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Water Quality and Wetlands

**Ball Hill FEIS
Water Quality and Wetlands**

November 2016

Prepared for:

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List of Abbreviations and Acronyms

ATV	all-terrain vehicles
Ball Hill	Ball Hill Wind Energy, LLC
BMP	best management practices
CFR	Code of Federal Regulations
FEIS	Final Environmental Impact Statement
ISMP	Invasive Species Management Plan
JD	Jurisdictional Determination
NOI	Notice of Intent
NYSDEC	New York State Department of Environmental Conservation
O&M	operations and maintenance
PJD	Preliminary Jurisdictional Determination
Project	Ball Hill Wind Project
ROW	right of way
SDEIS	Supplemental Draft Environmental Impact Statement
SEQRA	New York State Environmental Quality Review Act
SPDES	State Pollutant Discharge Elimination System
SPCC	spill prevention and control
SWPPP	Storm Water Pollution Prevention Plan
USACE	United States Army Corps of Engineers

E.1

Water Quality

This appendix provides a description of stream delineations and a detailed discussion of the overall stream impacts and proposed water quality mitigation activities for any impacts from construction and operation of the Ball Hill Wind Project (Project). This appendix also addresses possible impacts on groundwater and surface water resulting from construction and operation of the Project. Construction activities, including building access roads, installing turbines, and placing electrical collection and transmission lines, may impact the condition of groundwater and surface water resources and, ultimately, water quality. Ball Hill will minimize any potential construction impacts on surface or groundwater quality through the implementation of best management practices (BMPs) as described herein.

Long-term impacts on surface water quality are expected to be minimal because Project components were sited to avoid impacts on groundwater and surface water resources by locating them in previously disturbed areas to the extent practicable.

Existing Conditions

Stream delineation surveys were conducted in 2015 and 2016 to evaluate impacts and proposed mitigation and to support federal and state permits. The Project Wetland Delineation Report and a request for jurisdictional determination were submitted to the United States Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC) on July 21, 2016. The USACE and NYSDEC conducted site visits to verify wetland boundaries on August 24, 2016, and September 14, 2016, respectively.

The preliminary impact analysis provided in the Supplemental Draft Environmental Impact Statement (SDEIS) was prepared utilizing data from surveys conducted in 2011, 2012, and 2015. Since that time, the updated stream and wetland information was used to support micro-siting of the Project to avoid and minimize impacts on streams wherever practicable. The general stream types and conditions on the Project Site remain the same as those described in the SDEIS. More detailed information regarding the data used for this stream evaluation is included in Section E.3 of this appendix, the Wetland Delineation Report.

Table E-1 contains the updated existing conditions and stream characteristics for the Project. A total of 109 streams were delineated in the Project Area.

E.1.1 Construction Impacts

Since publication of the SDEIS, Ball Hill Wind Energy, LLC (Ball Hill) has engaged in a process of micrositing and analyzing engineering options and controls in order to minimize or avoid the Project's environmental impacts identified in the SDEIS. Beginning with the layout presented in the SDEIS, the Project was microsited to decrease temporary and permanent impacts to water resources.

Construction impacts for water resources are calculated for all areas where disturbance from construction of the Project may occur and includes both temporary impacts and permanent impacts.

Groundwater

As described in the SDEIS, construction of the Project is not expected to cause any significant adverse impact on groundwater. It is possible that shallow groundwater may be encountered during excavation of Project facilities or that other localized groundwater flow disruptions may take place downgradient of the turbine foundations, access roads, collection lines, substation, and transmission pole foundations. However, should this occur, it is anticipated that preconstruction groundwater conditions would restore themselves as groundwater fills in behind the subsurface Project facilities.

Any soil compaction that takes place during construction is not expected to extend to the water table; therefore, groundwater movement would not be disrupted by compaction. Compaction could potentially result in less groundwater infiltration in affected areas. However, the total area where compaction could potentially take place (85.5 acres [see Table A-1]), in comparison with the amount of pervious surface that readily allows infiltration to groundwater in the Project Area, is minor and is not expected to cause any changes in regional groundwater levels or quality. Soil compaction is expected to be temporary and limited to the construction period.

Construction of the Project may increase the potential for introduction of pollutants into groundwater as a result of possible spills of petroleum or other chemicals. To avoid or mitigate any such potential impact, Ball Hill will develop and implement a construction spill prevention and control (SPCC) plan prior to construction. In addition, prior to operation of the Project, Ball Hill will develop an operational SPCC plan, pursuant to 40 Code of Federal Regulations (CFR) Part 112, because oil on site would be greater than 1,320 gallons. Sources of oil could include the main power transformer, gear oils, and hydraulic fluids located in the turbines, and any oil or fuel storage as part of construction. Ball Hill general policies for the implementation of the SPCC are included in the Environmental Monitoring Plan in Appendix S. As construction of the Project develops, a site-specific SPCC will be established and included as an appendix to Ball Hill's construction plans.

Construction of the Project is not expected to impact private or public drinking sources. Typically, drinking water wells, such as those used by residents in the

Project Area, are designed to withdraw water from deep aquifers, which would utilize a deeper source of groundwater that would not be encountered during construction. If areas of shallow groundwater exist in the vicinity of Project facilities, they would be identified during site-specific, detailed foundation engineering investigations performed in conjunction with the road and foundation design processes and addressed in the design plans.

Blasting may be necessary if areas with shallow bedrock are encountered during construction. First, mechanical methods would be attempted to remove the bedrock, including ripping or conventional excavation. If blasting is necessary, it would be performed in a manner designed to control energy release. In general, blasting activities can cause adverse effects to groundwater flow due to ground dislocation from the force of the blast. Alteration of groundwater flow can potentially reduce or eliminate the amount of groundwater supplied to nearby wells. Temporary increases in turbidity and changes in water level may occur in wells located in proximity to the Project facilities during construction activities involving blasting. Potential blasting activities are not anticipated to impact private or public drinking sources due to the typical depth of drinking water wells in the Project Area. Additionally, Ball Hill would limit blasting operations to the minimum quantity and force required to fracture and loosen the rock to the necessary depth. Site-specific blasting plans will take into consideration potential effects on nearby water supply wells, as applicable.

Surface Water

A total of 48 stream crossings are necessary for construction and operation of the Project. These streams would be crossed by access roads, collection lines, and the transmission line. Locations of streams surveyed within the survey corridor are described in the Wetland Delineation Report (see Section E.3 of this Appendix). The potential sources of impacts on these streams are summarized on Table E-1 and shown on Figure E-1. Measures were taken during the Project's siting process to avoid stream crossings to the extent practicable. Due to the location and number of streams in the Project Area and the linear nature of Project facilities, it would be necessary to cross streams to install access roads, collection lines, and/or transmission lines. Because specific crossings are regulated by the USACE and NYSDEC, Ball Hill will refine its stream crossing methods, as appropriate, with these agencies as part of the required permitting process. Final crossing designs will be provided to the Towns upon permit issuance.

Within the generation portions of the Project, reduced construction rights of way (ROWs) for temporary access roads located within sensitive resources may be installed to avoid or minimize impacts. Culverts of an appropriate type and size to maintain sufficient flow would be used where access roads cross streams. Collection lines would be installed within a maximum 80-foot-wide ROW where multiple circuits are running parallel. Underground collection lines would be installed via trenching of the streams; however, impacts would be minimal since trenching would take place under dry conditions. Streams that are not naturally dry at the time of crossing would be temporarily dammed, with the water pumped

around the construction area to allow collection lines to be installed in dry conditions. The equipment that would be used to install the collection lines would cut a trench, place the cable, and backfill the trench in a single pass, which would reduce the duration of stream disturbance.

For the transmission portion of the Project, stream crossings would be avoided during construction to the maximum extent practicable. Construction of the transmission line requires the clearing of woody vegetation from an 80-foot-wide cleared ROW to allow installation of the transmission poles and lines and avoid interference with vegetation once the lines are installed. All transmission lines will have overhead crossings of streams within the transmission line ROW. Due to the location and number of streams along the transmission line, it would be necessary to cross streams during construction. Stream crossings would be limited to a 12-foot temporary construction corridor. Temporary construction impacts would be minimized by using temporary crossings or wetland mats for equipment crossings; however, some minor impacts may occur within the 12-foot travel corridor. Any vegetation impeding equipment access would be hand-cleared in the vicinity of streams. Clearing vegetation along crossed streams may disturb streams, in addition to slight water temperature changes due to loss of shade; however, where practicable, stumps would be left in place to minimize erosion and sedimentation and to facilitate natural revegetation once construction is complete. Upon completion of construction of the overhead electrical transmission lines, operations and maintenance (O&M) vehicles would be via all-terrain vehicles (ATVs) or comparable vehicles.

Protected Streams

Seventeen of the streams crossed by the Project have been classified as protected streams by NYSDEC. These stream segments, all of which are Class A streams, would be crossed by access roads and collection lines. Class A streams are identified as potential drinking water sources. The impacted streams are tributaries of Silver Creek, which flows into the Silver Creek Reservoir, located to the northeast of the Project Area. Any crossings that are necessary for Project construction would be designed to minimize degradation of the streams. Culverts of an appropriate type and size to maintain sufficient flow would be installed at stream crossings. After construction is complete, temporary access roads associated with the turbines and laydown areas would be reduced to 18-foot permanent access roads.

Stormwater

Construction of the Project could impact the quality of stormwater runoff. Indirect impacts on surface waters that could potentially result from construction activities include increases in sedimentation and turbidity caused by increased surface runoff from disturbed areas and the possible release of pollutants or hazardous materials in the event of a spill during construction. These impacts are expected to be minor, short-term, and reversible, with the exception of a minor permanent increase in impervious surface area, which will be mitigated through compliance with the site-specific Storm Water Pollution Prevention Plan

(SWPPP). See Section E.1.4 for a full discussion of mitigation of potential impacts on stormwater from construction.

E.1.2 Operational Impacts

The Project was microsited from the SDEIS layout to decrease temporary and permanent impacts to water resources. Operational impacts for water resources are calculated for all areas where disturbance from construction of the Project may occur and includes permanent impacts.

Groundwater

The operation of the Project is not expected to have any permanent impacts on groundwater within the Project Site. The Project would add only 33.36 acres of impervious surface within the 9,715-acre Project Area, including the following approximate areas: O&M Site (3.86 acres); Substation Site (0.18 acres [0.89 acres of open graded stone are not included as impervious]); Switchyard Site (0.66 acres [3.29 acres of open graded stone not included as impervious]); tower pedestals (0.15 acres); crane pads (2.66 acres); and permanent access roads (25.85 acres). The effect on groundwater recharge would, therefore, be negligible. The potential for pollutants to enter the groundwater from spills of petroleum and other chemicals during operation of the Project would be minimized through the continued implementation of BMPs and spill prevention measures set forth in the SPCC which will be finalized prior to construction. Implementation of these measures is expected to result in the avoidance of impacts on groundwater and residential drinking water wells within or outside the Project Site.

Surface Water

No significant adverse impacts on streams in the Project Area are expected from operation of the Project. A total of 16 streams would be crossed by permanent access roads. Upon completion of construction, temporary access roads would be reduced to 18-foot permanent access roads for turbines. Permanent culverts would be installed in access roads at stream crossings and maintained as necessary. No permanent fill would be placed in the stream channel; however, alteration of the vegetative communities on the banks may have minor impacts on stream ecology or function due to loss of shade. While impacts on riparian vegetation to maintain the collection ROW may be necessary during operation, stream banks would remain vegetated in an herbaceous or scrub-shrub state.

Protected Streams

Operation of the Project is not expected to result in any significant adverse impacts on protected streams. Permanent culverts would be inspected, maintained, and repaired as necessary to ensure no blockage, washouts, or other adverse impacts result. The presence of the transmission line and underground electrical collection lines would have no impact on stream ecology or function; impacts on riparian vegetation to maintain the collection ROW may be necessary during operation; however, stream banks would remain vegetated in an herbaceous or scrub-shrub state.

Stormwater

No significant increase in impervious surface would result from the operation of the Project. A total of 33.36 acres of impervious surface would be added to the 9,715-acre Project Area, as detailed above. These Project facilities will be designed for proper surface water flow and stormwater management, in compliance with the site-specific SWPPP. Therefore, no significant adverse impacts on stormwater runoff volumes or water quality are anticipated.

E.1.3 Summary of Impacts

Based on the layout of Project components, a total of 31 perennial streams, six intermittent, and six ephemeral streams would be crossed by Project facilities (see Table E-1 and Figure E-1). Seventeen NYSDEC-protected streams would be crossed by the Project facilities. These streams are discussed under the Protected Streams heading within this section. A total of 27 perennial streams and four intermittent streams would be crossed by the generation components of the Project. Nineteen streams are crossed by access roads associated with the generation portion of the Project and 12 are crossed by collection lines (see Table E-1 and Figure E-1). In the transmission portion of the Project, a total of four perennial streams, two intermittent streams, and six ephemeral streams would be crossed (see Table E-1).

As described above, construction of the Project may result in minor, short-term impacts on the streams crossed. These impacts could occur as a result of in-stream construction activities or construction on slopes adjacent to stream channels. If permanent culverts are necessary, culverts would be designed and installed in a manner maintaining natural stream flow and water velocity. Clearing and grading stream banks, culvert installation, in-stream trenching, trench dewatering, and backfilling could result in modification of aquatic habitat, increased water temperature, increased sedimentation, turbidity, decreased dissolved oxygen concentrations, releases of chemical and nutrient pollutants contained in stream sediments, and introduction of chemical contaminants, such as fuel and lubricants from possible spills. In general, these impacts would be temporary, short-term, and reversible as they are limited only to the period of in-stream construction.

Construction of the Project could result in indirect impacts on the quality of stormwater runoff as a result of increased surface runoff from disturbed areas and the possible release of pollutants or hazardous materials in the event of a spill during construction. These impacts are expected to be minor, short-term, and reversible, with the exception of a minor permanent increase in impervious surface area, which will be mitigated through compliance with the site-specific SWPPP.

No additional impacts are anticipated as a result of the Project.

E.1.4 Mitigation

Several measures will be implemented to ensure surface water quality protection, including implementation of BMPs as set forth in the site-specific SWPPP to be developed for this Project and a Notice of Intent will be filed prior to construc-

tion. Environmental monitoring of the site will occur throughout construction and site restoration will be performed in accordance with Ball Hill's construction plan and the SWPPP.

The SWPPP will encompass all requirements set forth by the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities and will include an erosion and sediment control plan and measures for post-construction runoff control as required. Furthermore, during construction, sediment and erosion control devices will be monitored weekly, at a minimum, and twice weekly if more than 5 acres are disturbed at one time, as per SPDES regulations and the NYSDEC Standards and Specification for Sediment and Erosion Control. The SWPPP will be submitted to the Towns and NYSDEC prior to construction, as required.

The SWPPP will require using sediment and erosion control measures and other BMPs during construction. Typical stormwater pollution prevention measures will be implemented as set forth in the SWPPP. Some examples include utilizing straw bale dikes, perimeter dikes/swales, silt fencing, stabilizing the construction entrance, stone/rock outlet sediment traps, stone check dams, level spreading, pipe slope drains, and dust control. Site-specific BMPs will be implemented prior to construction and will be described in more detail in the SWPPP, when developed. Furthermore, maintenance and BMPs will be used for post-construction runoff control, as required. This will ensure that temporarily impacted features do not create more stormwater runoff than preconstruction conditions.

In addition, a construction-specific SPCC will be prepared that contains measures to prevent spills and, in the event of a spill, provides response procedures that will be used to avoid and/or minimize potential adverse groundwater and surface water impacts. Any spillage of fuels, waste oils, other petroleum products, or hazardous materials in proximity to waterbodies shall be reported to NYSDEC's Spill Hotline (1-800-457-7362) within two hours.

Groundwater

Potential significant adverse groundwater impacts will be avoided and/or minimized through SWPPP implementation of the mitigation measures and BMPs set forth in the SWPPP. All surface soils that are temporarily compacted will be decompact and/or mitigated. Subsoil within approximately 35 feet of the turbine base will remain compacted, as this provides additional structural stability over the foundation. However, the topsoil will be placed over the compacted soil within this approximately 35-foot radius. Instances of soil compaction outside the 35-foot radius will be minimized through the SWPPPs and BMPs, including the segregation of subsoil and topsoil, use of geotextiles to prevent compaction, and soil compaction mitigation where appropriate. Similar activities in wetlands, if encountered, will be governed by NYSDEC and USACE permits.

If shallow groundwater enters the excavation areas during turbine foundation placement, it may be pumped out during installation of the foundation. Any

groundwater that is pumped out of a foundation excavation will be discharged to an area that will either direct the flow toward existing waterbodies or temporarily retain the water until it can filter back into the ground. Specific details relating to pumping groundwater will be included in the SWPPP. Temporary sediment traps or the controlled release of water over vegetated areas will be utilized during construction to intercept and manage sediment-laden runoff from dewatering of turbine foundations. Based on engineering designs, the control practices will retain the runoff and allow sediment to settle prior to discharge. For dewatering practices, the sediment traps shall be placed adjacent to the turbine foundations, with the outlet discharging to a swale, a ditch, or vegetated area.

Surface Water

Potential significant adverse surface water impacts will be avoided and/or minimized by siting Project components away from surface water resources to the extent practicable. However, it will be necessary to cross streams to install access roads and collection lines. During construction, appropriate erosion/sediment control measures (e.g., silt fences or straw bale dikes or other stormwater control measures) will be used to limit the area of impact on surface waters in accordance with USACE and NYSDEC permit requirements. Any sediment runoff or increased turbidity in surface waters resulting from construction will be minimal. Any construction activities occurring within 50 feet of protected stream banks will be conducted in accordance with NYSDEC permit requirements. Other measures that will be implemented to minimize impacts on streams during construction include the following:

- Clearing of existing vegetation will be limited to the material that poses a hazard or hindrance to construction. Snags that provide shelter in streams for fish will not be disturbed unless they cause serious obstructions, scouring, or erosion. Trees will not be felled into any stream or onto the immediate stream bank.
- Where necessary, appropriately sized culverts will be installed to meet hydraulic capacity and structural integrity criteria.
- There will be no widening or constriction of the stream channel bed through the road crossing, and no berms will be constructed on the stream banks.
- If culverts with bottoms are to be used and will be permanent, including round culverts, they will be installed so that at least 20% of the culvert's height is embedded below the existing stream bed at the outlet end of the culvert. The streambed material that is excavated to accommodate culvert placement will then be spread evenly on the bottom of the new culvert. If it is not practical to spread streambed material throughout the entire bottom of the new culvert, material will be spread in the culvert at the inlet and outlet ends gradually up to streambed elevation to promote natural deposition. Culverts with bottoms, including round culverts, will not be used if the streambed is bedrock.
- Access road shoulders will be adequately protected with riprap or seeded and mulched within seven days of completion of the temporary and permanent

culvert crossing. Mitigation of stream disturbances within 50 feet of protected streams will be coordinated with the applicable agencies (i.e., NYSDEC and USACE).

- During periods of work activity, flow immediately downstream of the work site will approximate flow immediately upstream of the work site.
- Where streams with flow at the time of construction will be crossed, dam-and-pump procedures will be followed to control water adjacent to the work area.
- Any additional recommendations identified by NYSDEC or USACE during the permitting process.

Access roads and collection lines were co-located with existing stream crossings whenever possible to avoid creating new disturbances of these resources. Project facilities were co-located with existing disturbed areas where possible (including existing farming and logging roads and ATV trails), in an effort to minimize impacts and improve these areas.

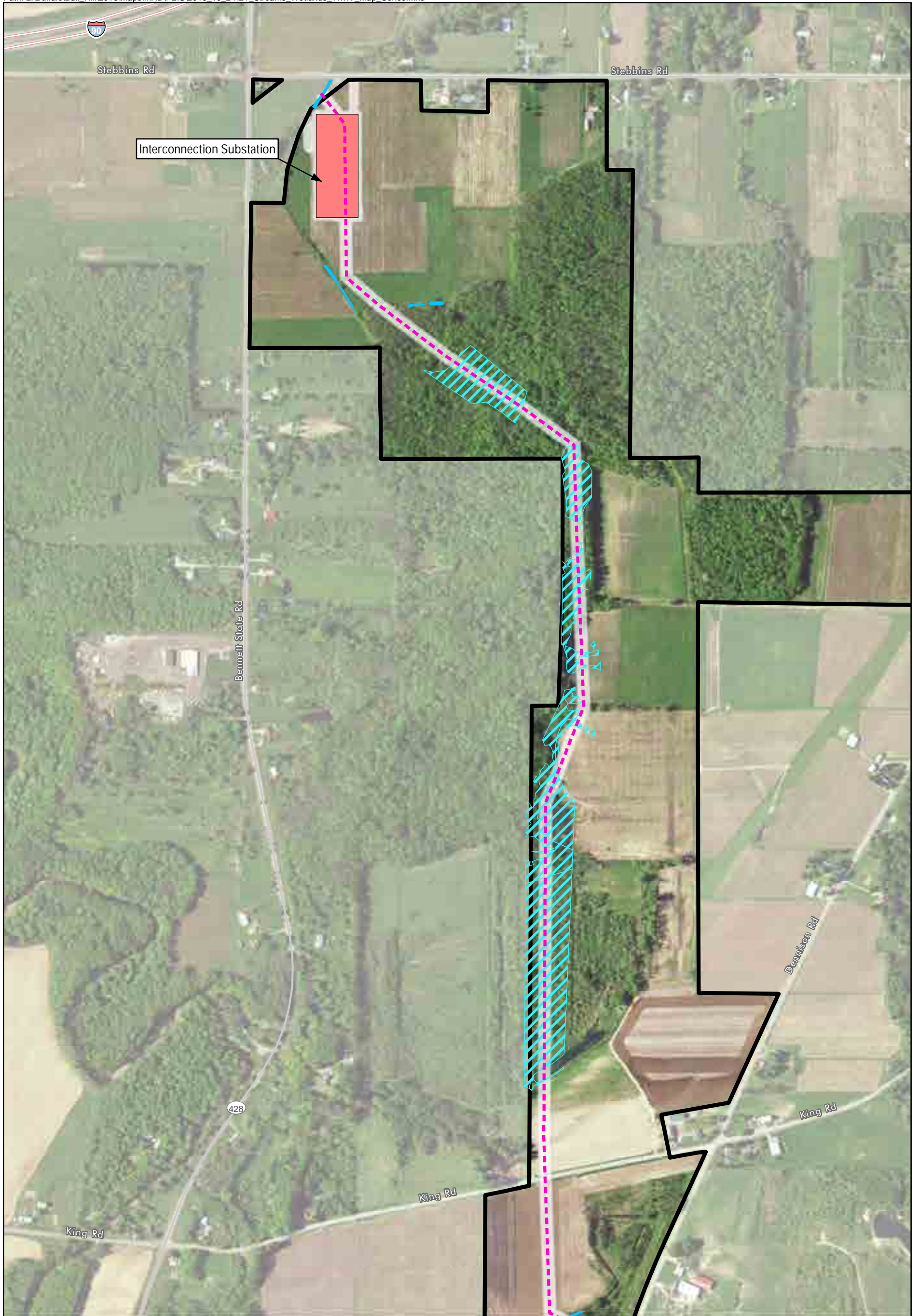
Underground collection lines and overhead transmission lines will be installed across streams. To minimize impacts, timber mats may be used during construction to bridge streams to minimize impacts associated with equipment crossing. Any in-stream disturbance, such as trenching, will take place during dry conditions to minimize downstream impacts. If water is present at the time of crossing, Ball Hill will dewater the area using a dam-and-pump crossing to minimize stream impacts. To further minimize impacts on streams, the trench will be opened, installation accomplished, and backfilled in one continuous operation, thus limiting the duration of in-stream work. As currently designed, the collection lines are entirely underground. Woody vegetation along the stream bank will be cut in some places, but to the maximum extent practicable, stumps will be left in place to protect against erosion. Stream crossings will be engineered, designed, and installed to maintain sufficient flow during construction in accordance with applicable regulations. These methods will be provided to the Towns upon submittal of the Joint Application for Permit to NYSDEC and the USACE. Sheet DT-1 of Appendix C of this FEIS, Project Drawings provides proposed culvert sizing.

Table E-1 Total Stream Impacts, Entire Project

	Count of Total Streams Impacted ¹	Count of Perennial Streams Impacted	Count of Intermittent Streams Impacted	Count of Ephemeral Streams Impacted	Count of NYSDEC-Protected Streams Impacted	Length of Stream within the Construction ROW ² (LFT)	Length of Stream within the Permanent Disturbance Corridor ³ (LFT)	Temporary Impacts (Areas to be Restored to Preconstruction Contours following Construction) (LFT)
Total SDEIS⁶	49	43	6	0	21	5,391.85	772.39	5,391.85
Generation Portion of the Project (FEIS) ¹	31	28	4	0	17	2,416.1	777.31	1,638.79
Transmission Portion of the Project (FEIS) ⁴	12	4	2	6	0	1,509.0	0	1,509.0
Total FEIS⁵	43	31	6	6	17	3,925.1	777.31	3,147.79
Change from SDEIS to FEIS	-6	- 12	0	+6	-4	-1,466.75	+4.92	-2,244.06

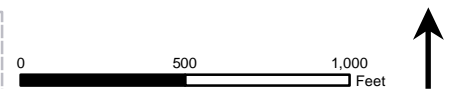
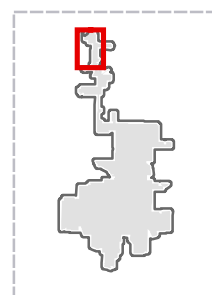
Notes:

- ¹ The generation portion of the Project includes turbines, access roads, electrical collection lines, laydown areas, and the O&M building site.
- ² Construction disturbance includes all areas to be disturbed during construction activities. As such, they include all impact related to clearing and grading of stream banks, in-stream trenching, trench dewatering, and backfilling. For the generation portion of the Project, this includes the linear feet of all streams that fall within the construction limit of disturbance. For the transmission portion of the Project, this includes the linear feet of all streams that fall within the 80-foot-wide cleared ROW.
- ³ Stream impacts within the permanent disturbance corridor refer to in-stream trenching, trench dewatering, and backfilling and culvert installation. Upon completion of construction, temporary access roads will be reduced to 18-foot permanent access roads for turbines and laydown areas. Permanent culverts will be installed in access roads at stream crossings and maintained as necessary. No permanent fill would be placed in the stream channel; however, alteration of the vegetative communities on the banks may have minor impacts on stream ecology or function due to loss of shade.
- ⁴ The transmission portion of the Project includes the collection substation, 5.7-mile transmission ROW, and the interconnection substation.
- ⁵ Due to rounding, totals may not reflect the sum of numbers.
- ⁶ In the SDEIS, impacts reported were based on delineations completed in 2008, 2012, 2013, and 2015.

