:

Wetland M.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 15:

Wetland N.



PHOTO 16:

Intermittent Stream O.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 17:

Wetland P.



PHOTO 18:

Intermittent Stream Q.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 19:

Wetland R.



PHOTO 20:

Intermittent Stream R.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 21:

Wetland S.



PHOTO 22:

Wetland SA.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 23:

Wetland SB.



PHOTO 24:

Wetland T.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 25:
Intermittent Stream U.



PHOTO 26:
Wetland V.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 27:

Wetland W.



PHOTO 28:

Intermittent Stream X.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 29:

Wetland Y.



PHOTO 30:

Wetland Z.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 31:

Wetland AA.



PHOTO 32:

Wetland BB.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 33:

Wetland CC.



PHOTO 34:

Wetland DD.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 35:

Wetland EE.



PHOTO 36:

Wetland FF.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 37:
Intermittent Stream GG.



PHOTO 38:
Intermittent Stream HH.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 39:

Wetland II.



PHOTO 40:

Wetland JJ.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 41:

Wetland KK.



PHOTO 42:

Wetland LL.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 43:
Wetland MM.



PHOTO 44:
Wetland NN.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 45:
Wetland OO.



PHOTO 46:
Wetland PP.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 47:
Wetland QQ.



PHOTO 48:
Wetland RR.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 49:

Wetland SS.



PHOTO 50:

Wetland TT.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 51:

Wetland UU.



PHOTO 52:

Wet Meadow UU.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 53:

Wetland VV.



PHOTO 54:

Wetland WW.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 55:

Wetland XX.



PHOTO 56:

Intermittent Stream YY.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 57:

Wetland ZZ



PHOTO 58:

Wetland AAA.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 59:
Wetland BBB.



PHOTO 60:
Intermittent Stream CCC.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 61:
Wetland DDD.



PHOTO 62:
Wetland EEE.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 63:
Wetland FFF.



PHOTO 64:
Wetland GGG.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 65:
Wetland HHH.



PHOTO 66:
Wetland III.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 67:
Wetland JJJ.



PHOTO 68:
Wetland KKK.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 67:
Wetland LLL.



PHOTO 68:
Wetland MMM.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010



PHOTO 69:
Wetland NNN.



PHOTO 70:
Wetland OOO.

Horse Creek Wind Farm

Town of Clayton & Orleans - Jefferson County, New York

Appendix C: Photos of Representative Wetland Communities

November 2010