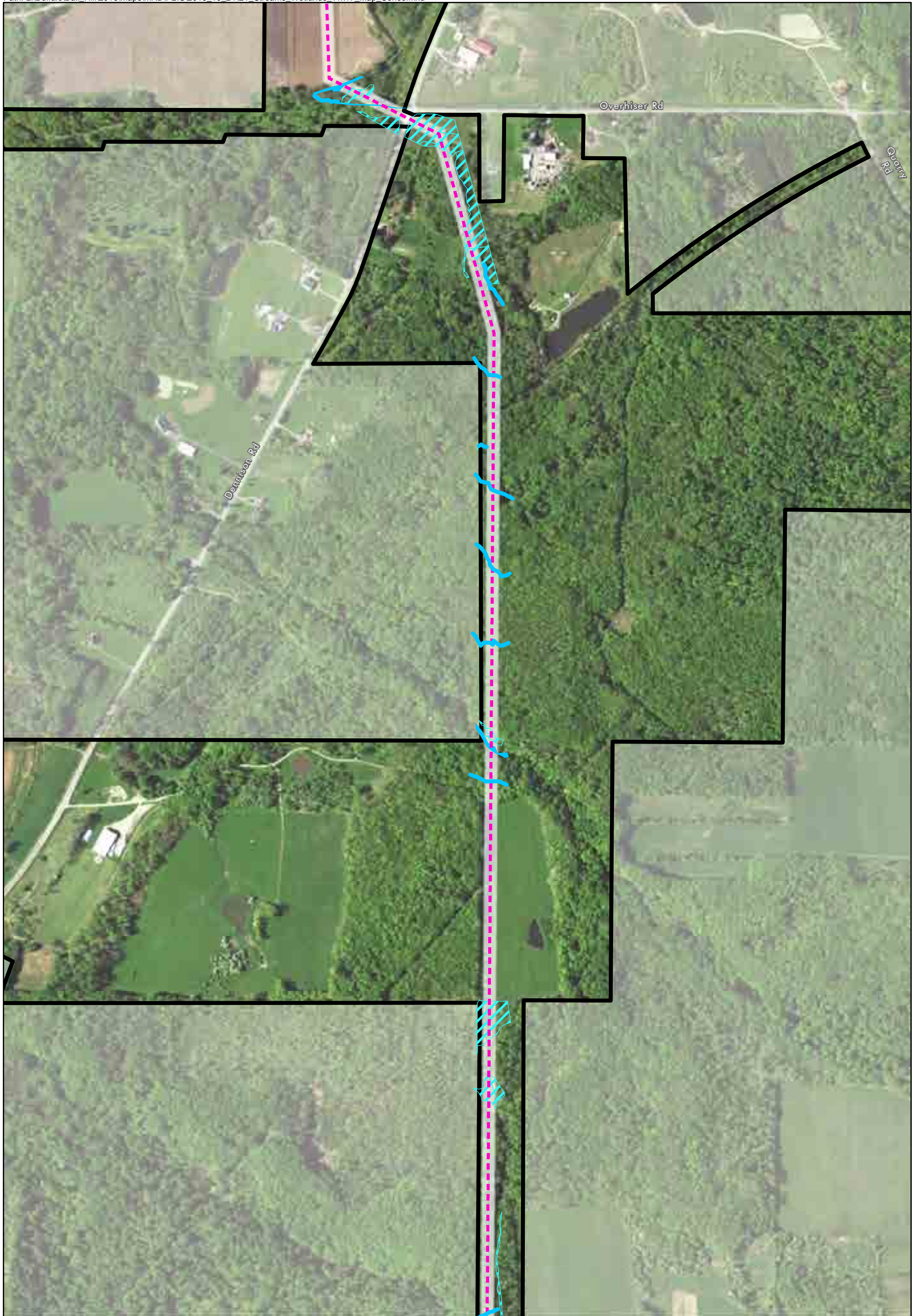


- Street
- Transmission Line
- Interconnection Substation
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- ▨ Delineated Wetland

Figure E-1
**Project Streams and
 Wetlands Surveyed:** Page 1 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

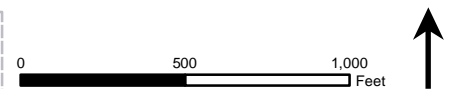
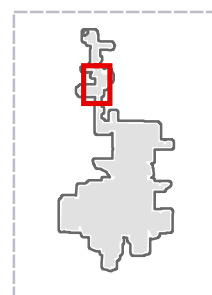


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.

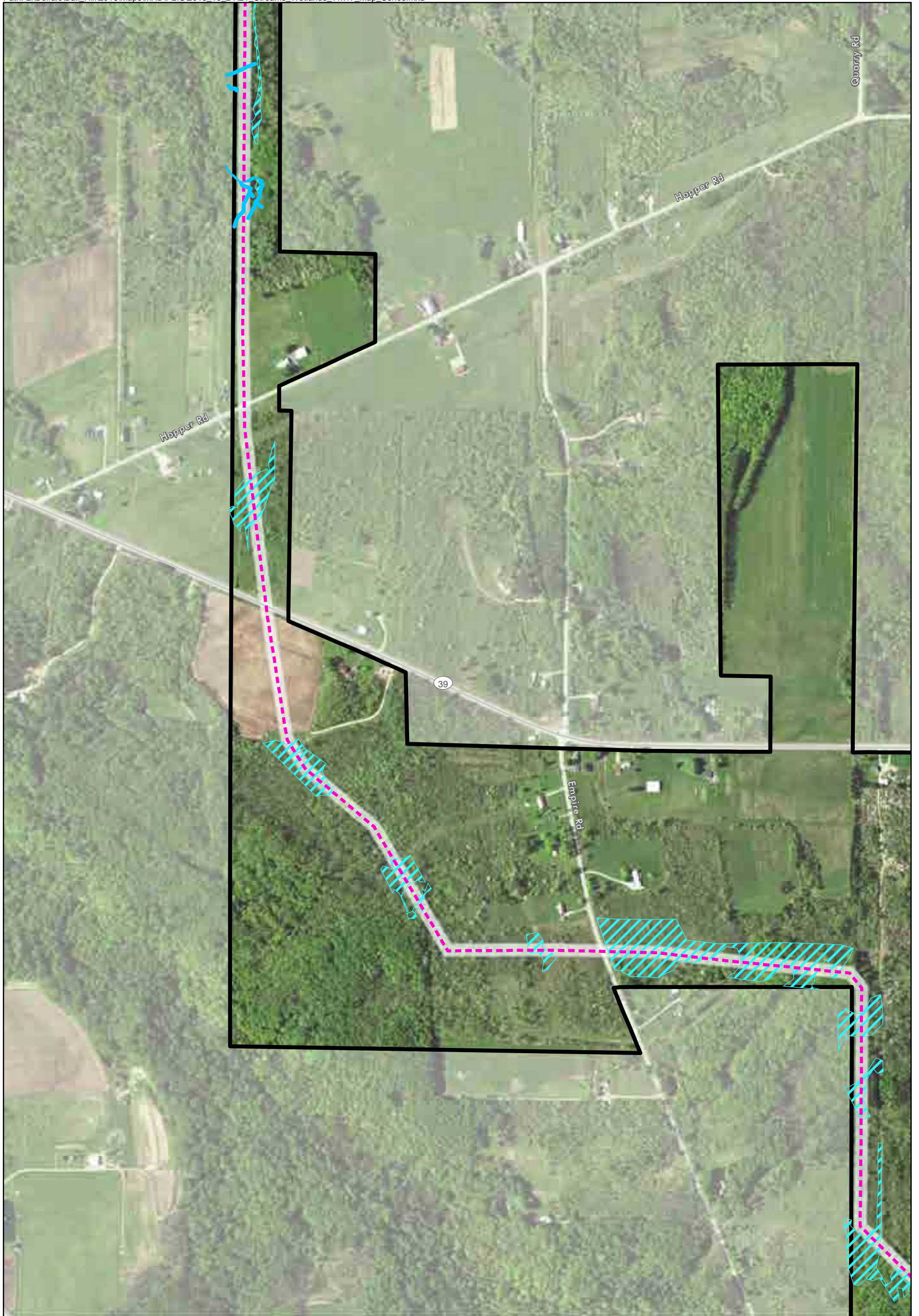


- Street
- Transmission Line
- ▭ Project Area
- ▭ Limit of Disturbance (LOD)
- Delineated Stream
- ▨ Delineated Wetland

Figure E-1
Project Streams and Wetlands Surveyed: Page 2 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC



Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.









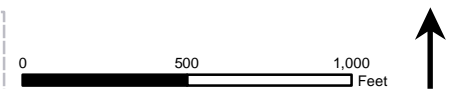
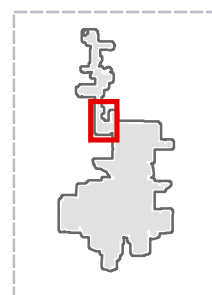
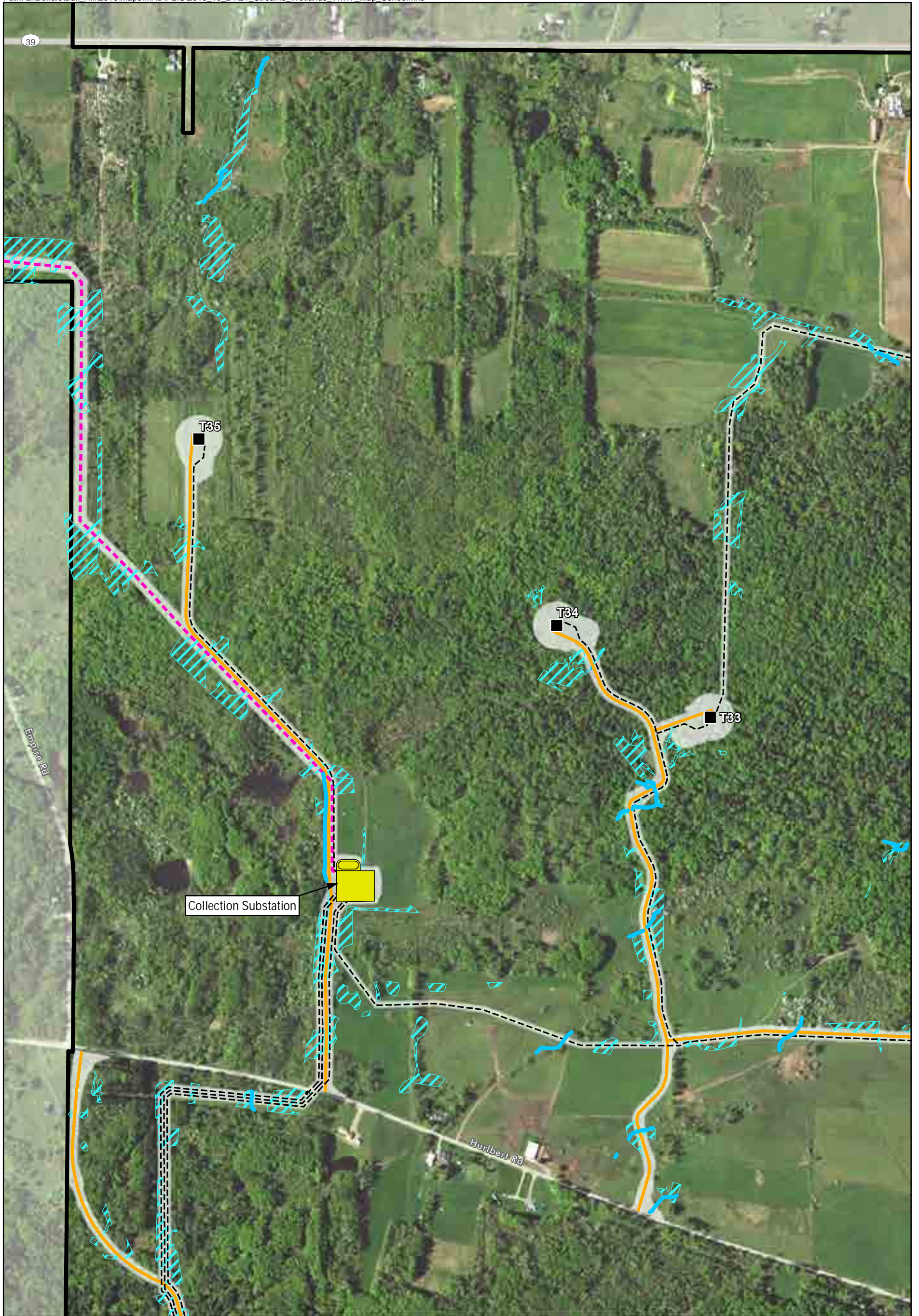
-  Street
-  Transmission Line
-  Project Area
-  Limit of Disturbance (LOD)
-  Delineated Stream
-  Delineated Wetland

Figure E-1
**Project Streams and
 Wetlands Surveyed:** Page 3 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

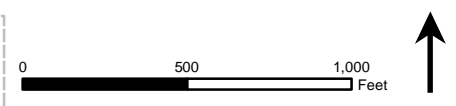
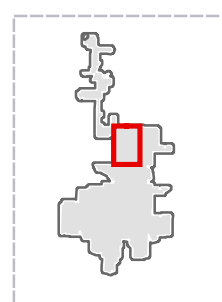


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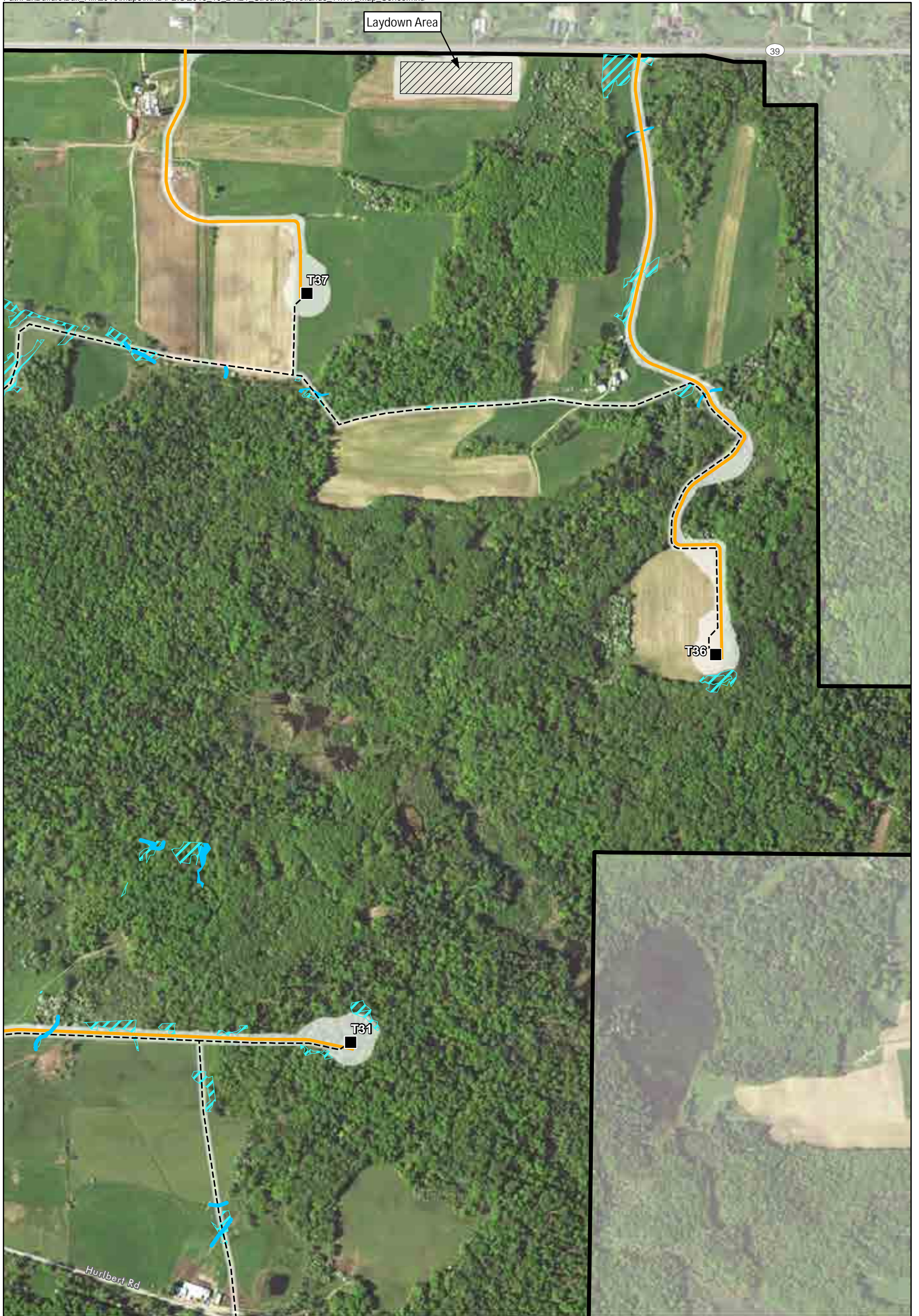


- Turbine
- Street
- Access Road
- Collection Line
- Transmission Line
- Collection Substation
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 4 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

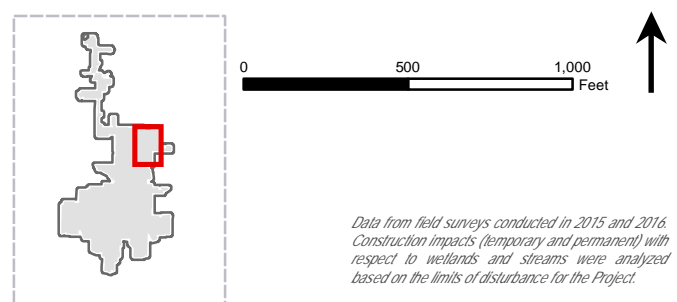


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.

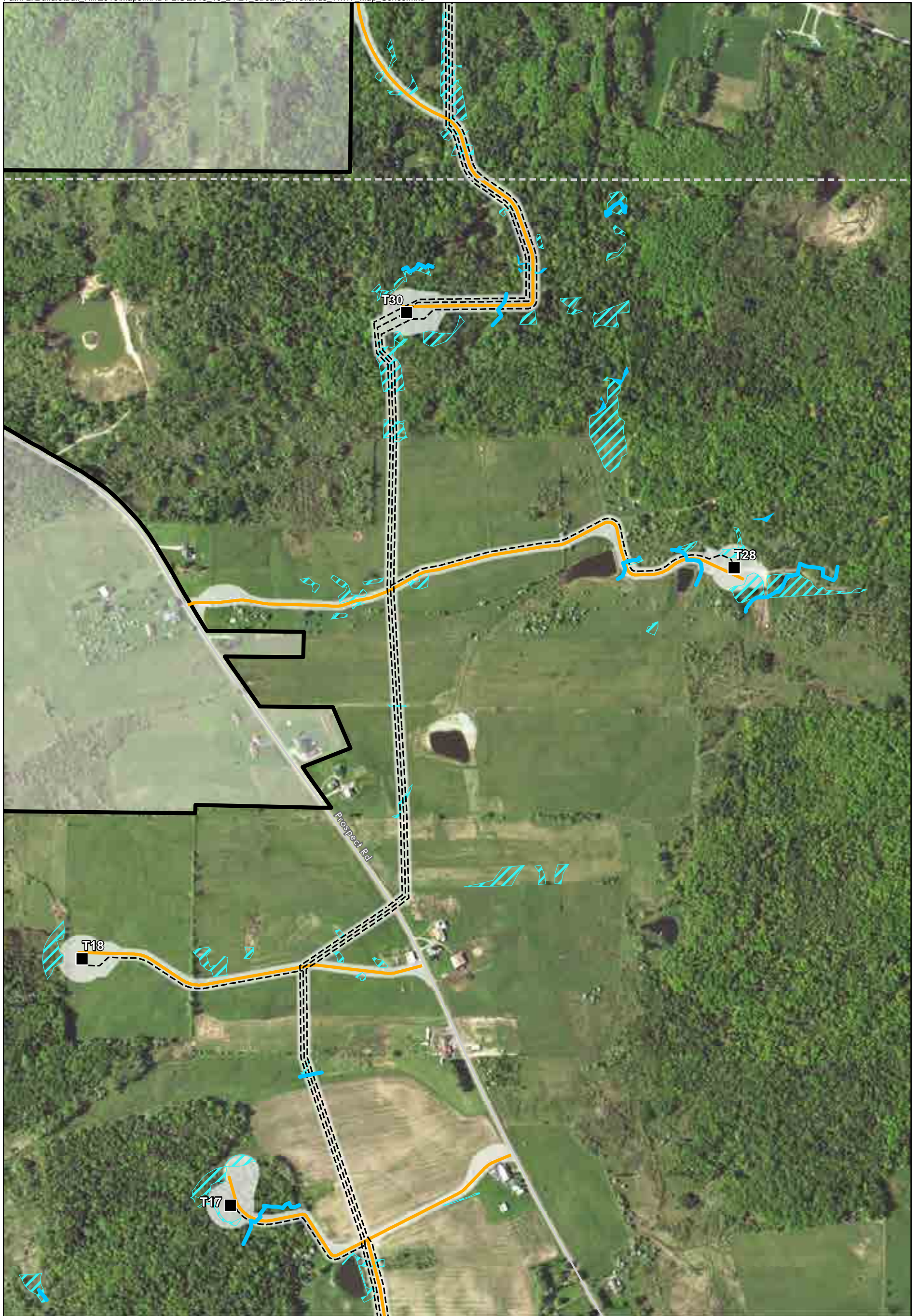


- Turbine
- Street
- Access Road
- Collection Line
- Laydown Area
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 5 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

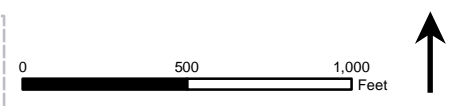
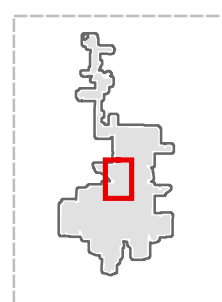


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.

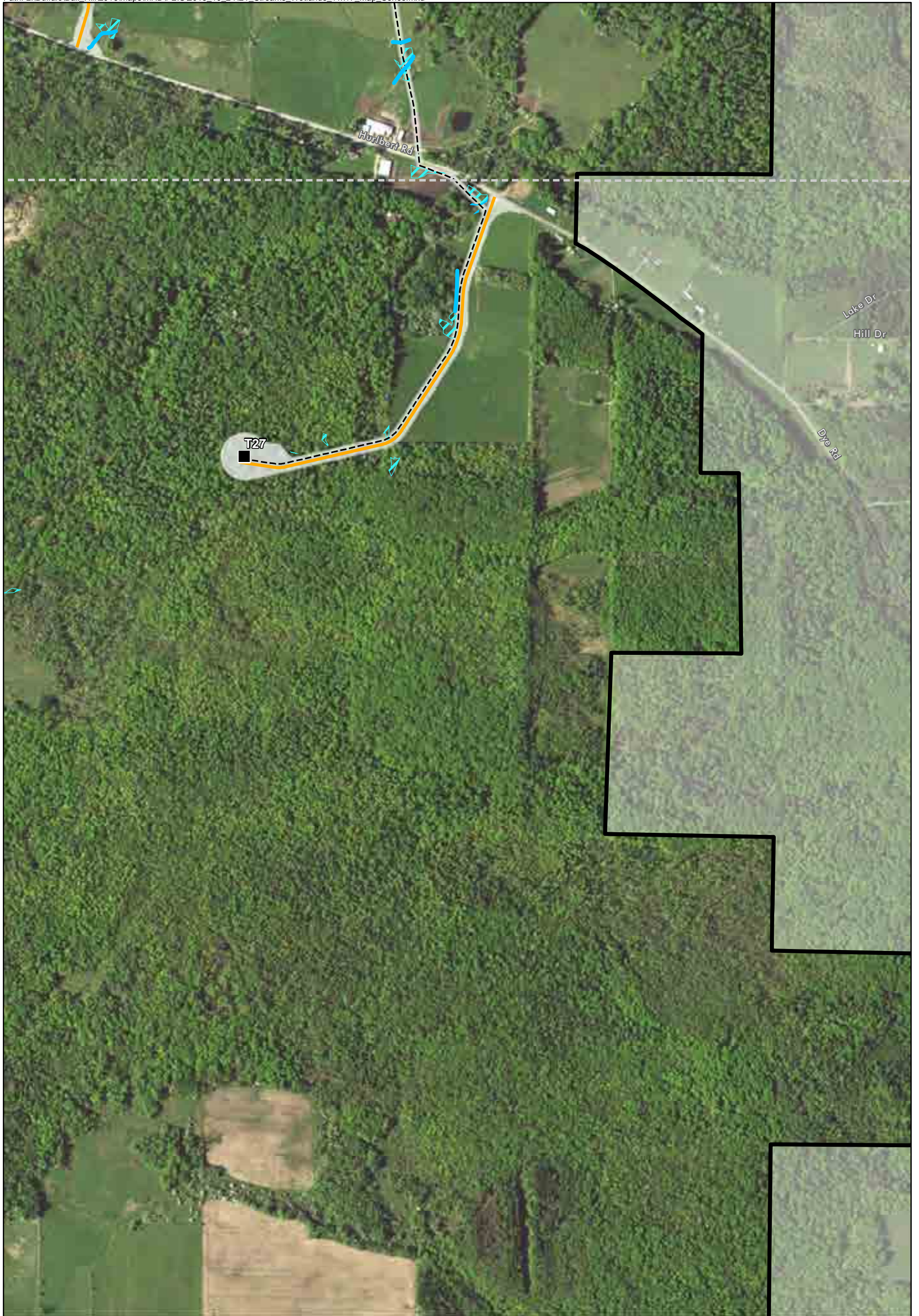


- Turbine
- Town Boundary
- Street
- Access Road
- Collection Line
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 6 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

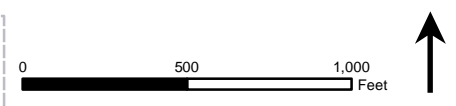
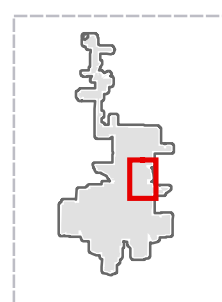


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.



- Turbine
- Town Boundary
- Street
- Access Road
- Collection Line
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 7 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

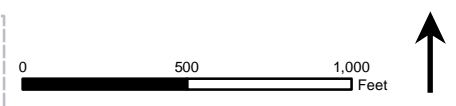
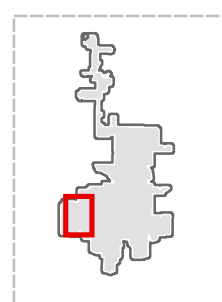


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.

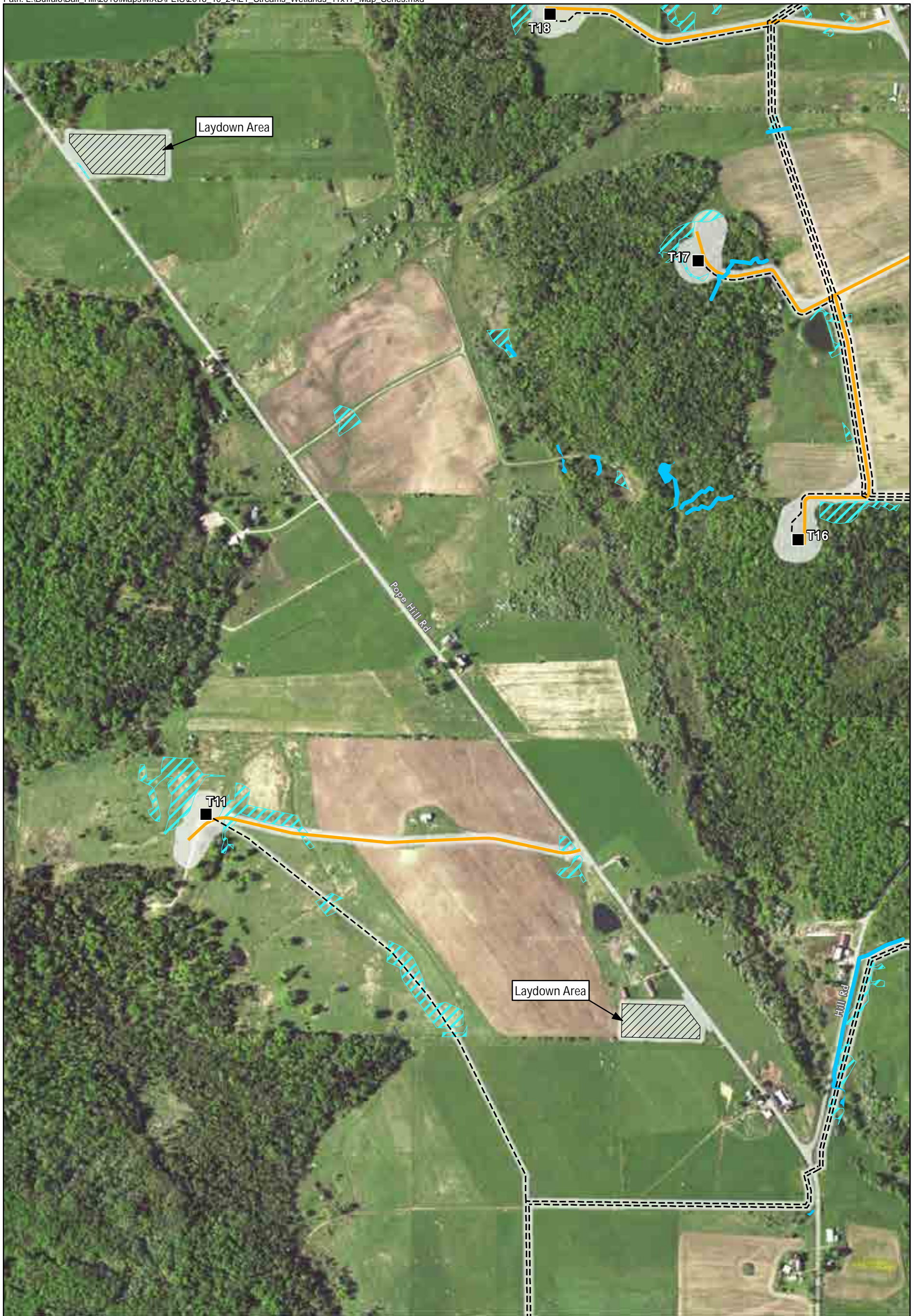


- Turbine
- Street
- Access Road
- Collection Line
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 8 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

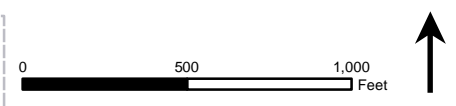
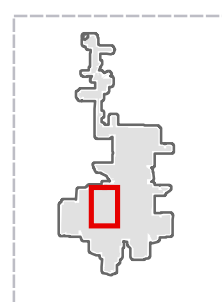


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.



- Turbine
- Street
- Access Road
- Collection Line
- Laydown Area
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 9 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

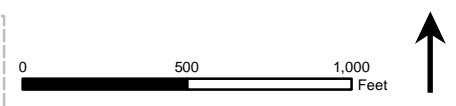
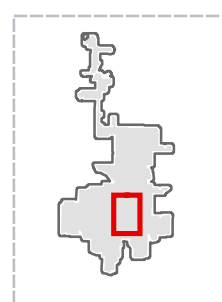


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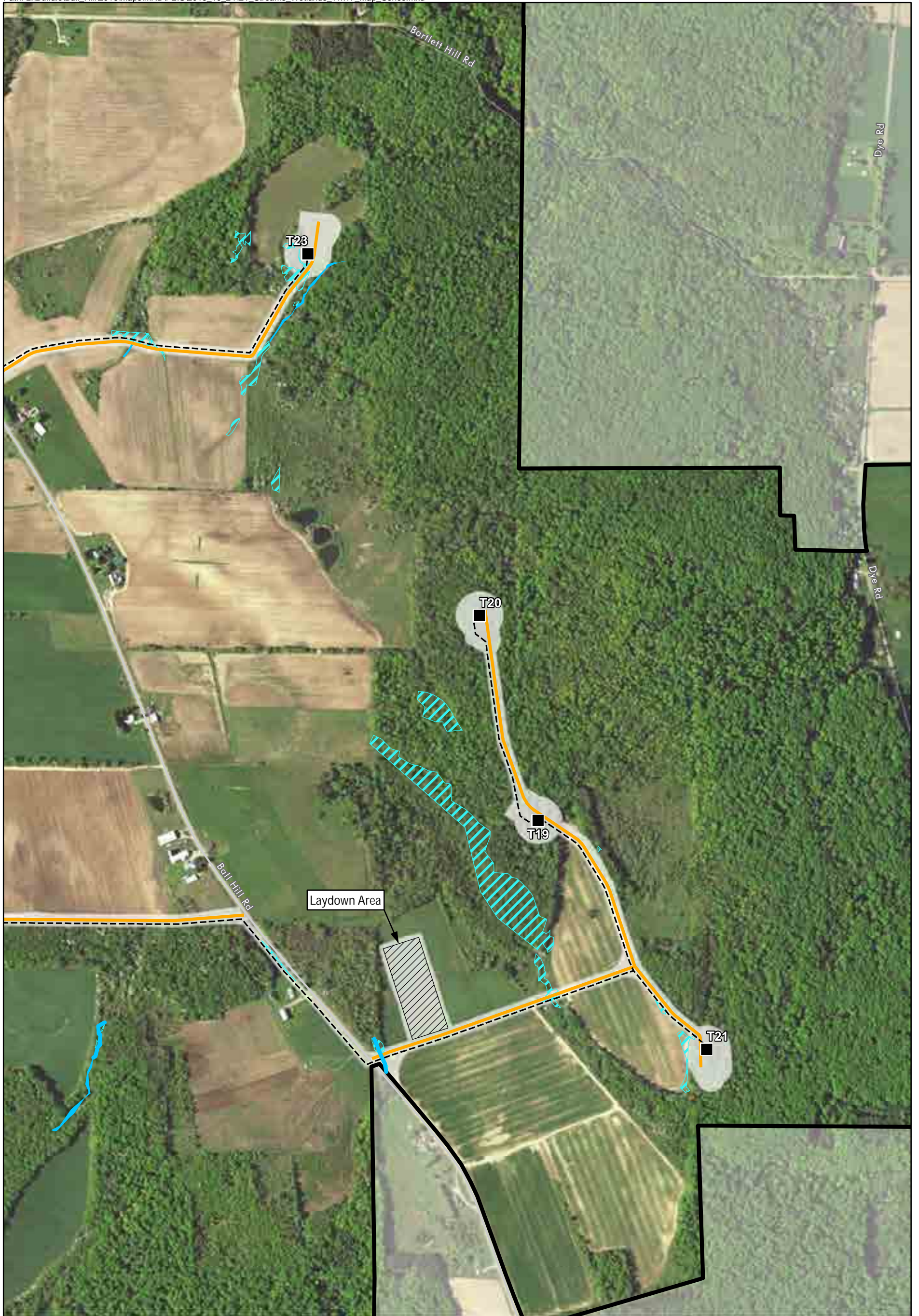


- Turbine
- Street
- Access Road
- Collection Line
- O&M Building
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 10 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

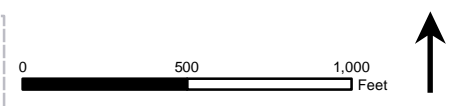
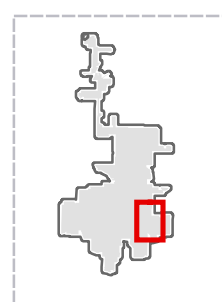


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.

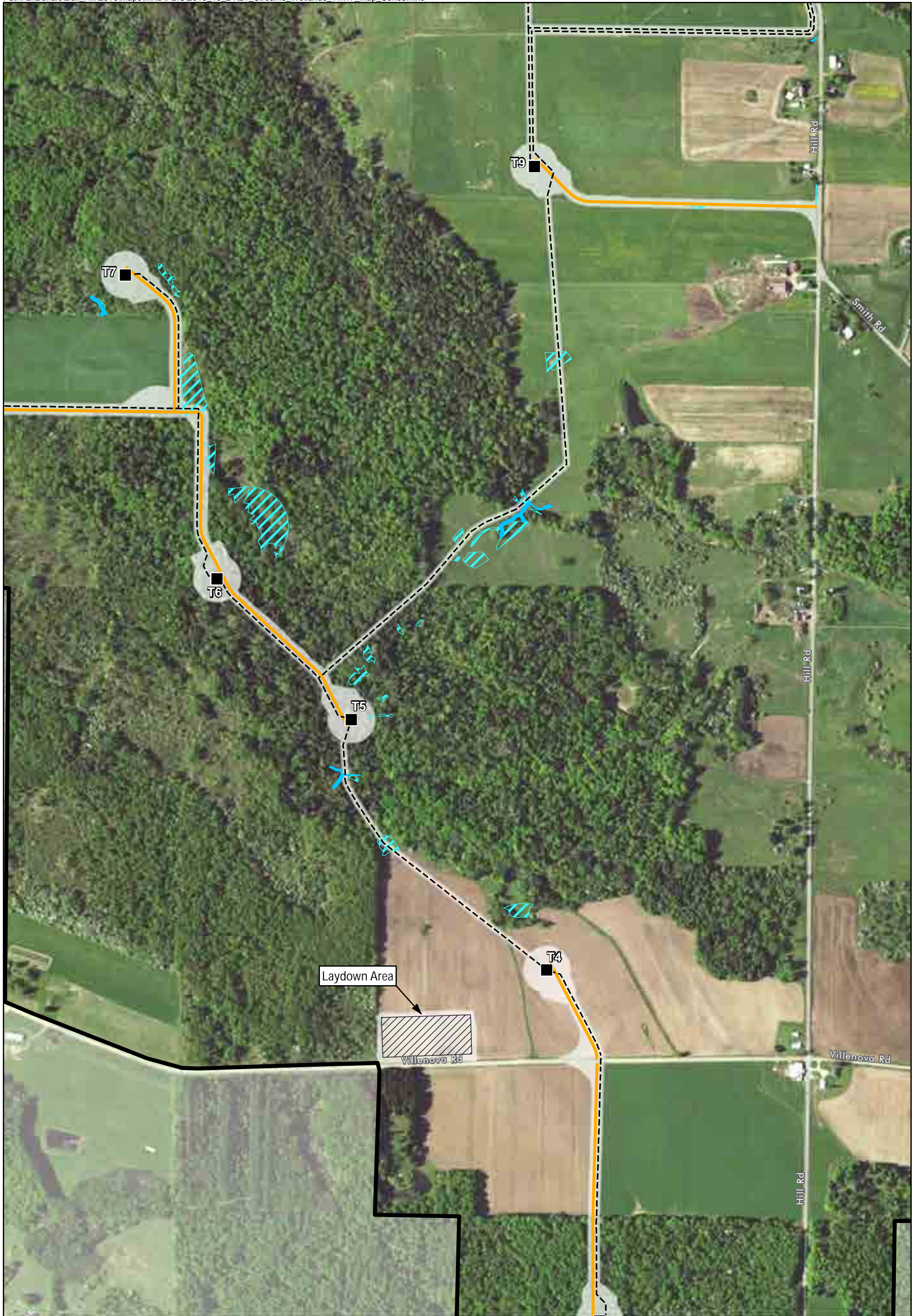


- Turbine
- Street
- Access Road
- Collection Line
- Laydown Area
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 11 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC

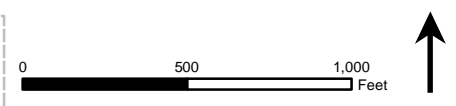
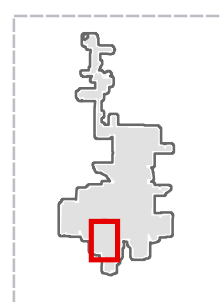


Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.



- Turbine
- Street
- Access Road
- Collection Line
- Laydown Area
- Project Area
- Limit of Disturbance (LOD)
- Delineated Stream
- Delineated Wetland

Figure E-1
Project Streams and
Wetlands Surveyed: Page 12 of 12
 Ball Hill Wind Project
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC



Data from field surveys conducted in 2015 and 2016. Construction impacts (temporary and permanent) with respect to wetlands and streams were analyzed based on the limits of disturbance for the Project.

E.2

Wetlands

This section provides a description of delineated wetlands and a detailed discussion of the overall wetland impacts and proposed mitigation activities for wetlands from construction and operation of the Project.

Federal and State-Regulated Wetlands

Section 404 of the Clean Water Act authorizes the USACE to issue permits regulating the discharge of dredged or fill materials into the waters of the United States, including wetlands. There is no minimum size for wetlands to be regulated under federal jurisdiction; however, wetlands that do not have a hydrological connection to waters of the United States (isolated wetlands) may not be subject to federal jurisdiction. There are no regulatory maps identifying federally jurisdictional wetlands. The USACE makes a Jurisdictional Determination (JD) over wetlands as part of their permitting review.

Under Article 24 of the New York State Environmental Conservation Law, NYSDEC regulates wetlands that exceed 12.4 acres (5 hectares) in size or have unusual local importance. New York State also regulates a 100-foot upland adjacent area surrounding each regulated wetland. Work within state-regulated wetlands and the regulated adjacent area requires a permit from NYSDEC.

Activities associated with construction and operation of the Project components within the delineated wetlands are anticipated to be subject to federal and/or state regulations. Ball Hill will file appropriate permit applications with the USACE and NYSDEC and provide copies to the Town of Villenova, New York State Environmental Quality Review Act (SEQRA) Lead Agency.

Delineated Wetlands

Wetland delineation surveys were conducted in 2015 and 2016 to evaluate impacts and proposed mitigation and to support federal and state permits (see Figure E-1). Ball Hill is currently in the process of applying for a JD through a joint permit application to the USACE and NYSDEC. A wetland delineation report and request for jurisdictional determination were submitted to the USACE and NYSDEC on July 21, 2016. The USACE and NYSDEC conducted site visits to verify wetland boundaries on August 24, 2016, and September 14, 2016, respectively.

The preliminary impact analysis provided in the SDEIS was prepared utilizing data from surveys conducted in 2011, 2012, and 2015. Since that time, a wetland and waterbody delineation survey has been completed for the entire proposed facility. This updated information was used to support micro-siting of the Project to avoid and minimize impacts on streams wherever practicable. The general wetland types and conditions in the Project Area remain the same as those described in the SDEIS, though the limits of individual wetlands have changed in some instances. More detailed information regarding the data used for this wetland evaluation is included in Section E.3, Wetland Delineation Report.

For the purposes of the wetland analysis in the FEIS, federal jurisdiction is assumed for all wetlands, following the USACE protocols for Preliminary JDs (PJDs). Ball Hill has chosen to request a PJD from the USACE and, therefore, all wetlands delineated within the Project Area are assumed to be under the jurisdiction of the USACE.

A field review of NYSDEC jurisdictional wetlands was conducted in September 2016. While no unmapped NYSDEC wetlands were identified, the boundaries of two previously mapped wetlands (SC-12 and SC-13) were expanded to encompass wetlands delineated adjacent to their boundaries.

Existing Conditions

Based on review of the current wetland data, 189 wetlands totaling approximately 66.6 acres were identified during field surveys. Of the 66.6 acres of wetlands within the Project Site, 17.15 acres are palustrine forested wetlands or have a forested component, 18.05 acres are palustrine scrub-shrub wetlands or have a shrub component, and 31.39 acres are palustrine emergent wetlands. Wetlands generally receive hydrologic input from precipitation and retained surface water perched on poorly drained soils, and in lower elevations from ground and surface water connections with streams. Soils within the wetlands generally consist of silt loam texture mineral soils with low chroma and redox depletions and/or concentrations.

E.2.1 Types of Wetland Impacts

The wetland impact discussion provided in this section is broken down by 1) impacts during construction; and 2) impacts resulting from operation of the Project.

- (1) Impacts during construction include all areas to be disturbed during construction activities (i.e., areas within the Project Site, including construction work-space for wind turbines, electrical collection and transmission lines, utility trenches, utility poles, access roads, staging areas, and other related structures). Construction impacts are broken down further by temporary and permanent impacts. Some wetlands are temporarily impacted by ground disturbance or placement of fill and the contours are restored following construction to allow wetlands conditions to become reestablished, but permanently impacted by forest conversion. This forest conversion is reported to clarify that where wetland contours are restored, there are some permanent impacts to wetland functions associated with the permanent loss of trees.

For the generation portion of the Project, temporary impacts include wetland impacts associated with ground disturbance activities, including mechanized clearing, filling, or excavation, where the Project Site would be restored to preconstruction contours, elevation, and wetland vegetation be allowed to become reestablished. Permanent impacts would result from permanent fill and loss of wetlands (from permanent facilities including permanent staging areas for turbines and permanent access roads), as well as permanent conversion of forested wetlands to emergent or shrub wetlands. These are described in greater detail below.

For the approximate 5.7-mile overhead electrical transmission line located between the new collection substation in the town of Hanover and interconnection substation in the town of Hanover, wetland impacts were calculated assuming a cleared 80-foot-wide permanent ROW. The total construction-related wetland impacts include the area of temporary impact during construction, the area of permanent wetland impacts associated with placement of fill for permanent facilities (those located within the footprint of any of the permanent facilities – substation or access roads), and the forested wetlands that would be cleared and permanently maintained as emergent or shrub wetlands within the electrical transmission line corridor. These are described in greater detail in Section E.2.2, Construction Impacts.

- (2) Impacts during operation include only those impacts that occur or have the potential to occur after construction and restoration are complete. No foreseeable permanent impacts would occur during operation of the Project. Temporary impacts may occur as a result of maintenance activities. These are described in greater detail in Section E.2.3, Operational Impacts.

E.2.2 Construction Impacts

During Project construction, 25.83 acres of wetland would be disturbed. Tables E-2 and E-3 indicate construction impacts. Of the 25.83 acres of construction-related wetland impacts, 0.87 acres would be permanently impacted by the placement of fill and loss of wetlands; and 24.96 acres would be temporarily impacted by ground disturbance, grading, or placement of fill where preconstruction contours would be restored following construction allowing the area to return to a wetland condition. Of the 24.96 acres of wetlands subjected to temporary impacts during construction, 6.54 acres would be permanently impacted by the loss of function associated with clearing forested wetlands and maintaining them to prevent trees from becoming reestablished. A total of 0.31 acres of forested wetland would be cleared during construction and allowed to revert to a forested wetland condition over time, resulting in temporary forested wetland conversion. The remaining, 18.11 acres of wetland temporarily impacted by placement of fill are emergent and shrub wetlands that would revert to similar vegetative cover once contours were reestablished.

Table E-2 Total Wetland Impacts

Facility	Ground Disturbance and Placement of Fill Impacts in all Wetlands			Forested Wetland Impacts		
	Total Construction Disturbance ¹ (acres)	Permanent Placement of Fill ² (acres)	Temporary Ground Disturbance and Temporary Placement of Fill ³ (acres)	Permanent Impact due to Permanent Forest Conversion ⁴ (acres)	Temporary Forest Conversion ⁵ (acres)	Emergent and Scrub/Shrub Wetlands Allowed to Revert to Their Native State (acres)
Total SDEIS	29.12	4.64	24.48	4.25	3.74	15.91
FEIS Impacts						
Turbines	1.37	0.07	1.30	0	0.08	1.22
Access Roads	4.52	0.80	3.72	0	0.23	3.49
Collection Line	6.50	0	6.50	0.41	0	6.09
Transmission and Substation	13.44	0	13.44	6.13	0	7.31
O&M Facility	0	0	0	0	0	0
Total FEIS⁶	25.83	0.87	24.96	6.54	0.31	18.11
Change from SDEIS to FEIS	(- 3.29)	(- 3.77)	+ 0.48	+ 2.29	(- 3.43)	+ 2.20

Notes:

¹ Construction disturbance includes all areas to be disturbed during construction activities; as such, they include all impacts related to clearing, temporary grading, and placement of fill. For the generation portion of the Project, this includes the acreage of all wetlands that fall within the construction ROW. For the transmission portion of the Project, this includes the acreage of all wetlands that fall within the 80-foot-wide cleared ROW, or the substation.

² Permanent placement of fill for both the generation portion and transmission portion of the Project refers to placement of fill within wetlands that results in a permanent loss of wetland acreage. Placement of fill includes placement of gravel fill for permanent roadways, turbine staging areas, the substation, and the O&M facility. No turbine pedestals are located within wetlands.

³ Temporary ground disturbance and temporary placement of fill for the generation portion of the Project are defined as wetland impacts associated with filling, grading, or excavation activities where the Project Site would be restored to preconstruction contours and elevation. Temporary impacts for the transmission portion of the Project include any portion of a wetland within the 80-foot-wide cleared ROW that is not permanently filled. Additionally, this also includes impacts associated with filling, grading, or excavation activities of the substation where the Project Site would be restored to preconstruction contours and elevation.

⁴ Permanent forest conversion includes area where forested wetlands would be cleared and not be allowed to naturally regenerate to forested wetlands, but rather be maintained in a scrub-shrub or emergent state. For the generation portion of the Project, this includes all electrical collection line ROWs. For the transmission portion of the Project, this would include all portions of forested wetlands that fall within the 80-foot-wide cleared ROW.

⁵ Temporary forest conversion includes areas where forested wetlands would be cleared and would be allowed to naturally regenerate to a forested wetlands. For the generation portion of the Project, this includes areas within the grading area needed around the turbine but outside the permanent impacts from the foundation and crane pad.

⁶ Due to rounding, totals may not reflect the sum of numbers.

Table E-3 Impacts on NYSDEC Wetlands and Jurisdictional 100-foot Buffer Area

Facility	Total Construction Disturbance in NYSDEC Wetlands ¹ (acres)	Ground Disturbance and Placement of Fill Impacts in NYSDEC Wetlands		Forested NYSDEC Wetland Impacts		Total Construction Disturbance in NYSDEC Adjacent Areas ¹ (acres)	Ground Disturbance and Placement of Fill Impacts in NYSDEC Adjacent Areas		Forested NYSDEC Adjacent Area Impacts	
		Permanent Placement of Fill ² (acres)	Temporary Ground Disturbance and Placement of Fill ³ (acres)	Permanent Impact due to Permanent Forest Conversion ⁴ (acres)	Temporary Forest Conversion ⁵ (acres)		Permanent Placement of Fill ² (acres)	Temporary Ground Disturbance and Placement of Fill ³ (acres)	Permanent Impact due to Permanent Forest Clearing ⁴ (acres)	Temporary Forest Clearing ⁵ (acres)
SDEIS Totals	5.90	0	5.90	2.82	0	3.33	0	3.33	1.55	0
FEIS Impacts										
Turbines	0	0	0	0	0	0	0	0	0	0
Access Roads	0	0	0	0	0	0	0	0	0	0
Collection Line ⁵	0	0	0	0	0	0	0	0	0	0
Transmission and Substation	5.90	0	5.90	2.82	0	3.33	0	3.33	1.55	0
O&M Facility	0	0	0	0	0	0	0	0	0	0
FEIS Total	5.90	0	5.90	2.82	0	3.33	0	3.33	1.55	0
Change from SDEIS to FEIS	0	0	0	0	0	0	0	0	0	0

Notes:

¹ Construction disturbance includes all areas to be disturbed during construction activities; as such, they include all impacts related to clearing, temporary grading, and placement of fill. For the generation portion of the Project, this includes the acreage of all wetlands that fall within the construction ROW. For the transmission portion of the Project, this includes the acreage of all wetlands that fall within the 80-foot-wide cleared ROW or the substation.

² Permanent placement of fill for both the generation portion and transmission portion of the Project refer to placement of fill within wetlands that results in a permanent loss of wetland acreage. Placement of fill includes placement of gravel fill for permanent roadways, turbine staging areas, the substation, and the O&M Facility. No Turbine pedestals are located within wetlands.

³ Temporary ground disturbance and temporary placement of fill for the generation portion of the Project are defined as wetland impacts associated with filling, grading, or excavation activities where the Project Site would be restored to preconstruction contours and elevation. Temporary impacts for the transmission portion of the Project include any portion of a wetland within the 80-foot-wide cleared ROW. Additionally, this also includes impacts associated with filling, grading, or excavation activities of the substation where the Project Site would be restored to preconstruction contours and elevation.

⁴ Permanent forest conversion/clearing includes where forested wetlands/forested adjacent area would be cleared and not be allowed to naturally regenerate to a forested wetland/forested adjacent area, but rather be maintained in a scrub-shrub or emergent/herbaceous state. For the generation portion of the Project, this includes all electrical collection line ROWs. For the purpose of this calculation, any clearing associated with access roads co-located with either collection lines has been included in this number. For the transmission portion of the Project, this would include all portions of forested wetlands that fall within the 80-foot-wide cleared ROW.

⁵ Temporary forest conversion/clearing includes where forested wetlands/forested adjacent area would be cleared and would be allowed to naturally regenerate to a forested wetland/forested adjacent area. For the generation portion of the Project, this includes areas within the grading limits of the turbine but outside the foundation and turbine crane pad.

Of the wetlands impacted along the proposed transmission line, 5.9 acres are mapped as NYSDEC wetlands (SC-12, a Class II wetland; and SC-13, a Class III wetland), which would be temporarily impacted by ground disturbance during the installation of the line. Of the 5.91 acres of wetland temporarily subjected to ground disturbance or fill, 2.82 acres would be permanently converted from a forested wetland to an emergent or shrub wetland. In addition, construction of the transmission line ROW would impact 3.33 acres of the adjacent 100-foot upland buffer surrounding the state wetlands, of which 1.55 acres would be permanently converted from forested cover to grassland or shrub cover.

E.2.3 Operational Impacts

Impacts on wetlands may occur along collection and transmission components of the Project during maintenance to clear vegetation or during access for maintenance. In the event that future temporary impacts may occur as the result of maintenance activities, Ball Hill would obtain necessary permits from the USACE and NYSDEC on an as-needed basis.

Summary of Impacts

Construction of the Project (i.e., access roads, collection lines, transmission lines, laydown and O&M areas, and turbine sites) would result in total construction disturbance of 25.83 acres of wetlands, 0.87 acres of which would be permanently impacted by placement of fill associated with turbine staging areas, access roads, and the transmission substation. The remaining 24.96 acres of wetlands would be limited to temporary ground disturbance impacts or permanent impacts associated with conversion of forested wetlands to an herbaceous or scrub-shrub state. Of the wetlands impacted along the transmission line, 5.91 acres are mapped as NYSDEC wetlands (SC-12, a Class II wetland; and SC-13, a Class III wetland) that would temporarily subjected to ground disturbance or fill. A total of 2.82 acres would be permanently converted from a forested wetland to an emergent or shrub wetland. In addition, construction of the transmission line ROW would impact 3.33 acres of the adjacent 100-foot upland buffer surrounding the state wetlands, of which, 1.55 acres would be permanently converted from forested cover to grassland or shrub cover. Impacts on streams are described separately (see Section E.1, Water Quality). The permanent impacts on 0.87 acres of wetlands are associated with several wetlands that are located along access roads (0.8 acres) and associated with turbine staging areas (0.07 acres). All other Project facilities, including the switchyard and all turbine foundations, are located outside of delineated wetlands.

Temporary impacts consist of 24.96 acres of wetland that would be temporarily impacted by grading, ground disturbance, or placement of fill during construction and would be returned to preconstruction contours and allowed to revegetate to scrub-shrub or emergent cover. All of these wetland impacts are assumed to be under federal jurisdiction for the purposes of the FEIS. The majority of wetlands subject to temporary clearing within the construction ROW are herbaceous and scrub-shrub wetlands (18.11 acres), which are expected to quickly revert to their preconstruction conditions. Some areas that are currently forested wetlands

would be temporarily cleared during construction to allow for safe construction at turbine sites, but would be allowed to revert to a forested wetland condition over time (0.31 acres).

Operation of the generation and transmission facilities could result in temporary impacts to wetlands associated with clearing to maintain ROWs for the transmission line and collection lines as well as temporary impacts to wetlands for maintenance access. Total wetland impacts for the entire Project are listed in Table E-2. Impacts on state jurisdictional wetlands are presented in Table E-3.

E.2.4 Mitigation

Ball Hill had an intensive multi-phased siting process to avoid and minimize potential impacts on wetlands, and considered siting factors that include topography, location of wetlands and other sensitive resources, availability of sufficient wind resources, proximity to existing roads and transmission lines, locations of residential dwellings, potential impacts from noise, and landowner access agreements. Each factor imposed limitations on the amount of flexibility available during the turbine siting process. Once these factors are considered, turbines and ancillary facilities (i.e., roads and collection system) are sited to avoid and/or minimize environmental impacts. Ball Hill made every effort to use previously disturbed areas, such as farmlands and roads, and avoid wetland and stream crossings. Despite an extensive effort to entirely avoid wetland impacts, because of other constraints and the linear nature of some Project components, it is not possible to design the Project without some impacts on wetlands while still meeting Project objectives. The process that was completed to avoid and minimize wetland impacts in the design of this Project is described below.

Avoidance and Minimization of Wetlands Impacts through Study and Careful Siting

Multiple wetland studies and delineations were previously completed for the Project to determine the extent and quality of wetlands that could potentially be impacted by the Project. Previous wetland studies included a desktop review of existing wetland location information and mapping, reconnaissance-level wetland surveys, and detailed wetland delineations in 2008. Since that time, additional rounds of wetland delineations were conducted in 2011/2012. These previous studies confirm that wetlands under state and federal jurisdiction exist within the Project Site and provide information on the extent and quality of those wetlands. Updated wetland delineations began in 2015 and were completed in 2016. Each phase of the wetland delineations was used to determine changes in the wetlands in the Project Site and refine siting for the Project components to avoid and/or minimize impacts on wetlands while balancing impacts on other resources. The results of 2015/2016 updated wetland delineations were used to further refine siting and avoid and minimize wetland impacts. The delineated wetland boundaries for the Project were added to facility mapping and used to further refine the location of turbine sites, roads, electrical collection lines, the transmission line and substation, and the O&M building to avoid and minimize impacts on wetlands to the extent practicable.

Minimization of Impacts during Construction and Operation of the Project

In addition to careful siting and avoidance of impacts as described above, Ball Hill will employ various other mitigation measures to minimize impacts on wetlands to the maximum extent practicable. For example, the size of access roads and collection and transmission line equipment access corridors within wetlands can be restricted to the minimum width necessary to safely and effectively construct and transport equipment to the turbine sites. The size and weight of the wind turbine components require a stable road surface free of obstructions, thus dictating the amount of woody vegetation that must be cleared and the size of the construction access roads. Roads will be gravel-based and will not have any impermeable top coating. Appropriately sized culverts will be used to maintain the hydrologic connectivity of the wetlands. Where possible, access road crossings have been co-located with existing crossings; therefore, the opportunity may exist to improve the connectivity of wetland areas where existing roads do not have adequate culverts or crossings.

During construction and restoration of the Project Site, BMPs would be implemented to minimize impacts on the wetland resource and, where applicable, the associated NYSDEC 100-foot upland adjacent area. These practices include stripping and stockpiling the wetland topsoil separate from subsoil layers during grading operations; use of geotextile fabric and/or crossing mats to minimize soil compaction; and installation of appropriately designed culverts to maintain wetland hydrology.

Ball Hill would utilize BMPs while installing underground collection cables. Trench plugs would be used, as appropriate, and installed immediately after cable laying and prior to trench backfilling, in order to maintain existing hydrological conditions. In areas where underground collection lines are not co-located with access roads, Ball Hill will return these wetlands to preconstruction grades and allow for the natural recruitment of plants into the underground collection corridor.

Ball Hill will follow all NYSDEC and USACE permit requirements regarding restoration of wetland impacts and employ an environmental monitor during construction. An Invasive Species Management Plan (ISMP) will be fully developed in consultation with NYSDEC and the USACE prior to the onset of construction activities. A draft ISMP is included in Appendix S as part of the EMP. The ISMP discusses measures to prevent the spread or introduction of invasive species into the Project Site, measures to control existing invasive communities, and long-term monitoring procedures.

Maintenance activities associated with Project would include: routine maintenance of wind turbines; collection and transmission line service; selective vegetative pruning around components; and access road maintenance. All chemical

treatments will be undertaken in accordance with all manufacturer guidelines and federal, state, and local laws.

Ball Hill would implement a SWPPP in accordance with NYSDEC permit requirements, which would include an Erosion and Sediment Control Plan and BMPs designed to minimize impacts on those wetlands crossed. During construction operations through permitted wetland areas, BMPs, such as silt fencing, straw bale barriers, or temporary rock sediment traps, would be installed to minimize off-site migration of Project-related sediment.

Mitigation for Permanent Impacts

For those wetland impacts that cannot be avoided, Ball Hill anticipates that mitigation will be required as a condition of the wetland disturbance permits required prior to construction. Within the NYSDEC and USACE permitting requirements, compensatory mitigation can only be considered after the Project proponent demonstrates avoidance and minimization to the extent possible. A Conceptual Wetland Mitigation Plan has been developed and is provided in Appendix F. This appendix outlines the proposed mitigation strategy for the Project and the proposed mitigation techniques that will be implemented in order to meet the requirements for compensatory mitigation consideration. This document will serve as the baseline for a Final Mitigation Plan, which will be developed in consultation with the USACE and NYSDEC during the course of their respective permitting processes.

Mitigation will be required for unavoidable, permanent fill impacts on regulated wetlands (wetland loss) and for loss of function associated with permanent conversion of forested wetlands (loss of wildlife habitat). Based on USACE guidance, mitigation can be completed either financially, in the form of in-lieu-fee mitigation, land acquisition for preservation purposes, regional mitigation banking; or in the form of a specific wetland restoration, creation, or enhancement project developed in conjunction with the Project. It is anticipated that the permanent loss of wetlands under the jurisdiction of the USACE as a result of fill and conversion impacts will be mitigated through the purchase of in-lieu fee mitigation credits. The number of credits from an approved in-lieu fee mitigation provider to offset the proposed permanent impacts (0.87 acres) will be determined through the permitting process with NYSDEC and the USACE.

NYSDEC regulations do not allow for the use of in-lieu fee mitigation to offset Project impacts. The Conceptual Wetland Mitigation Plan, provided in Appendix F, accounts for the permanent loss of wetland functions and values provided by the impacted NYSDEC jurisdictional wetlands. The goal of the mitigation plan is to restore, create, and/or enhance wetland hydrology, and vegetation to adequately offset the loss of function and value to the jurisdictional wetlands on the site resulting from Project implementation. As the impacts to NYSDEC Freshwater Wetland (FWW) SC-12 and SC-13 will be limited to conversion of forested wetlands and upland adjacent areas to areas maintained in a scrub-shrub or emergent/grassland state, the proposed mitigation focuses on recreation of the lost for-

est cover in areas adjacent to the impacted wetlands. The restoration/enhancement effort will require a minimum of 1:1 replacement of lost forest cover, with the final ratio determined as part of the permitting process. The Conceptual Wetland Mitigation Plan proposes planting approximately 2.8 acres of wetland tree species and 1.5 acres of upland tree species within areas currently maintained as active and fallow agricultural fields (see Appendix F). A Final Wetland Mitigation Plan will be developed in conjunction with NYSDEC and the USACE as part of the Joint Application for Permit process and provided to the Towns upon completion.

E.3 Wetland Delineation Report

PREPARED FOR:
BALL HILL WIND ENERGY, LLC
11101 WEST 120TH AVENUE, SUITE 400
BROOMFIELD, CO 80021

BALL HILL WIND PROJECT

WETLAND DELINEATION REPORT

JULY 2016
REVISED OCTOBER 2016



PREPARED BY:



325 DELAWARE AVENUE, SUITE 200
BUFFALO, NEW YORK 14202
FISHER ASSOCIATES PROJECT No. 150001

EXECUTIVE SUMMARY

On behalf of Ball Hill Wind Energy LLC, Fisher Associates conducted a field delineation between October 26 to November 20, 2015 and May 19 to July 15, 2016 to identify jurisdictional Waters of the U.S. (WUS) including wetlands and streams within the Project Study Limits defined to support of the Ball Hill Wind Project ("Project"). The Project Study Limits consist of a 665.38-acre area, which encompasses potential construction and limits of disturbance required for the Project. The Project Study Limits are depicted on the attached Wetland Delineation mapping.

The Project Study Limits are located in Chautauqua County and consist of proposed turbine locations in addition to associated infrastructure including access roads, collection lines, transmission line, switch yard, construction staging areas, operations and maintenance support areas, and an utility-scale substation. The northern portion of the Project is located within the Chautauqua-Conneaut Watershed (HUC 04120101) and the southern portion of the Project is located within the Conewango Watershed (HUC 05010002). The Project is drained by Tupper Creek and unnamed contributing tributaries to the North Branch of Conewango Creek, Silver Creek, Tupper Creek, Walnut Creek, and the West Branch of Conewango Creek.

The Project Study Limits were delineated based upon the methodology outlined in the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). Using these methodologies, preliminary delineation mapping was produced and is included along with the attached investigation description and discussion. During our delineation, approximately 66.60 acres of combined palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetlands were identified. In addition, 11,648 linear feet of stream channel and 8,345 linear feet of jurisdictional ditches were identified.

Based on conditions observed, the USACE will likely invoke jurisdiction of all identified wetlands, stream reaches, and jurisdictional ditches due to their apparent hydrologic connection to other waters. It is also anticipated that the NYSDEC will invoke jurisdiction over the delineated wetlands under Article 24 of the Environmental Conservation Law (ECL) that are associated with NYSDEC Wetlands SC-12 (delineated wetlands A593 and A594) and SC-13 (delineated wetlands A643 and A644). It is not anticipated that the NYSDEC will invoke jurisdiction over the additional wetland systems identified as they are not within close proximity (i.e., less than 50 meters) of Wetlands SC-12, SC-13, or other mapped NYSDEC wetlands and their regulated 100-foot adjacent areas. NYSDEC will likely invoke jurisdiction over 17 of the 63 stream reaches delineated within the Project Study Limits under Article 15 of the ECL, as they are recognized as Class A streams. NYSDEC is not anticipated to invoke jurisdiction over the remaining 46 stream reaches or jurisdictional ditches identified under Article 15 of the ECL, as they are recognized as either Class C or D streams.

**WETLAND DELINEATION REPORT
BALL HILL WIND PROJECT**

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BALL HILL WIND PROJECT**

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APPENDICES

Appendix A Wetland Determination Data Forms
Appendix B Stream Data Forms
Appendix C Ditch Data Forms
Appendix D Representative Site Photographs

PROJECT INFORMATION SHEET

General

Project Name: Ball Hill Wind Project
State: New York
County: Chautauqua County
Towns: Villenova and Hanover

Latitude: 42.440000 North
Longitude: -79.128000 West

Project Study Area Size: 656.56 acres

HUC Code: 04120101 (Chautauqua-Conneaut Watershed) and
05010002 (Conewango Watershed)

Waterbodies (TNW): Tupper Creek; unnamed contributing tributaries to the North Branch of Conewango Creek, Silver Creek, Tupper Creek, Walnut Creek, and the West Branch of Conewango Creek; and associated palustrine emergent, scrub-shrub, and forested wetlands

Corresponding Information

USGS Quad Map: Silver Creek, Forestville, and Perrysburg

USDA Soils Map: Chautauqua County

Owner/Applicant

Name: Ball Hill Wind Energy, LLC

Address: 11101 West 120th Avenue, Suite 400
Broomfield, CO 80021

Contact: Sean Flannery

Consultant

Name: Fisher Associates

Address: 325 Delaware Ave, Suite 200
Buffalo, NY 14202

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Ben Virts: (585) 334-1310 ext. 286

1.0 INTRODUCTION

On behalf of Ball Hill Wind Energy LLC, Fisher Associates conducted a field delineation between October 26 to November 20, 2015 and May 19 to July 15, 2016 to identify jurisdictional Waters of the U.S. (WUS) including wetlands and streams within the Project Study Limits defined to support of the Ball Hill Wind Project (“Project”). The Project Study Limits consist of a 665.38-acre area, which encompasses potential construction and limits of disturbance required for the Project. The Project Study Limits are depicted on the attached Wetland Delineation mapping.

2.0 SITE INFORMATION

2.1 Site Location

The Project Study Limits are located in the Towns of Villenova and Hanover in Chautauqua County in southwestern New York. The northern portion of the Project is located within the Chautauqua-Conneaut Watershed (HUC 04120101) and the southern portion of the Project is located within the Conewango Watershed (HUC 05010002). The Project is drained by Tupper Creek and unnamed contributing tributaries to the North Branch of Conewango Creek, Silver Creek, Tupper Creek, Walnut Creek, and the West Branch of Conewango Creek. The Project is located in the Eastern Lake Section of the Central Lowland Physiographic Province and the Southern New York Section of the Appalachian Plateaus Physiographic Province.

2.2 Site Description

The Project Study Limits consist of proposed turbine locations in addition to associated infrastructure including access roads, collection lines, transmission line, switch yard, construction staging areas, operations and maintenance support areas, and an utility-scale substation. The areas within the Project Study Limits consist of mix of active agricultural lands and mixed deciduous forest within a rural setting (see Wetland Delineation Map Index and Wetland Delineation Map, Sheets 1 through 101).

3.0 METHODS OF DELINEATION

3.1 Preliminary Offsite Investigation/Data Review

A review of publicly available resources was performed prior to the onsite field investigation in order to determine if there is the potential for jurisdictional areas, and if present, the extent of these areas located within the Project Study Limits. These mapping resources generally include but are not limited to:

- New York State Freshwater Wetlands Mapping (NYSFW);
- New York State Protection of Waters Regulatory Program Streams Mapping (NYSS);
- U.S. Fish & Wildlife Service National Wetlands Inventory (NWI) Database;
- U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) Soils Database; and
- United States Geographical Survey (USGS) Mapping.

3.2 Field Investigation

Wetland boundaries were field delineated according to the routine onsite methodology described in the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).

Wetlands were identified based on the presence of hydric soils; a vegetative community dominated by hydrophytes, and inundated or saturated conditions, and/or indicators of hydrologic patterns. Fisher Associates delineated and flagged the wetland boundary with consecutively numbered delineation flagging where vegetation and conditions were conducive to the establishment of field flagging. In areas of the Project Study Limits that are maintained through mowing or previously harvested agricultural row crops, field flagging was not established due to a lack of vegetation to hold field marking flags. Similarly, in areas which were actively accessible to livestock, field flagging was not established to protect the wellbeing of the livestock which could potentially consume the field flagging. A project-specific identification number was given to each delineated wetland. Wetland delineation data relative to vegetation, hydrology, soils and general observations was documented on routine wetland data forms consistent with the guidance of the 2012 Regional Supplement.

Wetland field data points were established within close proximity to the flagged wetland boundary in order to document upland and wetland conditions existing along the wetland boundary. The aquatic resource boundaries were flagged in the field and the flagged locations were surveyed to further clarify their locations.

Stream channels, tributaries, and linear conveyance features were identified based on the recognition of field indicators of bed, banks, and an ordinary high water mark coupled with an evaluation of downstream flow. Wetland Delineation Maps depicting the location of the delineated wetlands and any additional jurisdictional features, including streams, identified within the Project Study Limits are provided as an attachment. Supporting wetland determination data forms are provided in Appendix A and supporting stream data forms are provided in Appendix B.

4.0 DELINEATION FINDINGS

4.1 Preliminary Offsite Investigation/Data Review Findings

4.1.1 NYS Freshwater Wetland Mapping

The NYSFW maps were developed by the New York State Department of Environmental Conservation (NYSDEC) pursuant to Article 24 of the Environmental Conservation Law. These maps depict the approximate boundaries of freshwater wetlands regulated by the NYSDEC. In most instances, the State-mapped boundaries are based on aerial photographs and soil survey interpretation and, therefore, require site-specific field verification. Freshwater wetland mapping information identified for the Project Study Limits was obtained from online Geographic Information System (GIS) mapping resources made available by the NYSDEC (NYSDEC 2015). Based on reviewed mapping information, NYSDEC Wetland SC-12 (Class II) and SC-13 (Class III) are mapped within the Project Study Limits.

4.1.2 NYS Streams Mapping

The NYSS maps were developed by the NYSDEC pursuant to Article 15 of the Environmental Conservation Law. These maps depict the approximate locations of streams mapped by NYSDEC and identify their respective state water quality classification and standard designations based on existing or expected best usage of each water segment. In most instances, the mapped stream locations are based on aerial photographs and topographic map interpretation and, therefore, require site-specific field verification. Stream mapping information identified for the Project Study Limits was obtained from online Geographic Information System (GIS) mapping resources made available by the NYSDEC (NYSDEC 2015). Based on reviewed mapping information, NYSS mapped streams are present within the Project Study Limits. There are twenty-nine (29) occurrences of NYSS mapped streams including eleven (11) Class A streams and eighteen (18) Class C streams.

4.1.3 National Wetlands Inventory Mapping

NWI mapping information for the Project Study Limits was obtained from online GIS mapping resources made available by the USFWS (USFWS 2015). A review of this information was completed which indicated that eight (8) mapped NWI wetlands, including Cowardin Classifications of PFO1E (palustrine forested broad-leaved seasonally flooded/saturated), PFO1/SS1E (palustrine forested/scrub-shrub broad-leaved seasonally flooded/saturated), PEM5E (palustrine emergent seasonally flooded/saturated), and PUBHx (palustrine unconsolidated bottom permanently flooded excavated), are mapped within the Project Study Limits. However, it is understood that this mapping is provided as a reference and is not necessarily indicative of the presence or absence of wetlands in an area.

4.1.4 Soils Mapping

Soil types identified for the Project Study Limits were obtained from online GIS mapping resources made available by the NRCS (USDA-NRCS 2015). A review of this information was completed to evaluate the soil types within the Project Study Limits to determine the possible presence of hydric soils.

The mapped soils at each wetland location, including instances where there may be more than one soil component identified at a given wetland location, are described in Table 1: Wetland Delineation Summary. Areas of predominantly hydric soils were identified within the Project Study Limits. The mapped soils present within the Project Study Limits are depicted in the attached Wetland Delineation Mapping.

4.2 Onsite Determination/Findings

4.2.1 Wetland Area Summary

The onsite delineation did verify the presence of wetlands and confirmed the presence of hydric soils depicted on the NRCS soils mapping. 66.60-acres of combined palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetlands were identified. A summary of the wetlands identified within the Project Study Limits is provided in Table 1:

Wetland Delineation Summary. The location and size of wetlands delineated onsite are shown on the attached Wetland Delineation Mapping.

4.2.1.1 Wetland Vegetation

The criterion for wetland vegetation is a dominance of hydrophytic species. A species is considered hydrophytic per USACE (1987 and 2012) if it is classified either as obligate (OBL), facultative wet (FACW), or facultative (FAC) in *The National Wetland Plant List: 2014 Update of Wetland Ratings* (Lichvar, et.al, 2016). A dominance of hydrophytes requires that more than 50% of the vegetative species in an area are classified as hydrophytic.

Generally, the delineated wetlands consisted of palustrine emergent wetlands within active agriculture fields which are either cultivated or pastured by livestock. Lesser areas of forested and scrub-shrub wetlands were identified in areas that were generally not subject to active agriculture or livestock pasturing. The wetland determination data forms which provide expanded detail of the wetlands identified within the Project Study Limits can be found in Appendix A. Wetland vegetation community cover types observed at each wetland are summarized in Table 1: Wetland Delineation Summary.

4.2.1.2 Wetland Hydrology

The Project Study Limits were examined for field indicators of wetland hydrology. According to USACE (1987 and 2012), wetland hydrology consists of permanent or periodic inundation, or soil saturation to the surface during the growing season. If these indicators were present within the sample plots, the hydrology criterion was met.

Generally, wetlands identified within the Project Study Limits receive hydrologic input from precipitation and retained surface water perched upon poorly drained soils containing fine sediments and shallow restrictive layers. In addition, wetlands within lower elevations of the project watersheds exhibited a direct groundwater connection and often additional shared surface hydrology in association with adjacent and contiguous streams. Hydrologic indicators observed at each delineated wetland were recorded on the wetland determination data forms presented in Appendix A. Table 1: Wetland Delineation Summary provides the location (latitude/longitude) and total wetland area delineated within the Project Study Limits.

4.2.1.3 Wetland Soils

Soil physical characteristics were evaluated during the field delineations by excavating to a depth appropriate to evaluate potential hydric soil indicators below ground surface. Soil color was evaluated using *Munsell Soil Color Charts* (Munsell 2000). Soils that exhibited hydric soil indicators, such as low chroma colors and/or evidence of reducing conditions met the hydric soil criterion per USACE (1987 and 2012).

Wetland soils observed during the excavations within the Project Study Limits generally consisted of primarily silt loam texture mineral soils exhibiting reduced, low chroma matrices and documented redox concentrations and/or redox depletions within the matrices. Soil samples within wetland areas most commonly possessed Redox Dark Surface (F6) and/or Depleted Matrix (F3) hydric soil indicator conditions within their profiles. Characteristics

observed at each data point are summarized in the wetland determination data forms included in Appendix A.

4.2.2 Streams Summary

Stream channel reaches delineated within the Project Study Limits included 63 combined perennial, intermittent, and ephemeral channel reaches totaling 11,648 linear feet. Observed stream characteristics are summarized in the stream data forms included in Appendix B. A summary of the streams identified within the Project Study Limits is provided in Table 2: Stream Delineation Summary. The locations of streams delineated onsite are shown on the attached Wetland Delineation Mapping.

4.2.3 Ditches Summary

Jurisdictional ditches delineated within the Project Study Limits included 20 ditch reaches totaling 8,345 linear feet. Classification as a jurisdictional ditch herein is based on the presence of a defined bed and bank, an ordinary high water mark, a direct or indirect connection to a traditional navigable water (TNW), and at least one of the following supplementing attributes:

- Ditches that have relatively permanent flowing or standing water;
- Natural streams that have been altered (e.g. channelized, straightened, or relocated);
- Ditches that have been excavated in jurisdictional waters of the US (WOTUS);
- Ditches that connect two or more jurisdictional WOTUS; and.
- Ditches that drain natural water bodies (including wetlands) into the tributary system of a TNW.

Observed ditch characteristics are summarized in the ditch data forms included in Appendix B. A summary of the jurisdictional ditches identified within the Project Study Limits is provided in Table 3: Ditch Delineation Summary. The locations of jurisdictional ditches delineated onsite are shown on Wetland Delineation Map, Sheets 1 through 101.

4.2.4 Upland Area Summary

During the field investigation of the Project Study Limits, significant areas of upland or non-jurisdictional areas were identified. The majority of the identified upland areas are characterized by mixed deciduous forest and active agricultural lands, including row crops, forage hay production, and active pasture. Upland soils observed were primarily silt loam texture exhibiting medium to high chroma 2.5Y and 10YR matrices throughout the soil profile to a depth of twenty inches below ground surface. Typically, no indicators of wetland hydrology were observed within the upland areas. The location and size of upland areas in addition to the mapped soils present at these locations are depicted on the attached Wetland Delineation Mapping.

5.0 SUMMARY AND CONCLUSIONS

Fisher Associates conducted a wetland delineation associated with the Project between conducted a field delineation between October 26 to November 20, 2015 and May 19 to July 8, 2016. 66.60-acres of combined PEM, PSS, and PFO wetlands were identified. In addition,

11,648 linear feet of combined perennial, intermittent, and ephemeral stream channel reaches and 8,345 linear feet of jurisdictional ditches were identified within the Project Study Limits.

Based on conditions observed, the USACE will likely invoke jurisdiction over all identified wetlands, stream reaches, and jurisdictional ditches due to their apparent hydrologic connection to other waters. It is also anticipated that the NYSDEC will invoke jurisdiction over the delineated wetlands under Article 24 of the Environmental Conservation Law (ECL) that are associated with NYSDEC Wetlands SC-12 (delineated wetlands A593 and A594) and SC-13 (delineated wetlands A643 and A644). It is not anticipated that the NYSDEC will invoke jurisdiction over the additional wetland systems identified as they are not within close proximity (i.e., less than 50 meters) of Wetlands SC-12, SC-13, or other mapped NYSDEC wetlands and their regulated 100-foot adjacent areas. NYSDEC will likely invoke jurisdiction over 17 of the 63 stream reaches delineated within the Project Study Limits under Article 15 of the ECL, as they are recognized as Class A streams. NYSDEC is not anticipated to invoke jurisdiction over the remaining 46 stream reaches or jurisdictional ditches identified under Article 15 of the ECL, as they are recognized as either Class C or D streams.

6.0 REFERENCES

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. *Classification of wetlands and deepwater habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Department of the Army, Corps of Engineers, and Environmental Protection Agency, "Clean Water Rule: Definition of 'Waters of the United States,' Final Rule," 80 *Federal Register* 37054-37127, June 29, 2015.

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State*. Second Edition. A revised and expanded edition of Carol Reschke's *Ecological Communities of New York State*. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

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. 2012. *U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. U.S. Army Engineer Research and Development Center.

Kollmorgen Corporation. 2000. *Munsell Soil Color Charts*. Macbeth Division of Kollmorgen Corporation, Baltimore, MD.

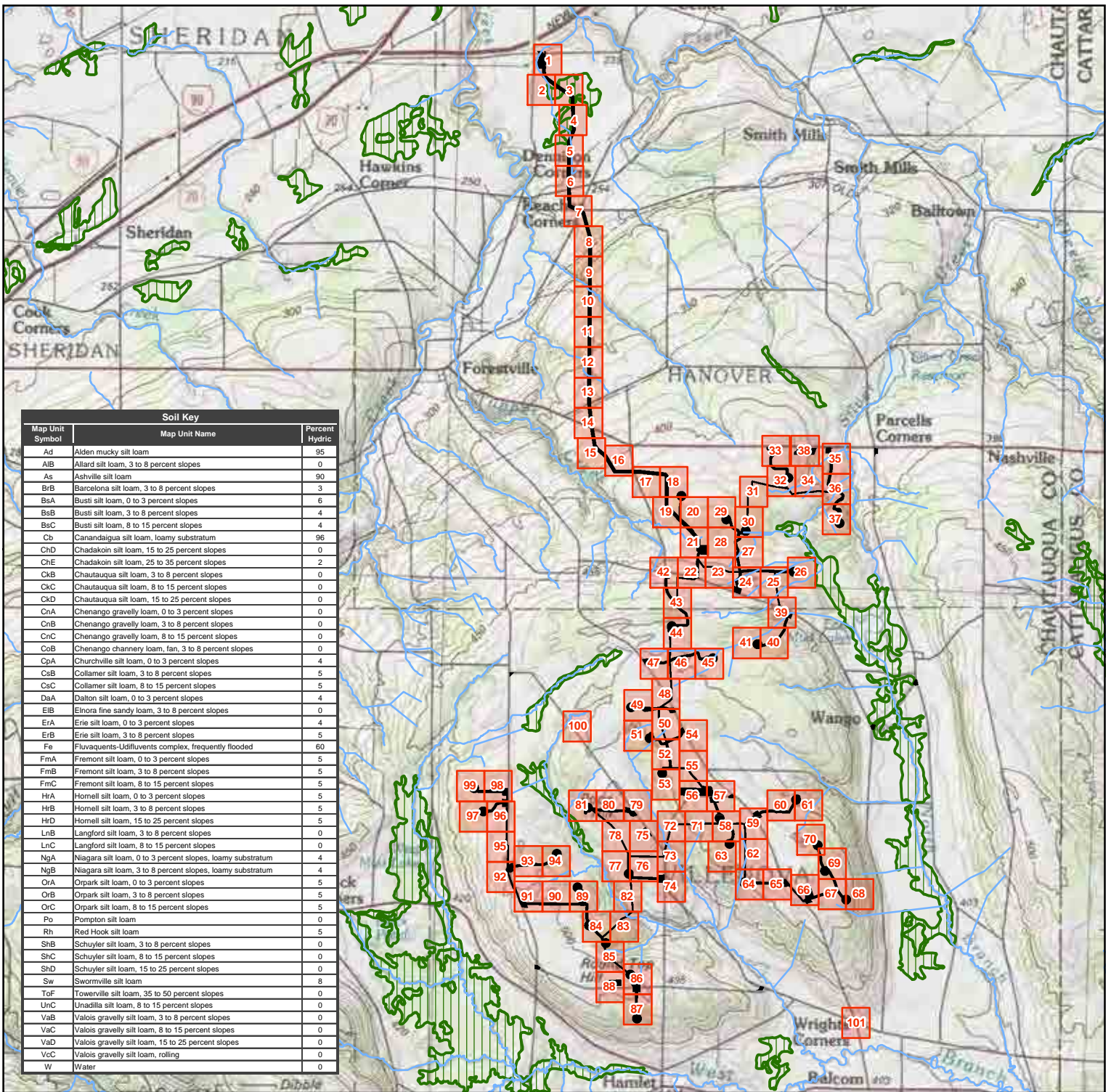
Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 Update of wetland ratings*. *Phytoneuron* 2016-30: 1-17. Available at: <http://wetlandplants.usace.army.mil/>

New York State Department of Environmental Conservation (NYSDEC). 2015. Environmental Resource Mapper. <http://www.dec.ny.gov/animals/38801.html>

USDA-NRCS. 2015. *Web Soil Survey*. Natural Resource Conservation Service. U.S. Department of Agriculture. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

U.S. Fish & Wildlife Service (USFWS). 2015. National Wetland Inventory. <http://www.fws.gov/wetlands>

MAPS



Soil Key		
Map Unit Symbol	Map Unit Name	Percent Hydric
Ad	Alden mucky silt loam	95
AIB	Allard silt loam, 3 to 8 percent slopes	0
As	Ashville silt loam	90
BRB	Barcelona silt loam, 3 to 8 percent slopes	3
BsA	Busti silt loam, 0 to 3 percent slopes	6
BsB	Busti silt loam, 3 to 8 percent slopes	4
BsC	Busti silt loam, 8 to 15 percent slopes	4
Cb	Canandaigua silt loam, loamy substratum	96
ChD	Chadakoin silt loam, 15 to 25 percent slopes	0
ChE	Chadakoin silt loam, 25 to 35 percent slopes	2
CkB	Chautauqua silt loam, 3 to 8 percent slopes	0
CkC	Chautauqua silt loam, 8 to 15 percent slopes	0
CkD	Chautauqua silt loam, 15 to 25 percent slopes	0
CnA	Chenango gravelly loam, 0 to 3 percent slopes	0
CnB	Chenango gravelly loam, 3 to 8 percent slopes	0
CnC	Chenango gravelly loam, 8 to 15 percent slopes	0
CzB	Chenango channely loam, fan, 3 to 8 percent slopes	0
CpA	Churchville silt loam, 0 to 3 percent slopes	4
CsB	Collamer silt loam, 3 to 8 percent slopes	5
CsC	Collamer silt loam, 8 to 15 percent slopes	5
DaA	Dalton silt loam, 0 to 3 percent slopes	4
EiB	Einora fine sandy loam, 3 to 8 percent slopes	0
ErA	Erie silt loam, 0 to 3 percent slopes	4
ErB	Erie silt loam, 3 to 8 percent slopes	5
Fe	Fluvaquents-Udfluvents complex, frequently flooded	60
FmA	Fremont silt loam, 0 to 3 percent slopes	5
FmB	Fremont silt loam, 3 to 8 percent slopes	5
FmC	Fremont silt loam, 8 to 15 percent slopes	5
HrA	Hornell silt loam, 0 to 3 percent slopes	5
HrB	Hornell silt loam, 3 to 8 percent slopes	5
HrD	Hornell silt loam, 15 to 25 percent slopes	5
LnB	Langford silt loam, 3 to 8 percent slopes	0
LnC	Langford silt loam, 8 to 15 percent slopes	0
NgA	Niagara silt loam, 0 to 3 percent slopes, loamy substratum	4
NgB	Niagara silt loam, 3 to 8 percent slopes, loamy substratum	4
OrA	Orpark silt loam, 0 to 3 percent slopes	5
OrB	Orpark silt loam, 3 to 8 percent slopes	5
OrC	Orpark silt loam, 8 to 15 percent slopes	5
Po	Pompton silt loam	0
Rh	Red Hook silt loam	5
ShB	Schuyler silt loam, 3 to 8 percent slopes	0
ShC	Schuyler silt loam, 8 to 15 percent slopes	0
ShD	Schuyler silt loam, 15 to 25 percent slopes	0
Sw	Swormville silt loam	8
ToF	Towerville silt loam, 35 to 50 percent slopes	0
UnC	Unadilla silt loam, 8 to 15 percent slopes	0
VaB	Valois gravelly silt loam, 3 to 8 percent slopes	0
VaC	Valois gravelly silt loam, 8 to 15 percent slopes	0
VaD	Valois gravelly silt loam, 15 to 25 percent slopes	0
VcC	Valois gravelly silt loam, rolling	0
W	Water	0

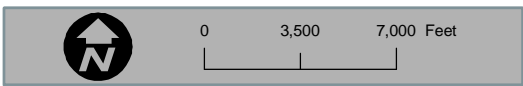
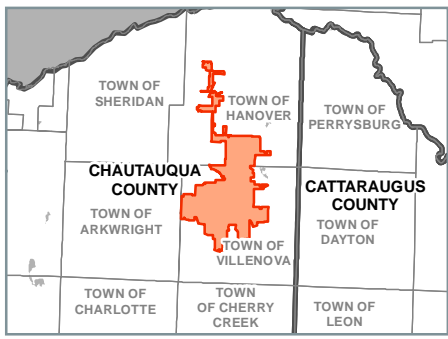
Project USGS Quad(s):
Silver Creek, Forestville, Perrysburg

Project Watershed(s):
Chautauqua-Conneaut (HUC 04120101)
Conewangot (HUC 05010002)

Project Study Limits:
665.38 Acres
Center of Project Study Limits:
42.440 N, -79.128 W
North American Datum 1983



NYSDEC Stream (Class, Standard)
 Project Study Limits
 NYSDEC Freshwater Wetland
 Mapsheet

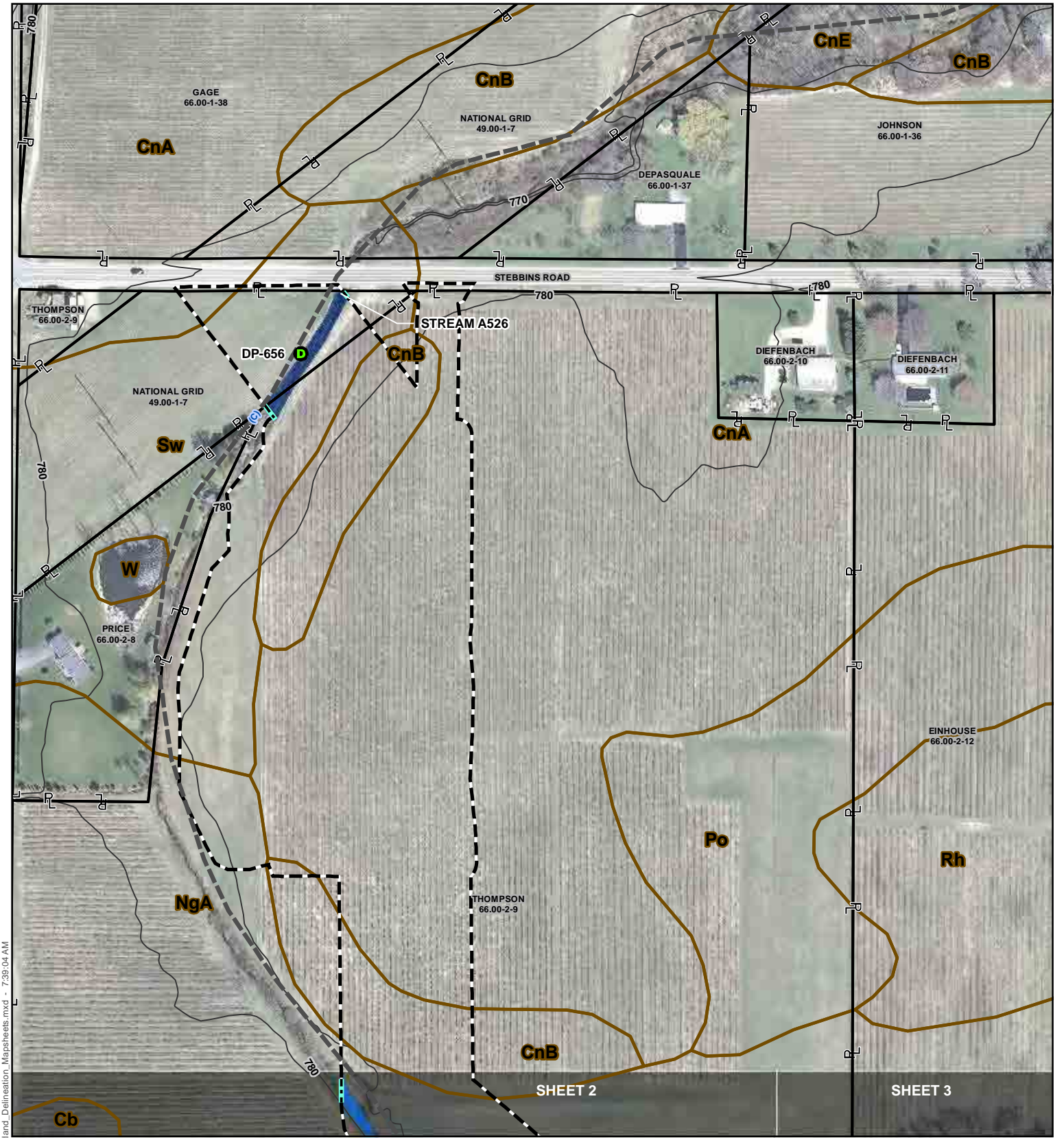


Data Sources:
United States Geological Survey 24k Topo Quad Map - usgs.gov
Aerial Photography: NYS GIS Clearinghouse (2012): nysgis.state.ny.us
Roads: NYS GIS Clearinghouse (9/30/2015): nysgis.state.ny.us
Streams: NYSDEC (10/19/2015) - dec.ny.gov
Wetlands: NYSDEC (8/19/2014) - dec.ny.gov
Wetlands: National Wetland Inventory (5/1/2014) - fws.gov/wetlands/
Soils: NRCS Soil Survey (10/7/2015) - gdg.sc.egov.usda.gov

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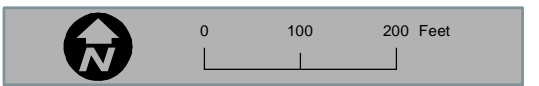
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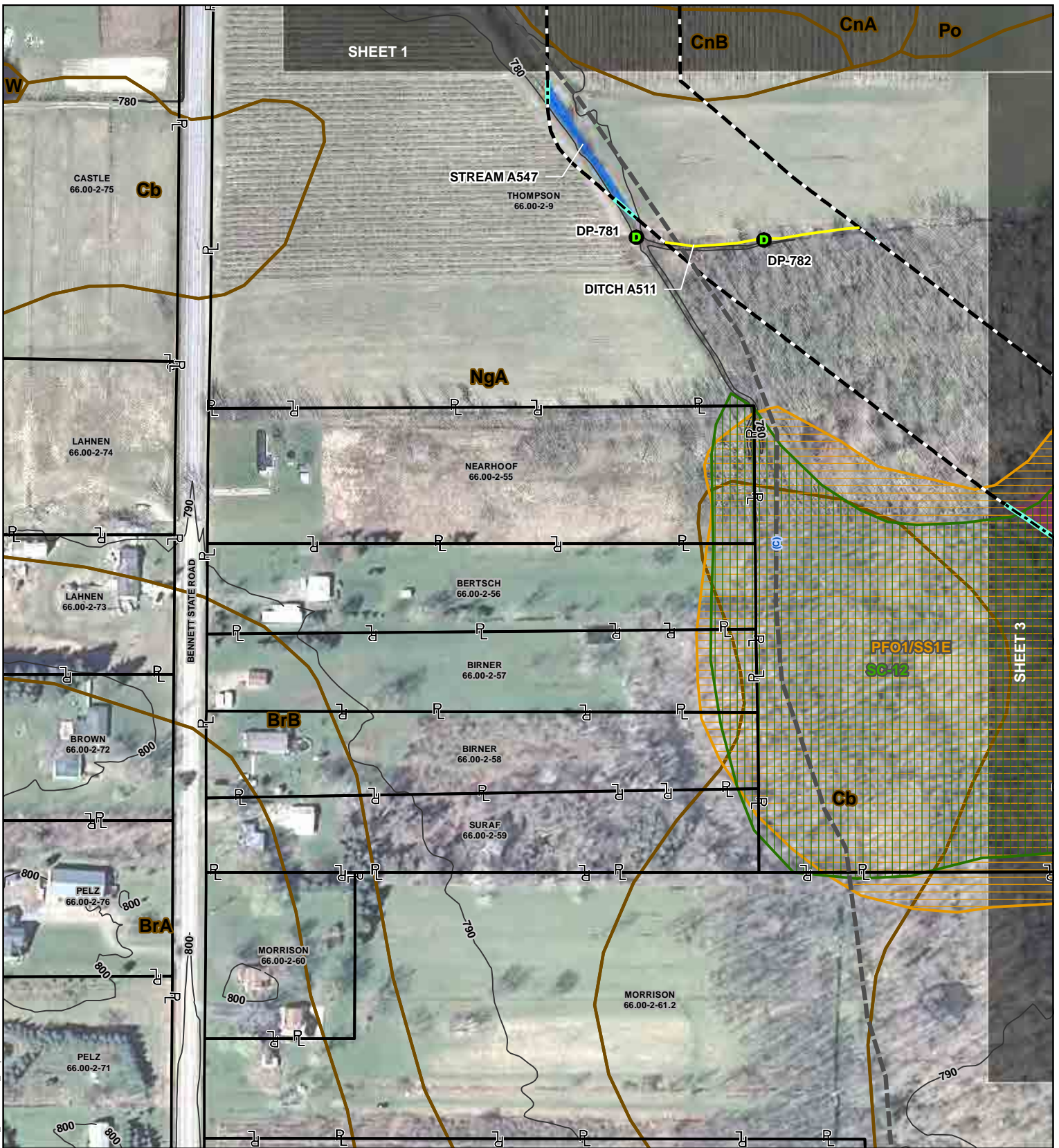
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	




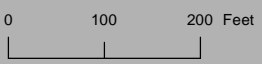
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BALL HILL WIND PROJECT
WETLAND DELINEATION REPORT
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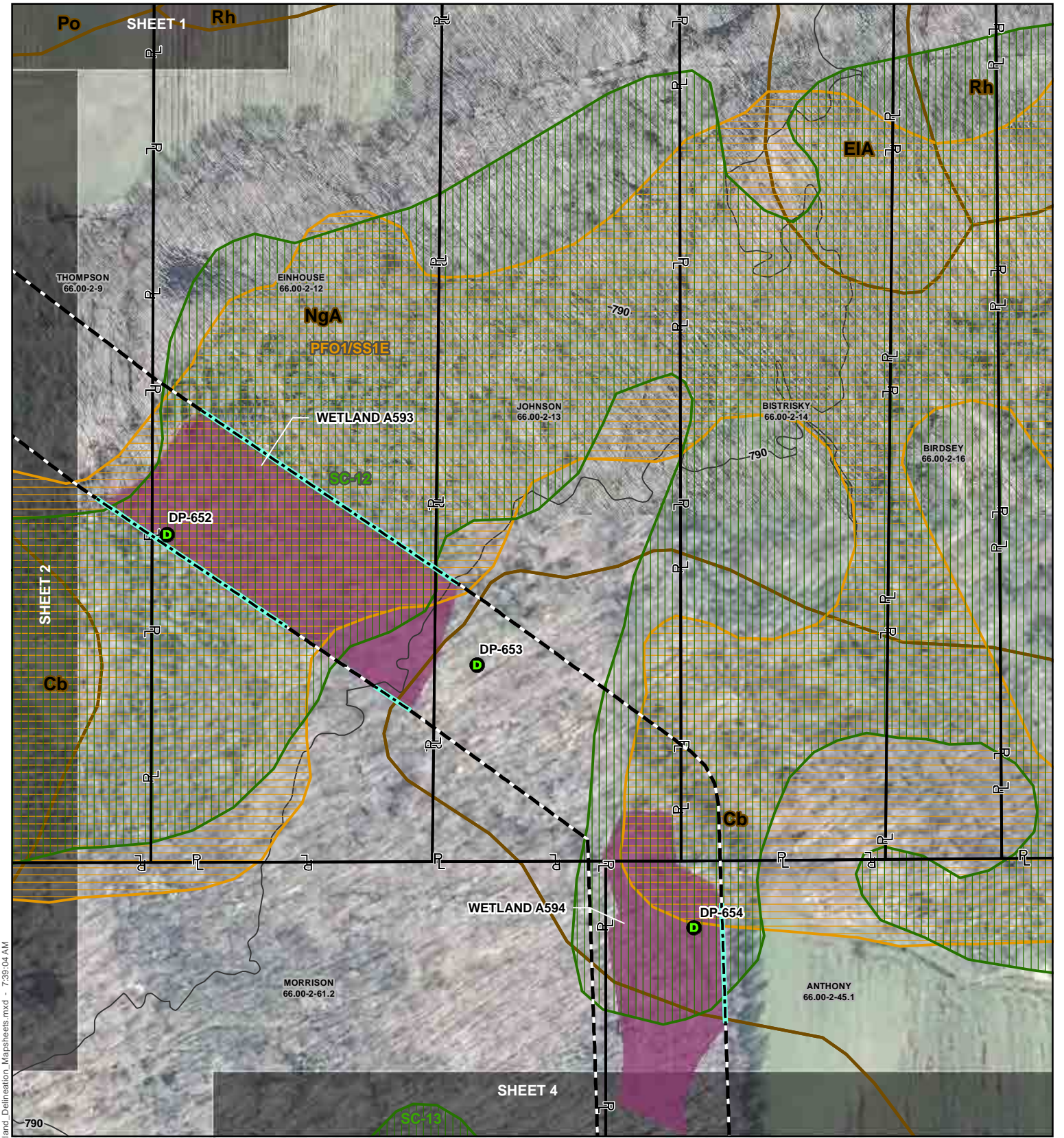
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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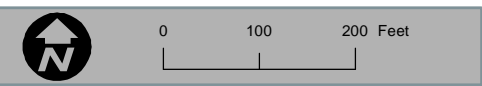


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SHEET 2 OF 101

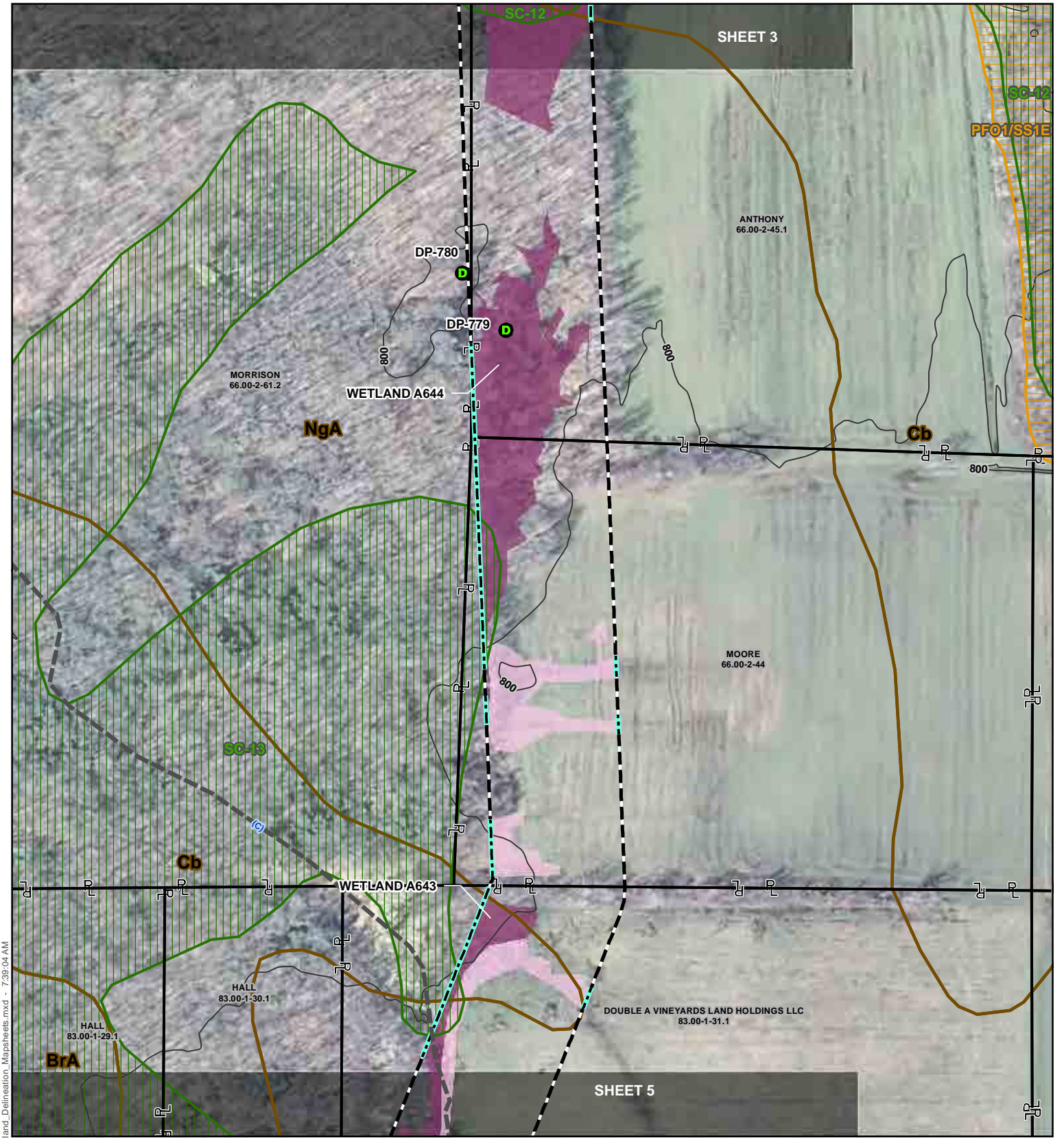


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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
| Delineated Intermittent Stream | Delineated PFO Wetland | |
| Delineated Perennial Stream | Delineated PSS Wetland | |



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SHEET 3 OF 101**



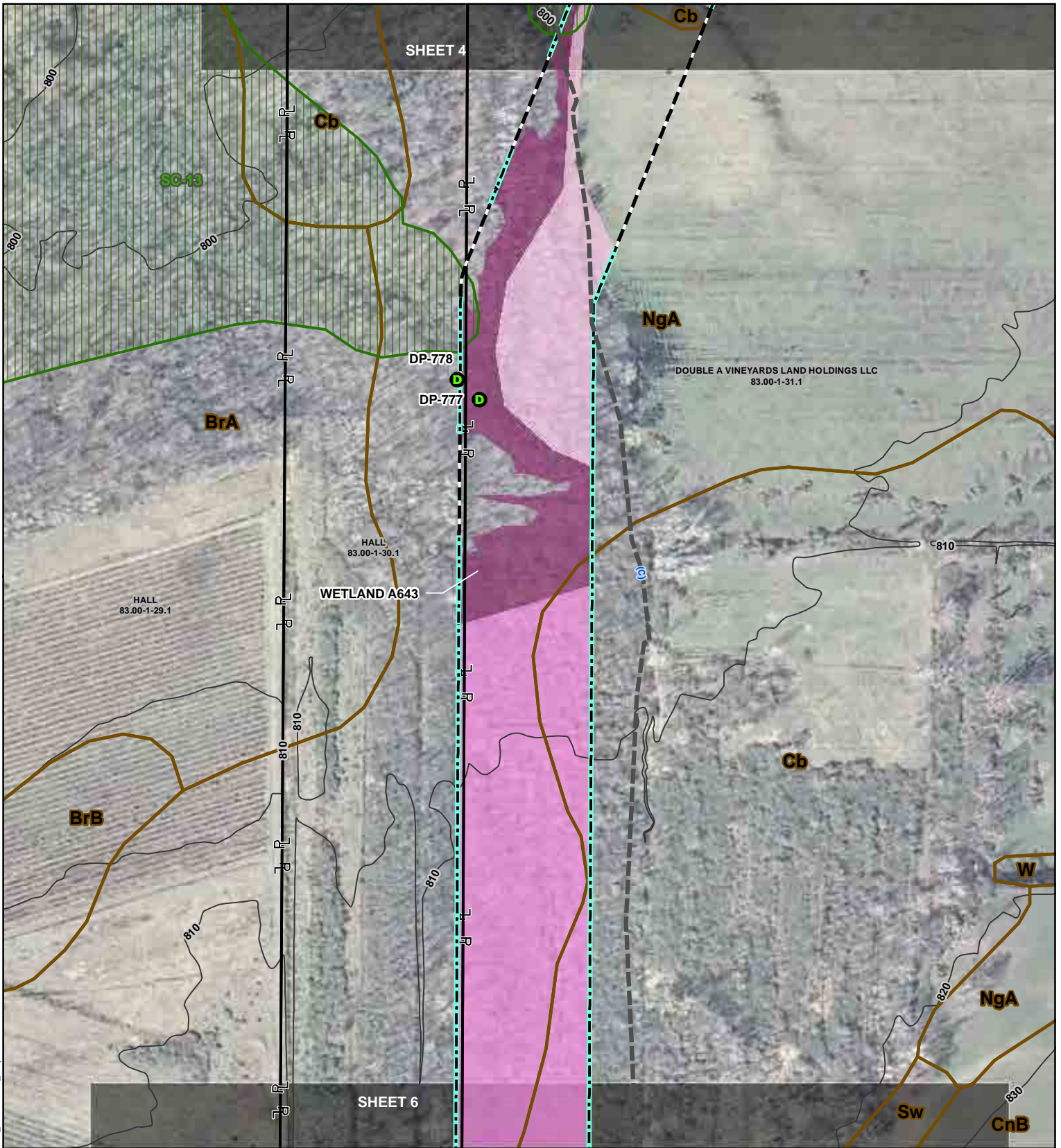
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
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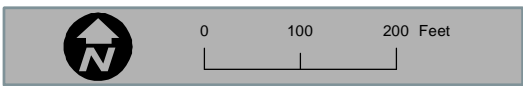
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BALL HILL WIND PROJECT
WETLAND DELINEATION REPORT
SHEET 4 OF 101**



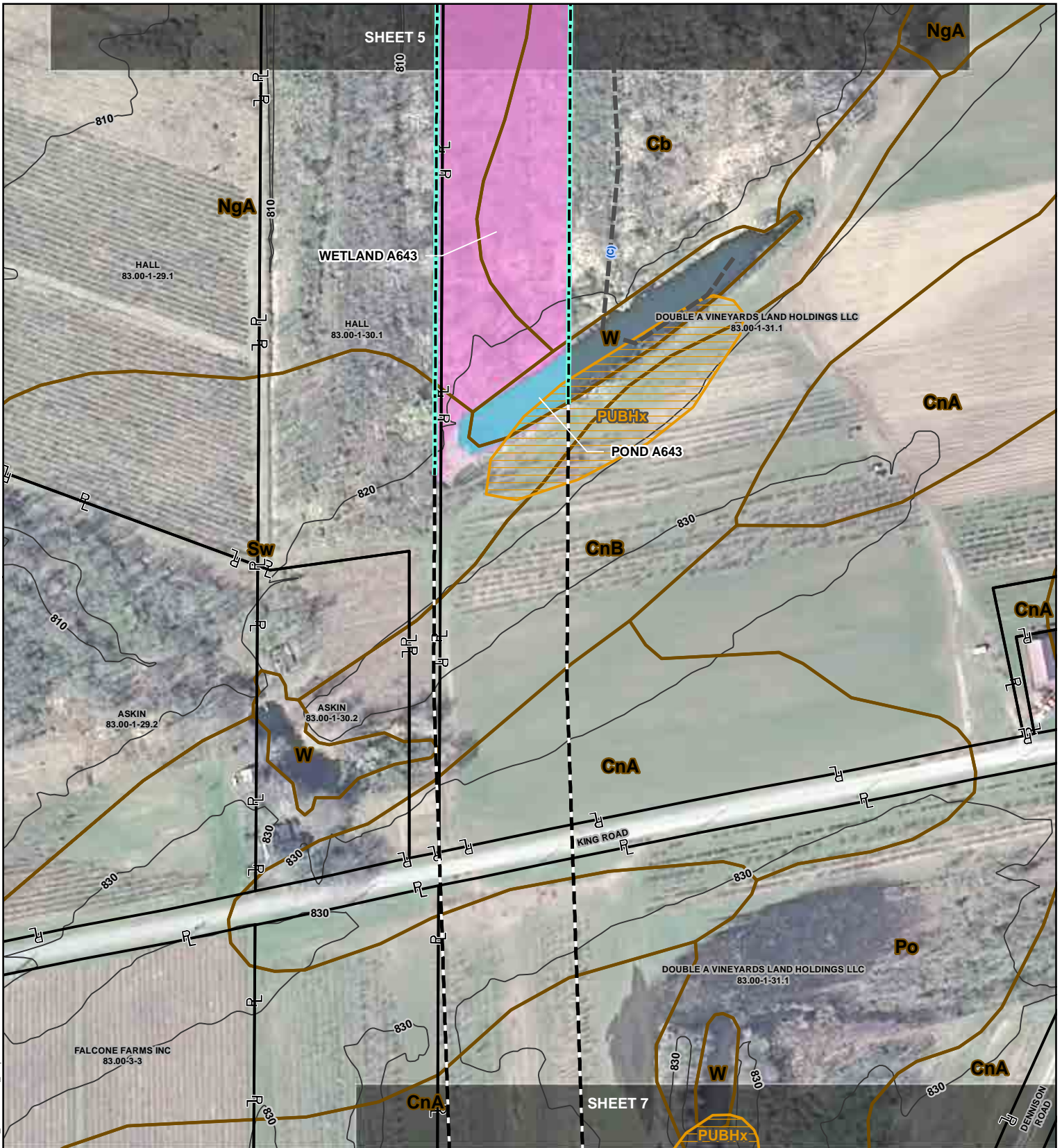
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
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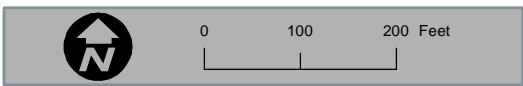
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SHEET 5 OF 101**



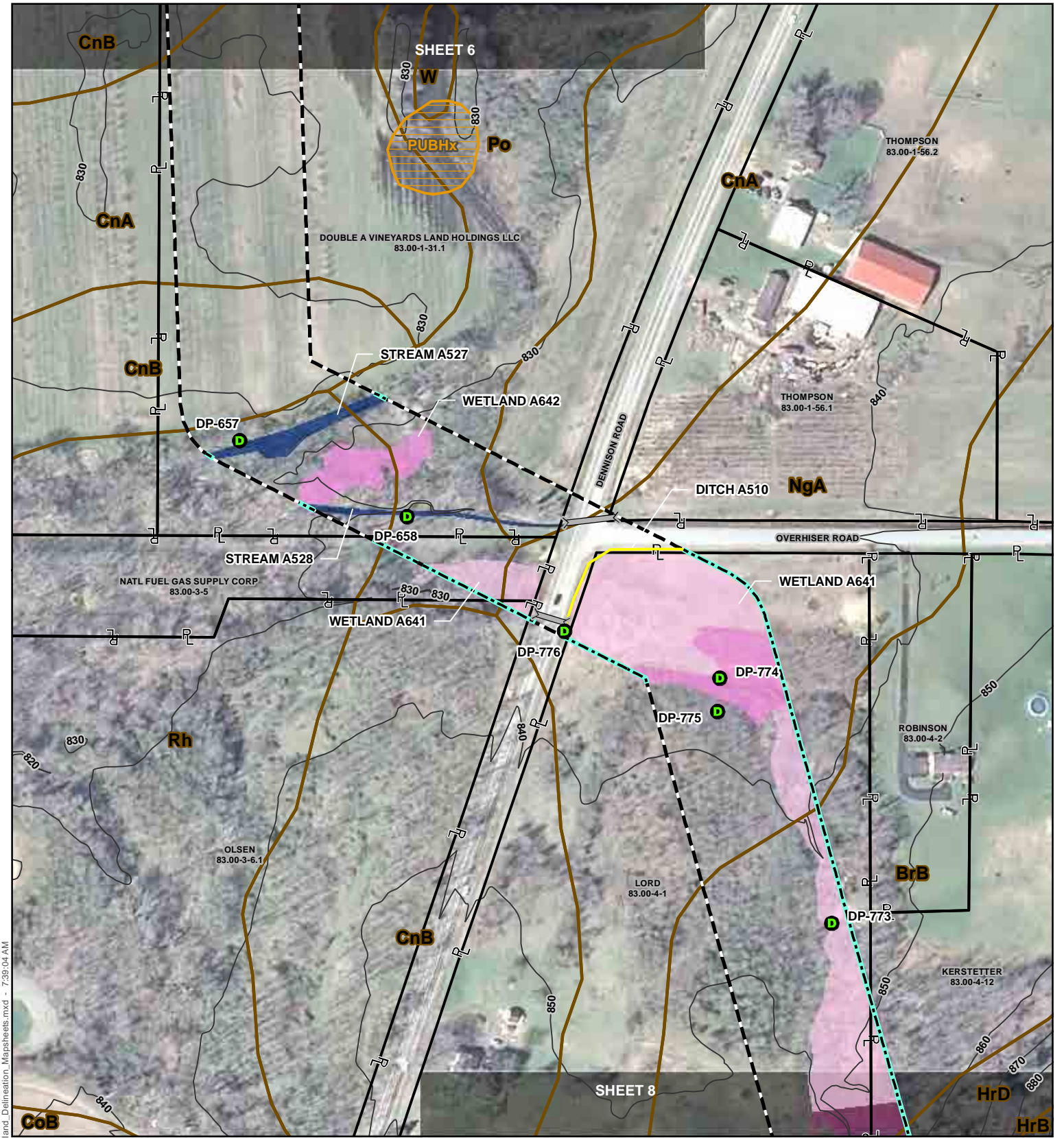
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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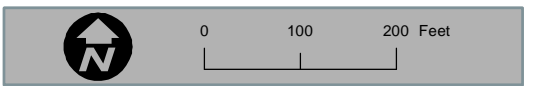
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WETLAND DELINEATION REPORT
SHEET 6 OF 101**



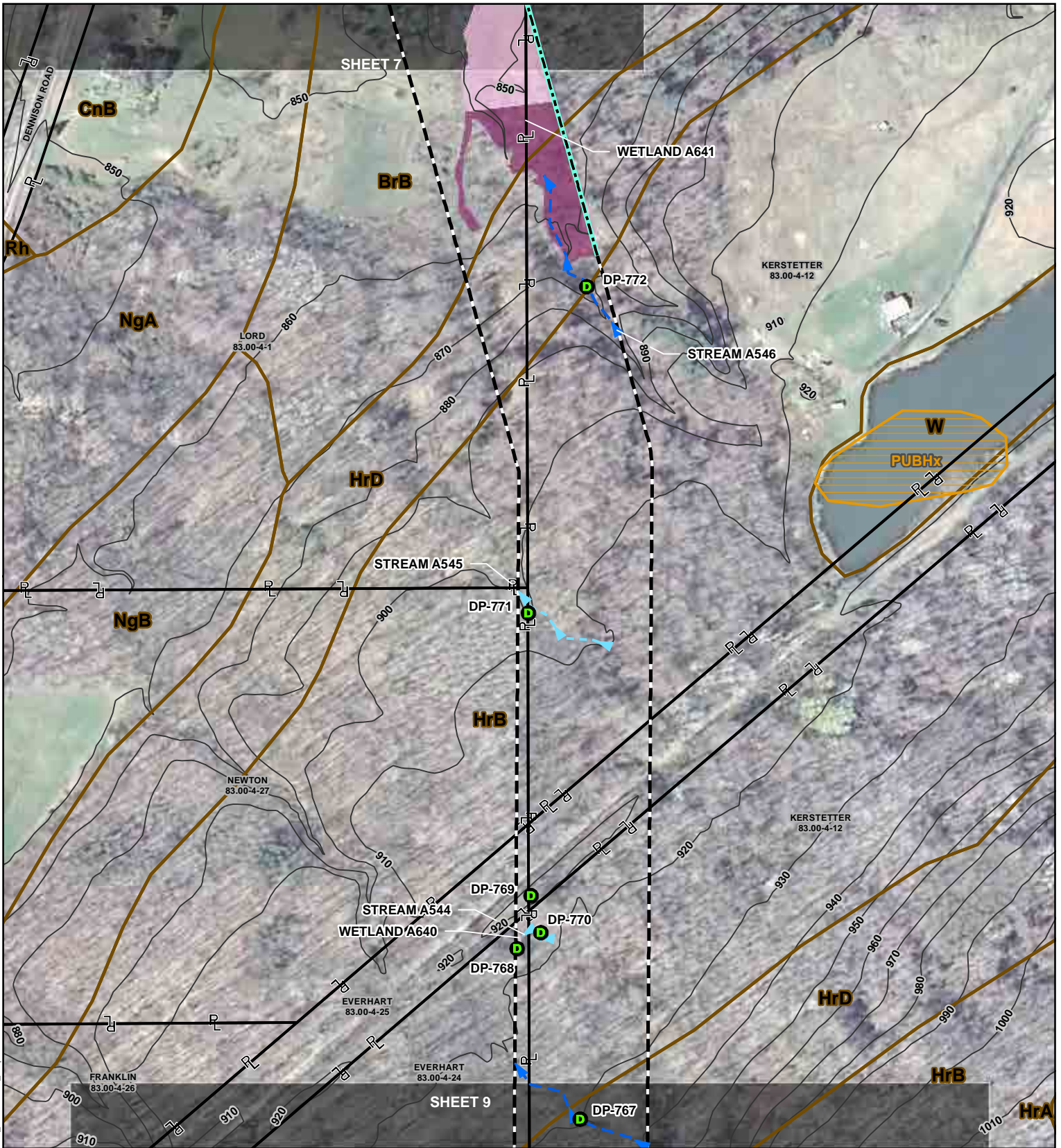
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
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Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



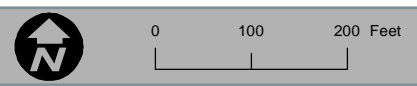
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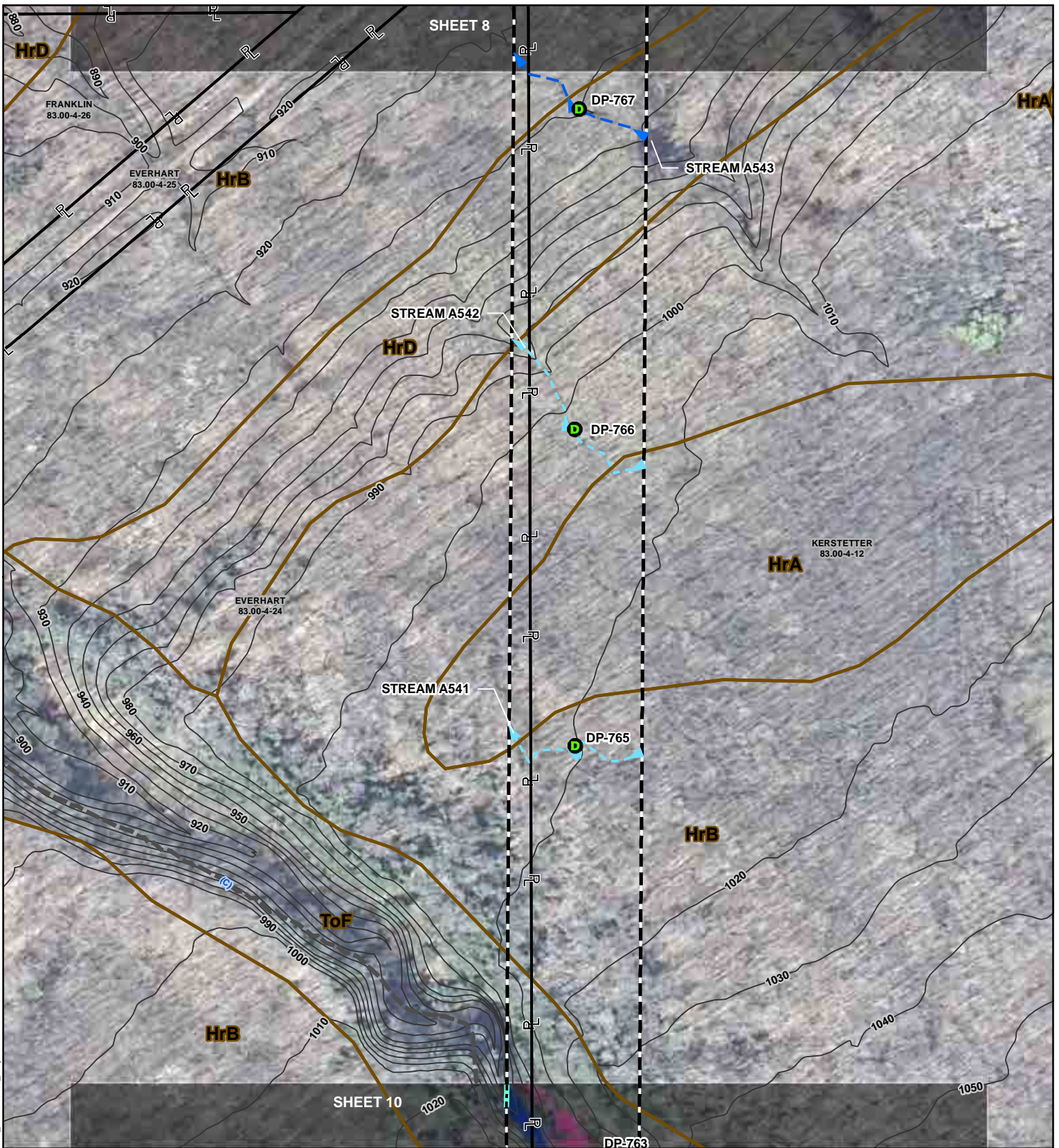


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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
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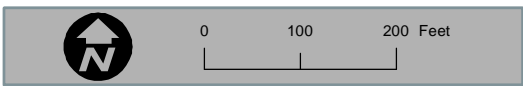


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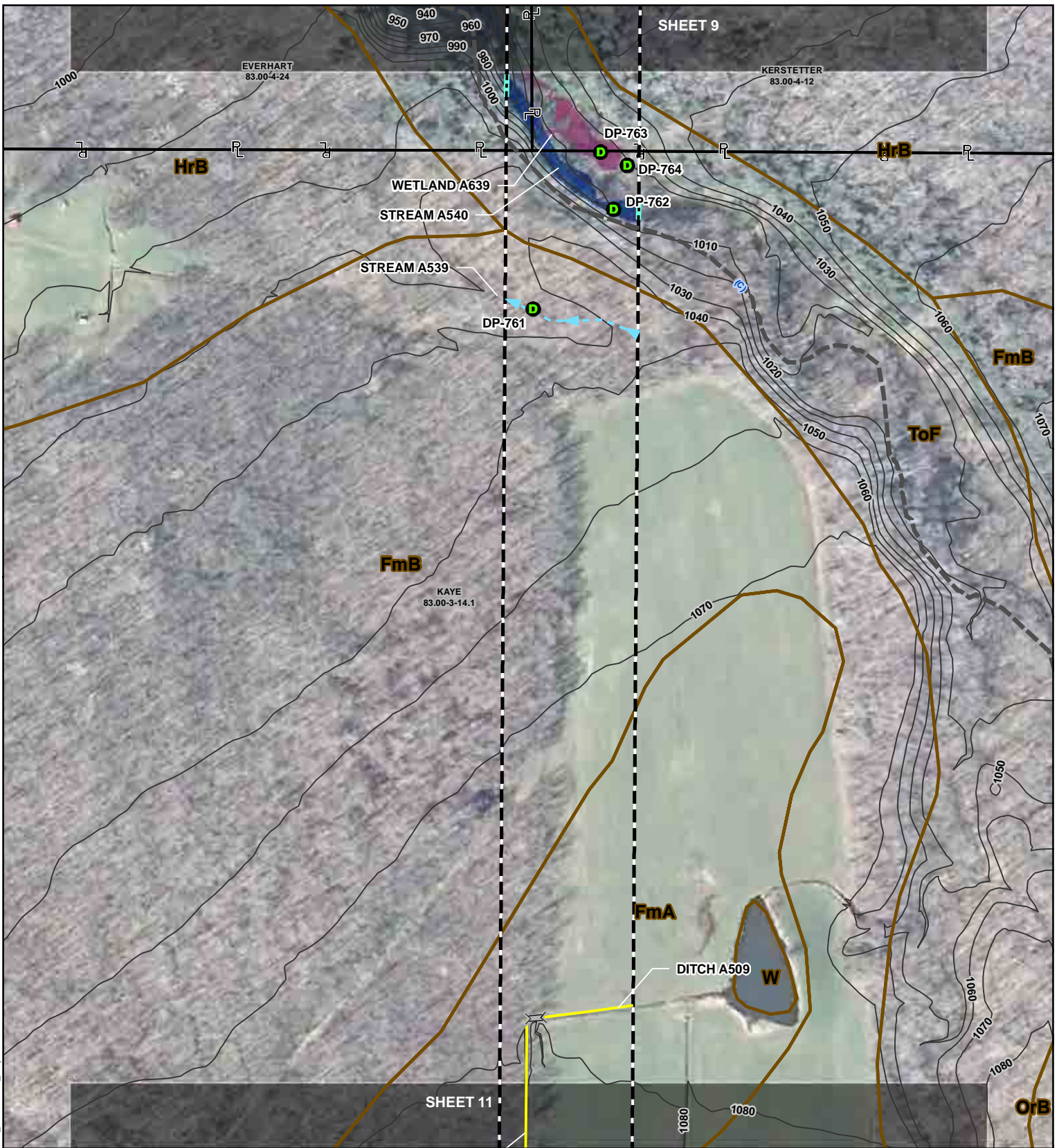


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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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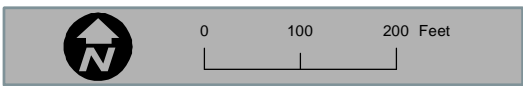


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WETLAND DELINEATION REPORT
SHEET 9 OF 101



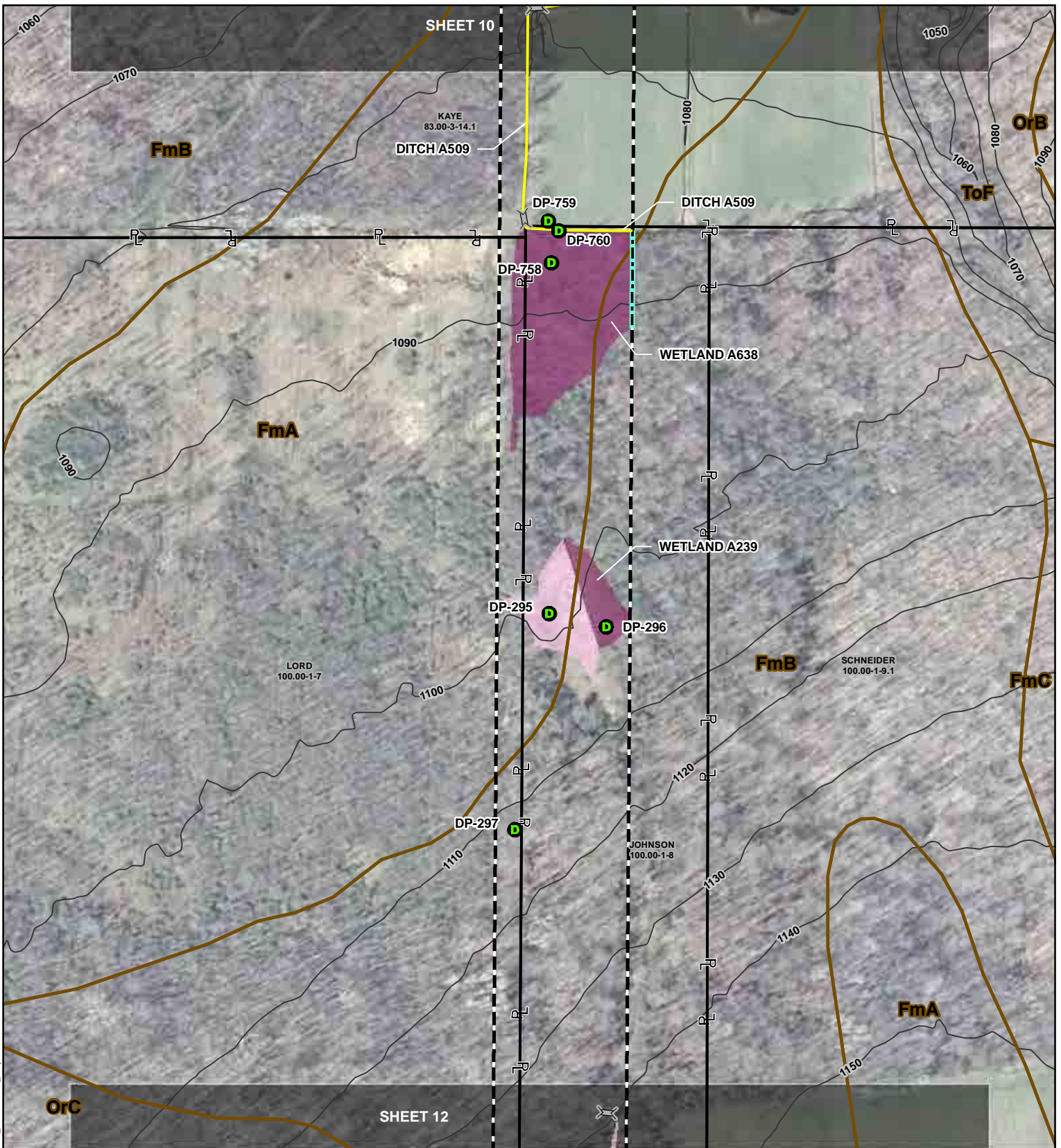
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
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Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



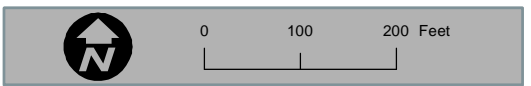
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WETLAND DELINEATION REPORT
SHEET 10 OF 101**



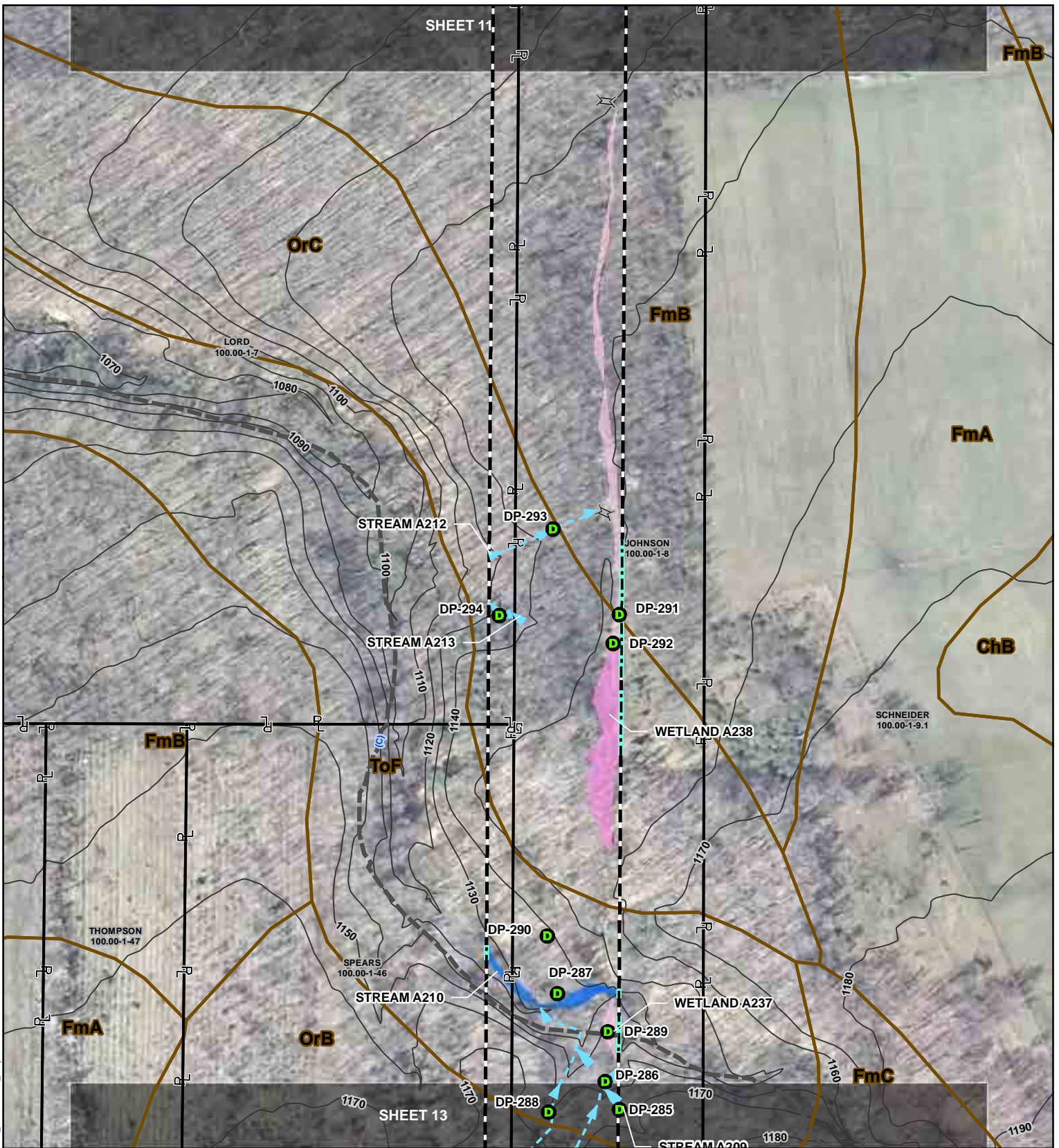
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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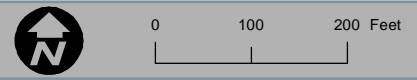
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
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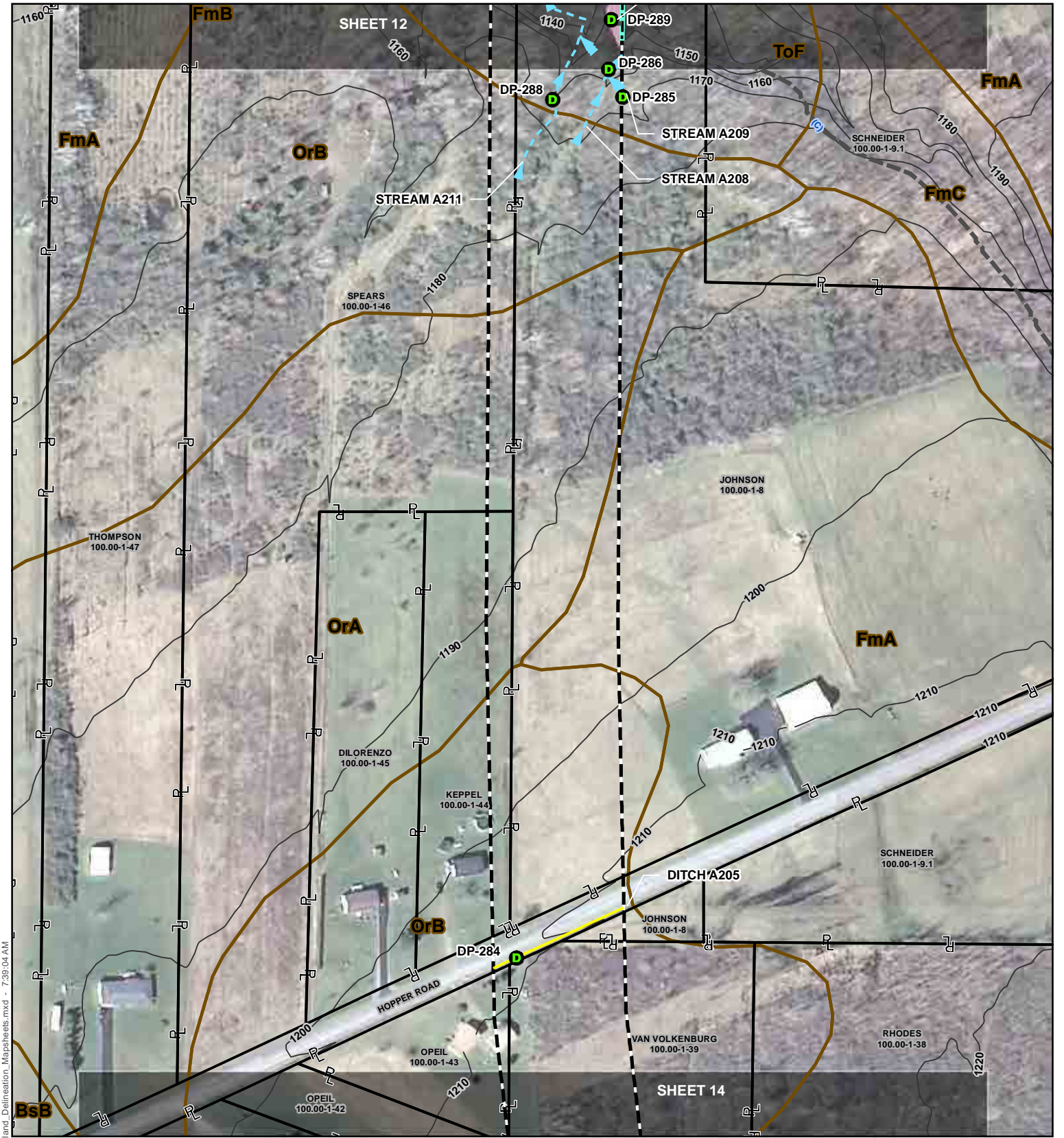


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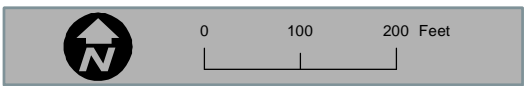
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Revision Date: 10/4/2016



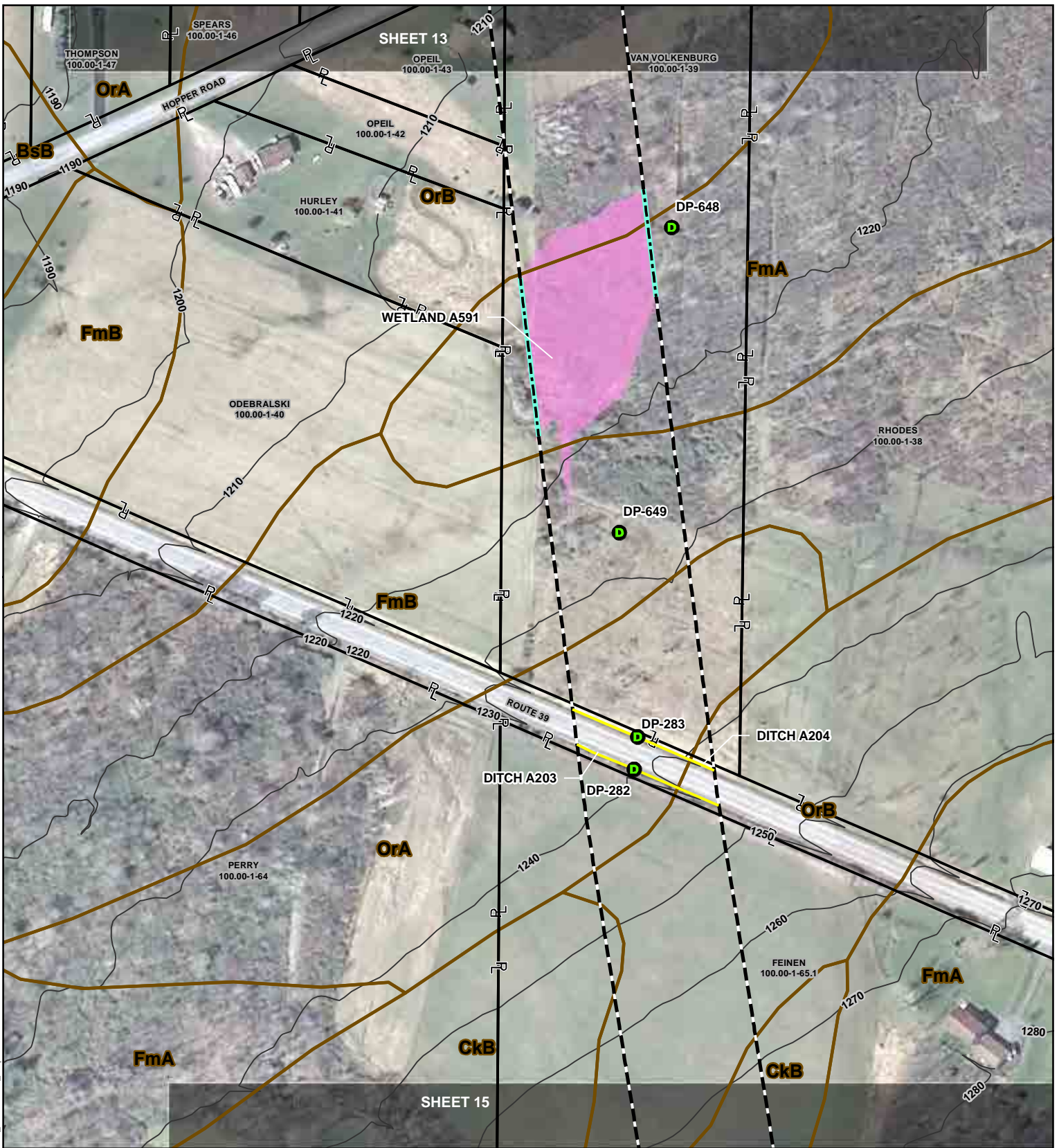
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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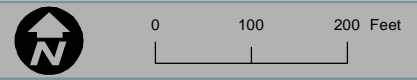
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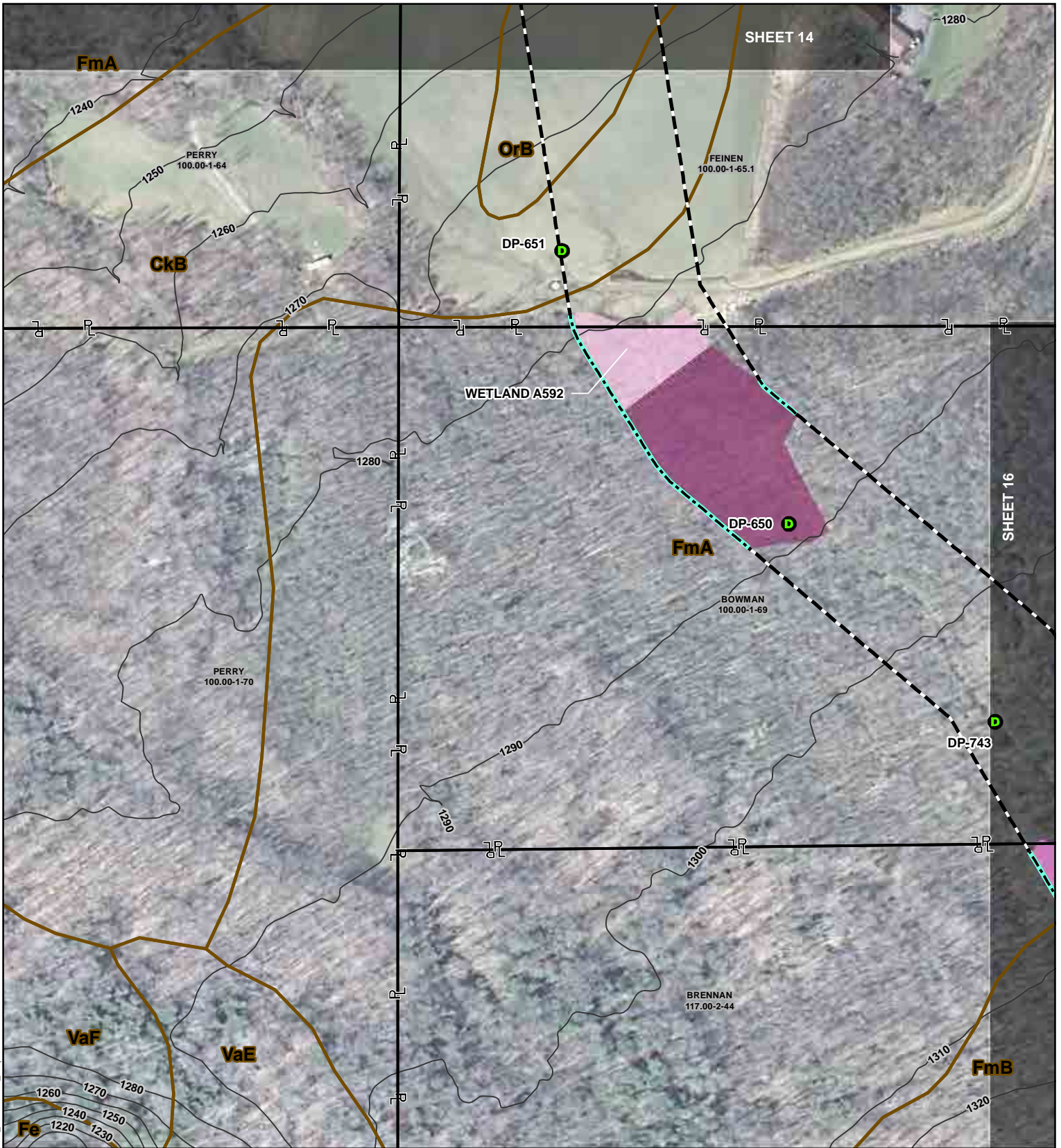


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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
| Delineated Intermittent Stream | Delineated PFO Wetland | |
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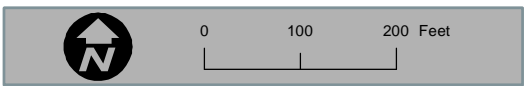


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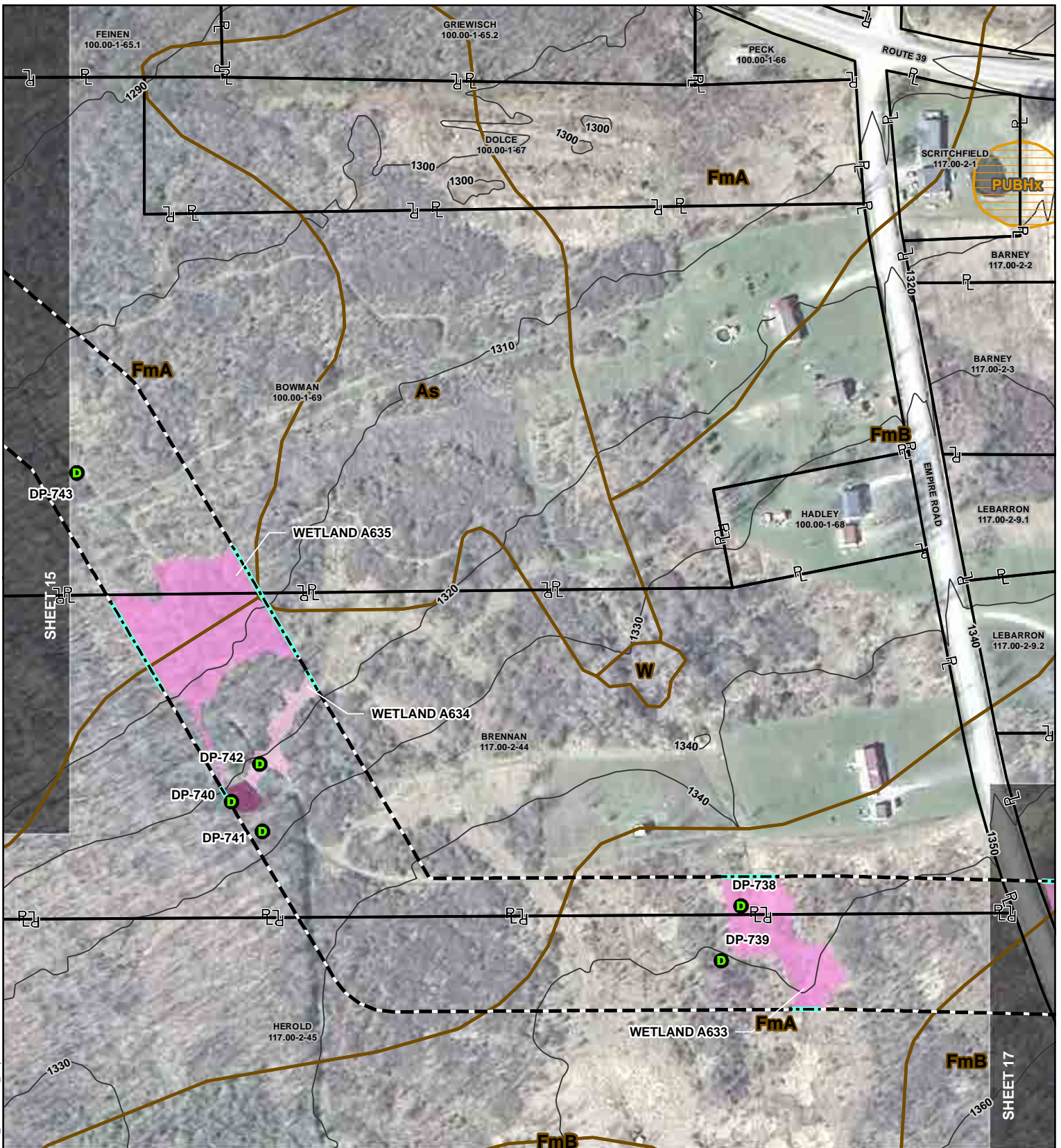
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
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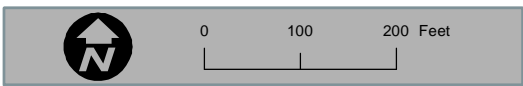
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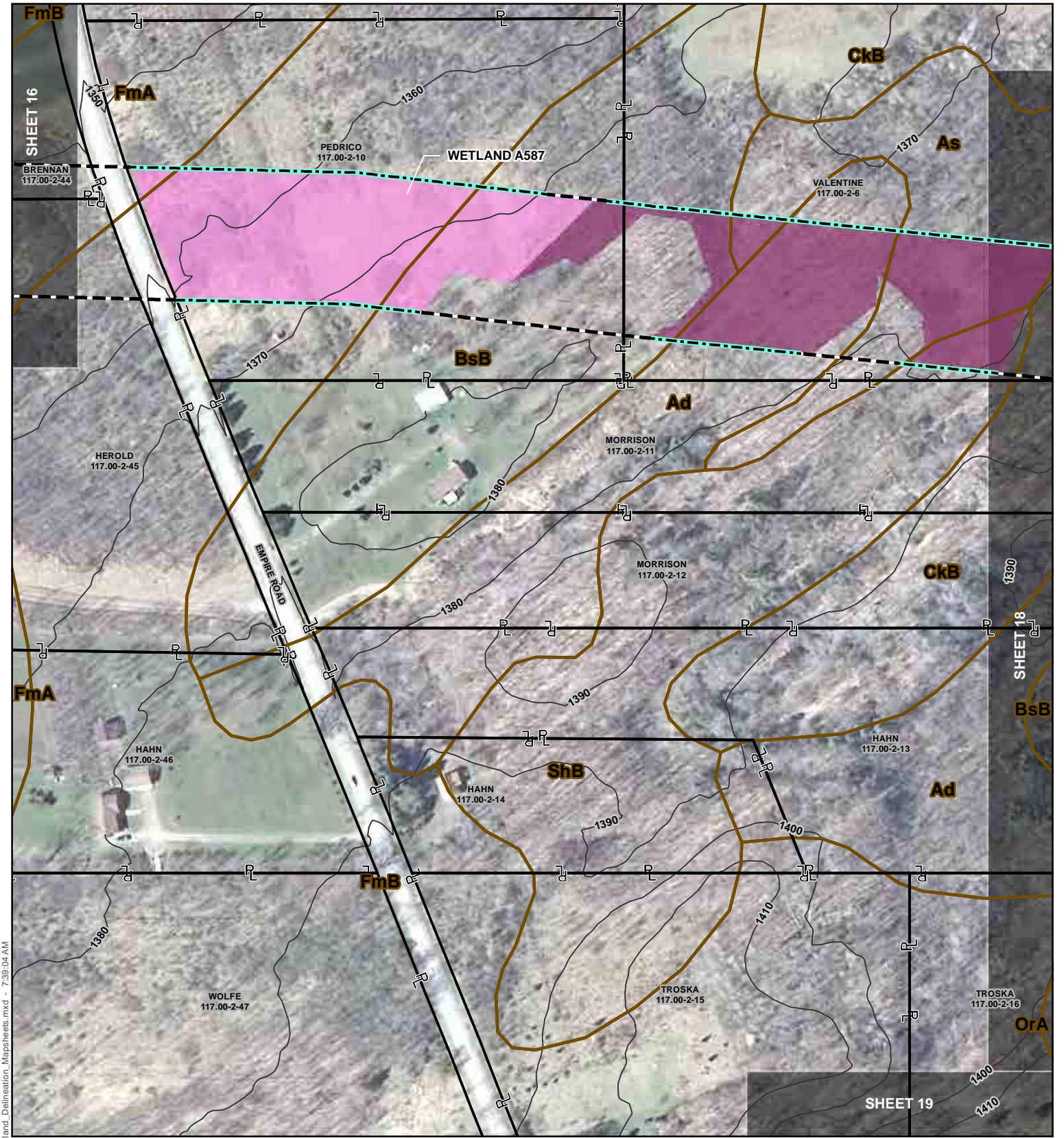


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
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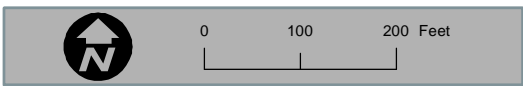



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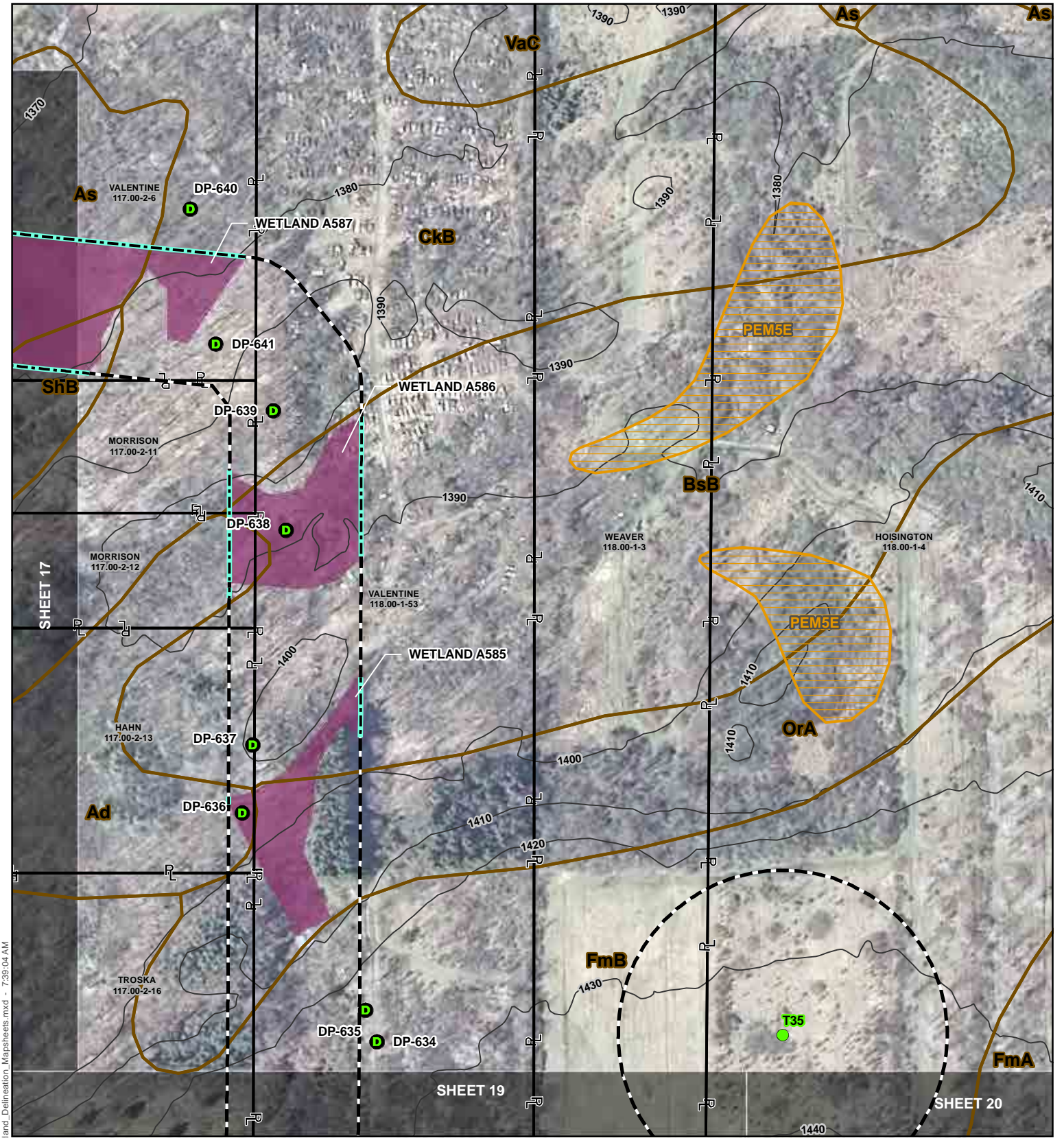


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	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
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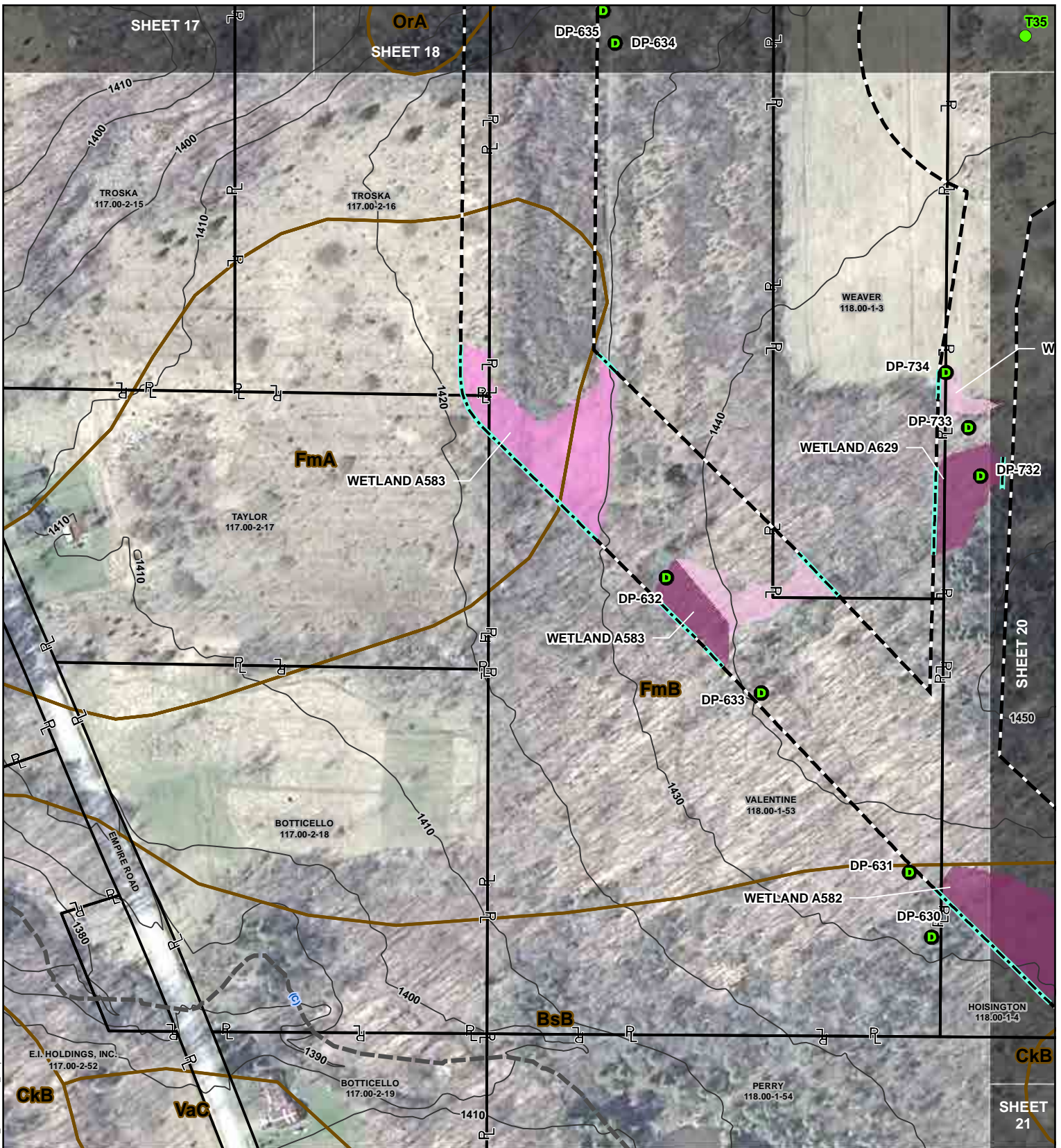

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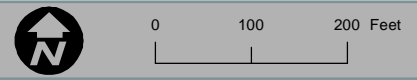
Data Point	NYSDEC Stream (Standard)	NWSI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
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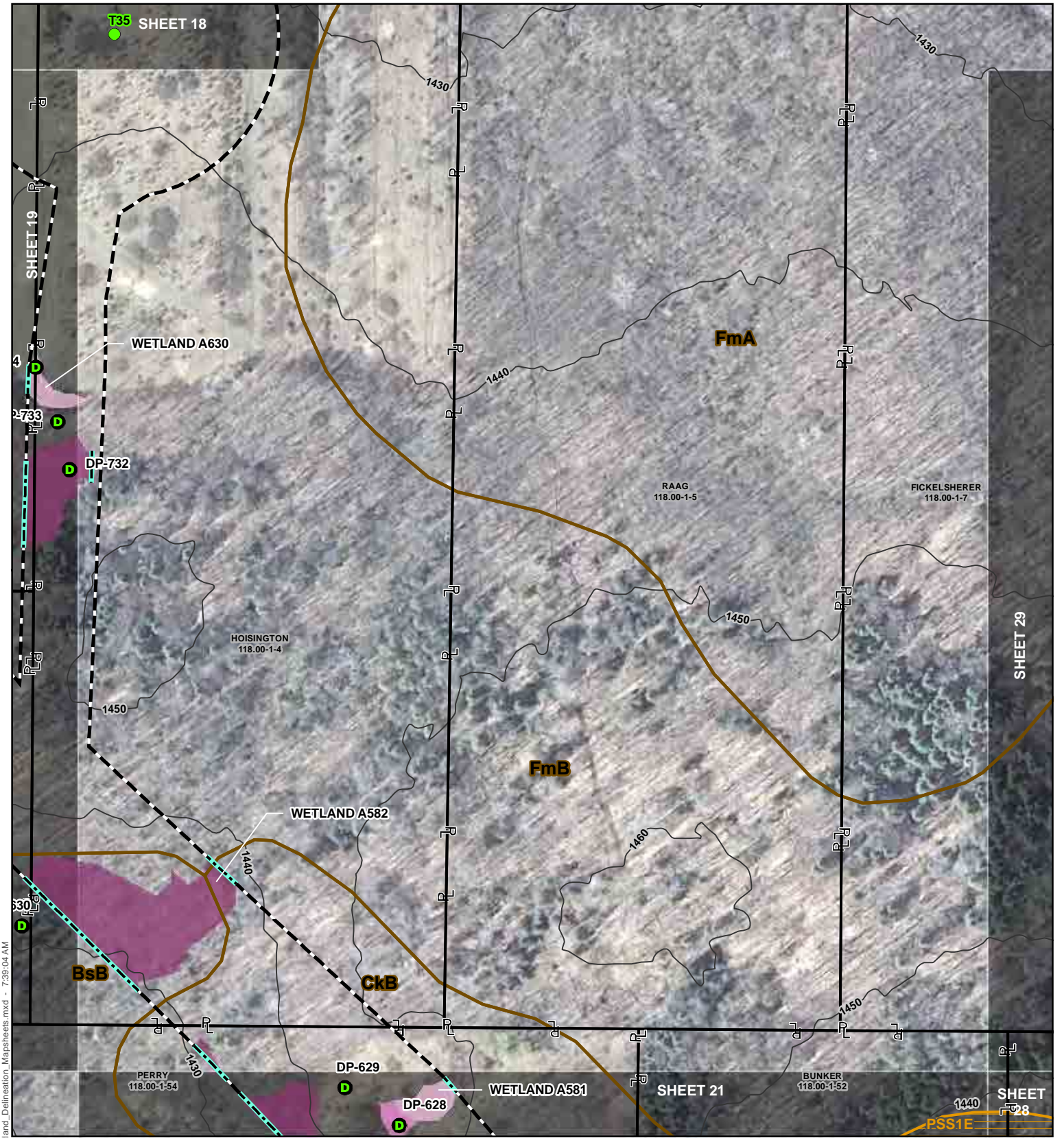


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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
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| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
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| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
| Delineated Intermittent Stream | Delineated PFO Wetland | |
| Delineated Perennial Stream | Delineated PSS Wetland | |



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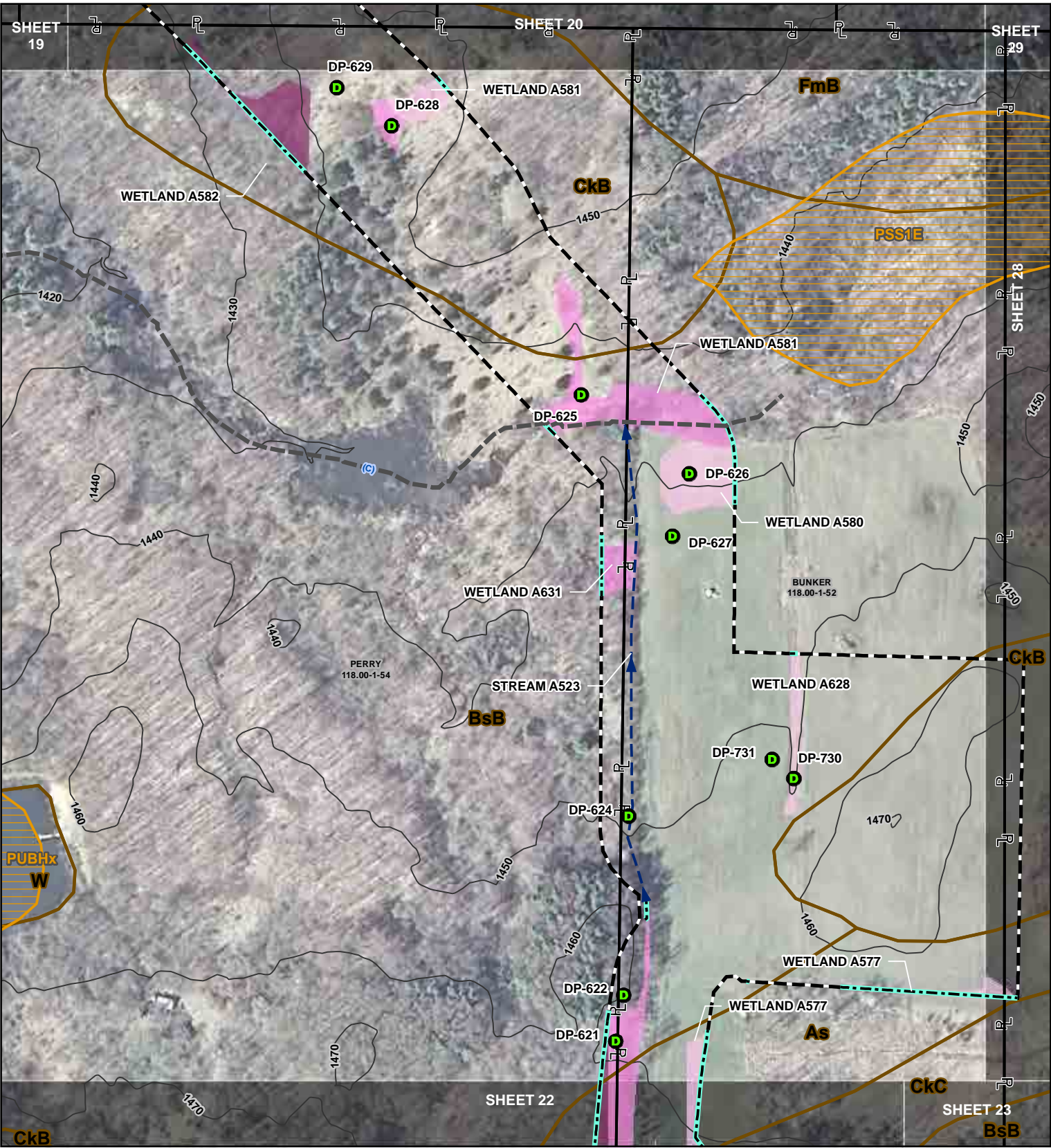
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
| Delineated Intermittent Stream | Delineated PFO Wetland | |
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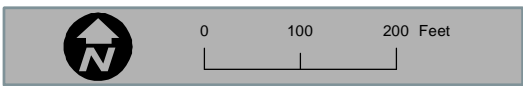
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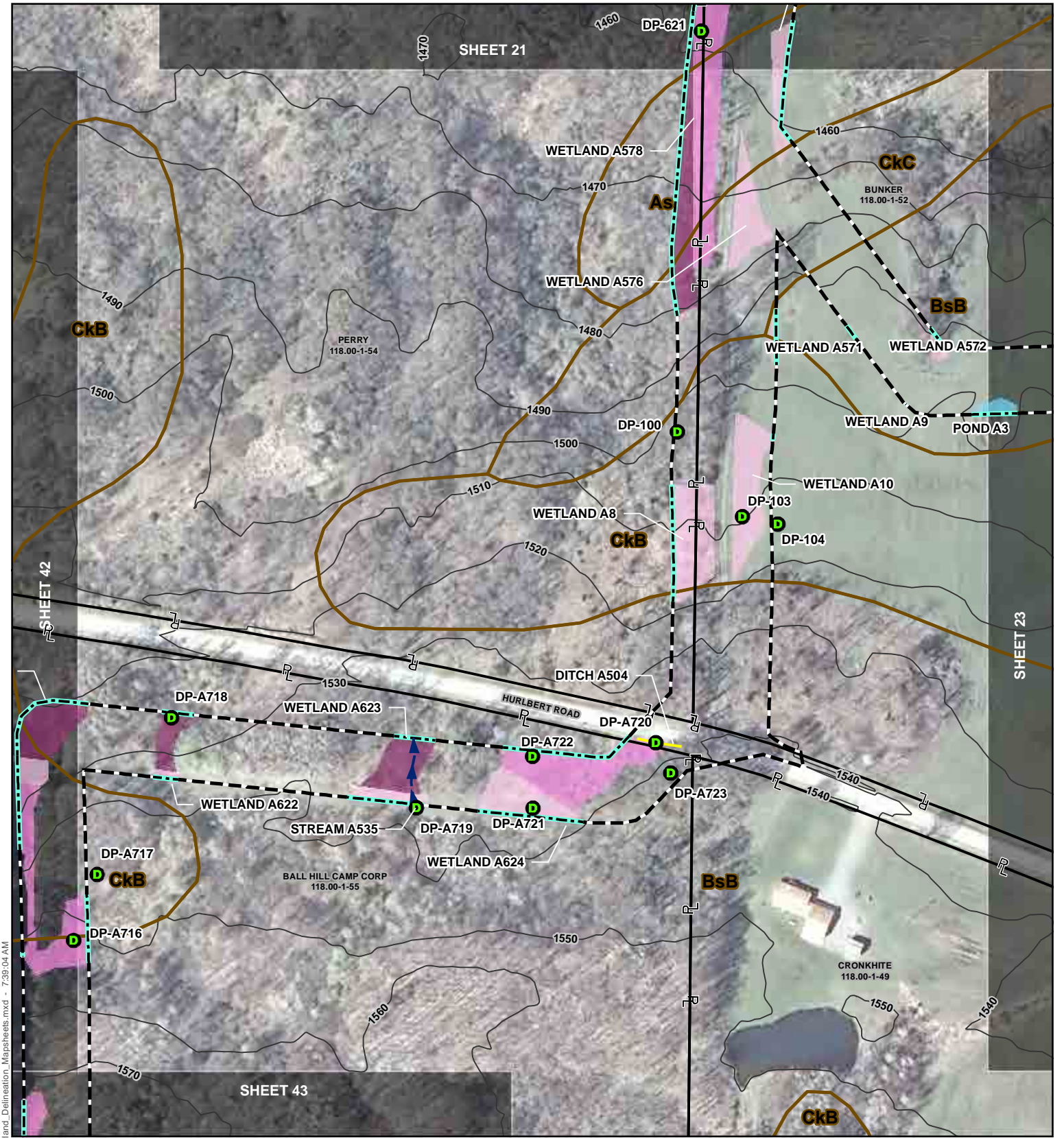
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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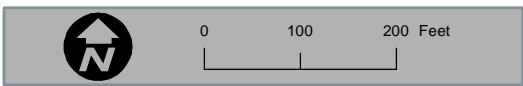
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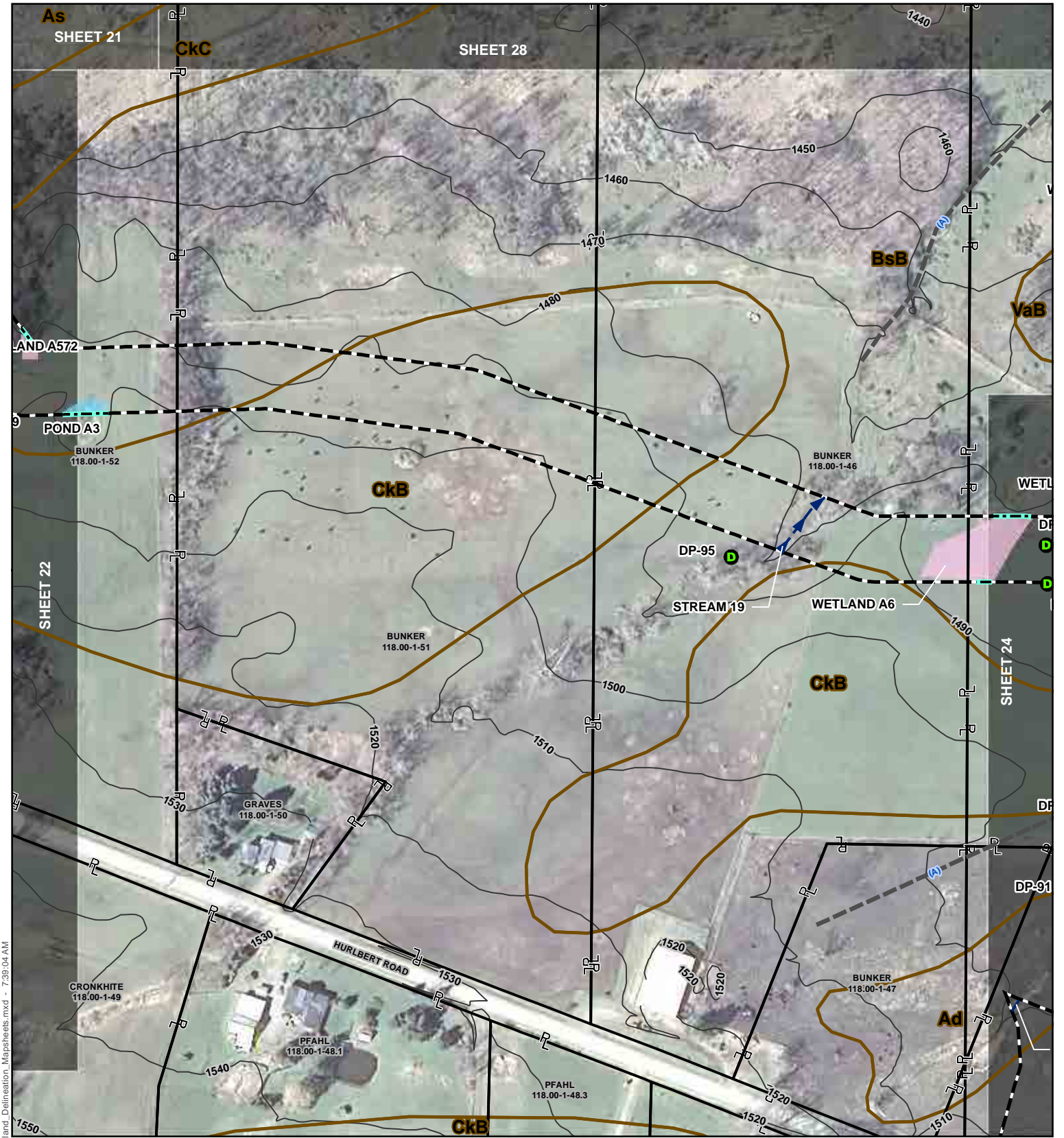
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
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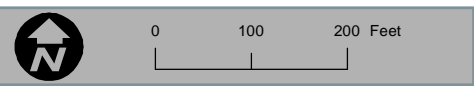
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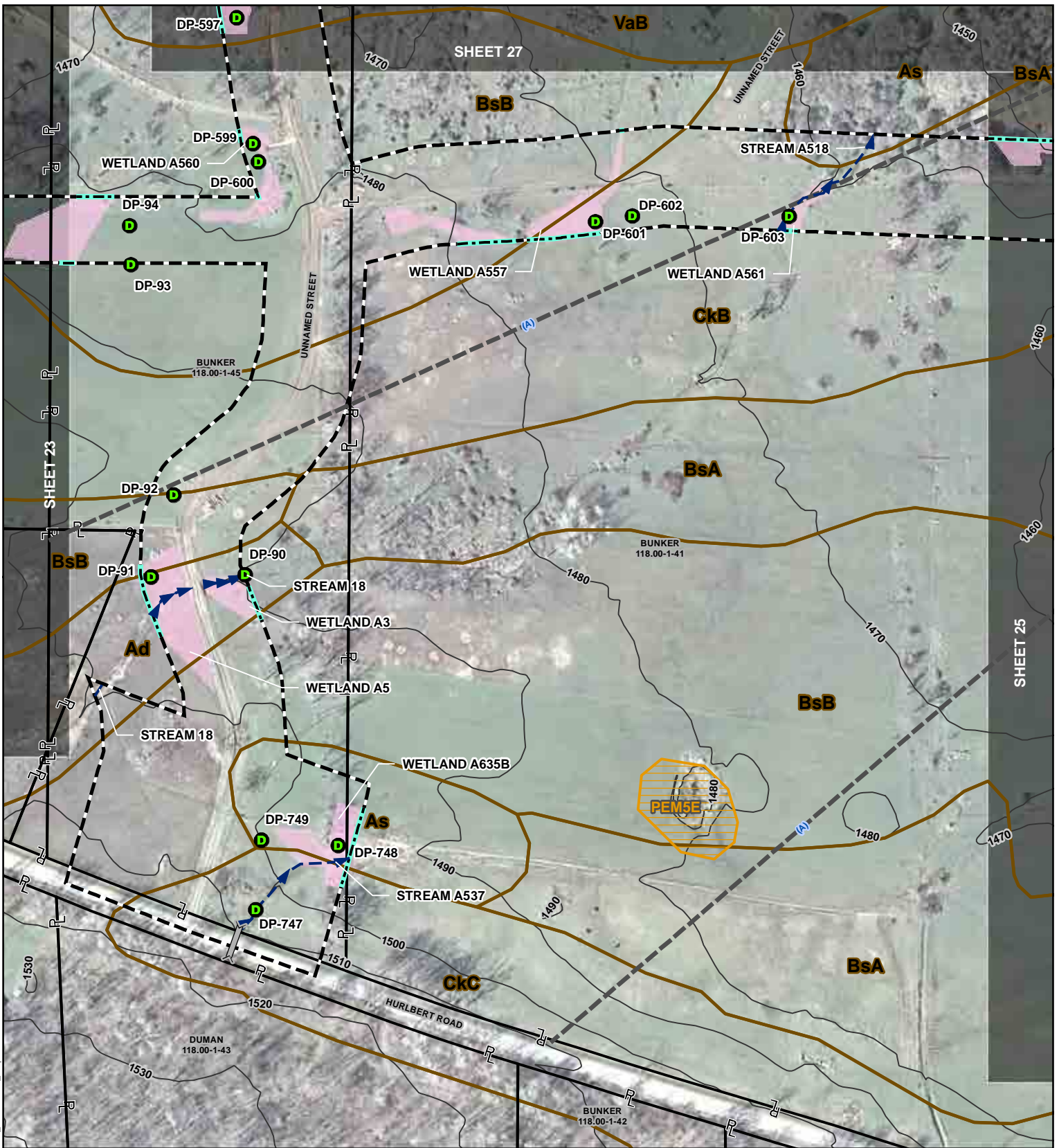
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
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| Delineated Perennial Stream | Delineated PSS Wetland | |



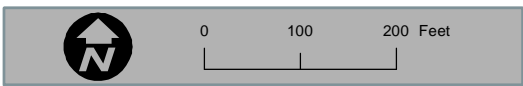
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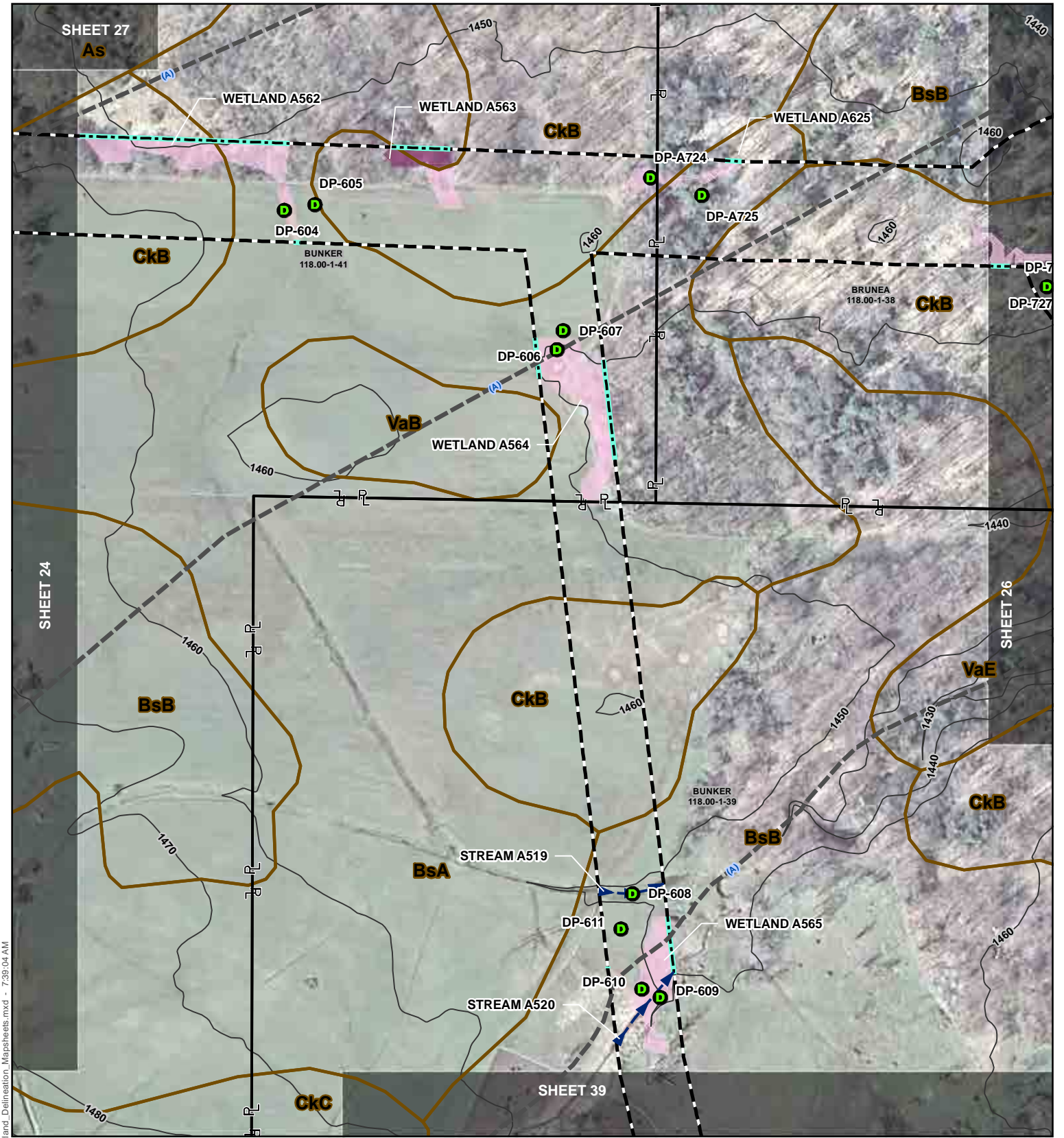


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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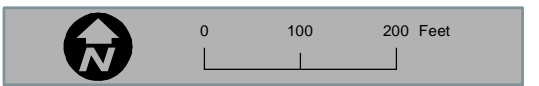



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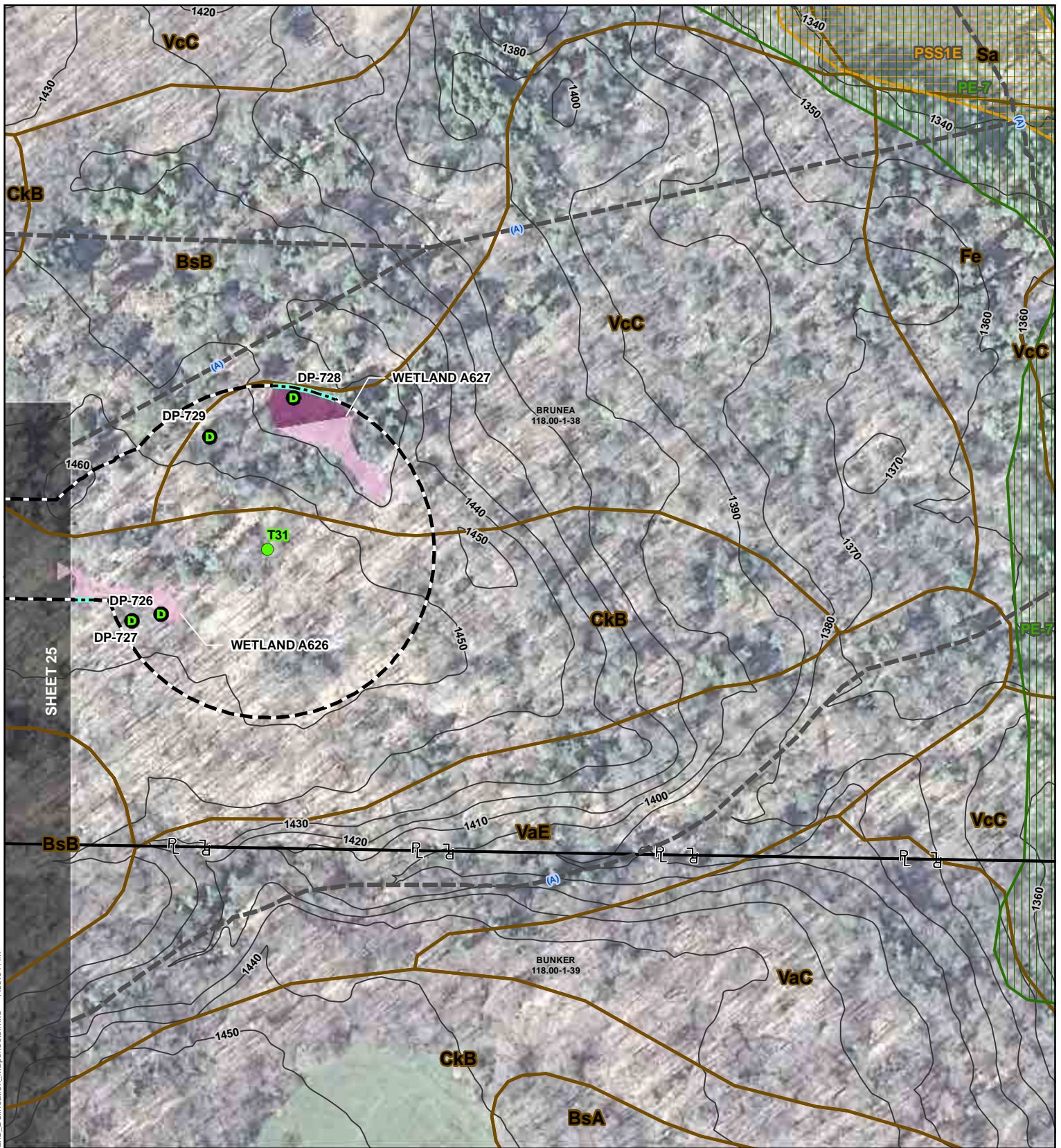
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
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Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



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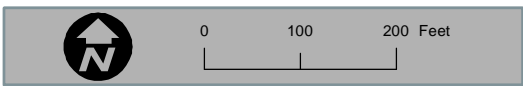
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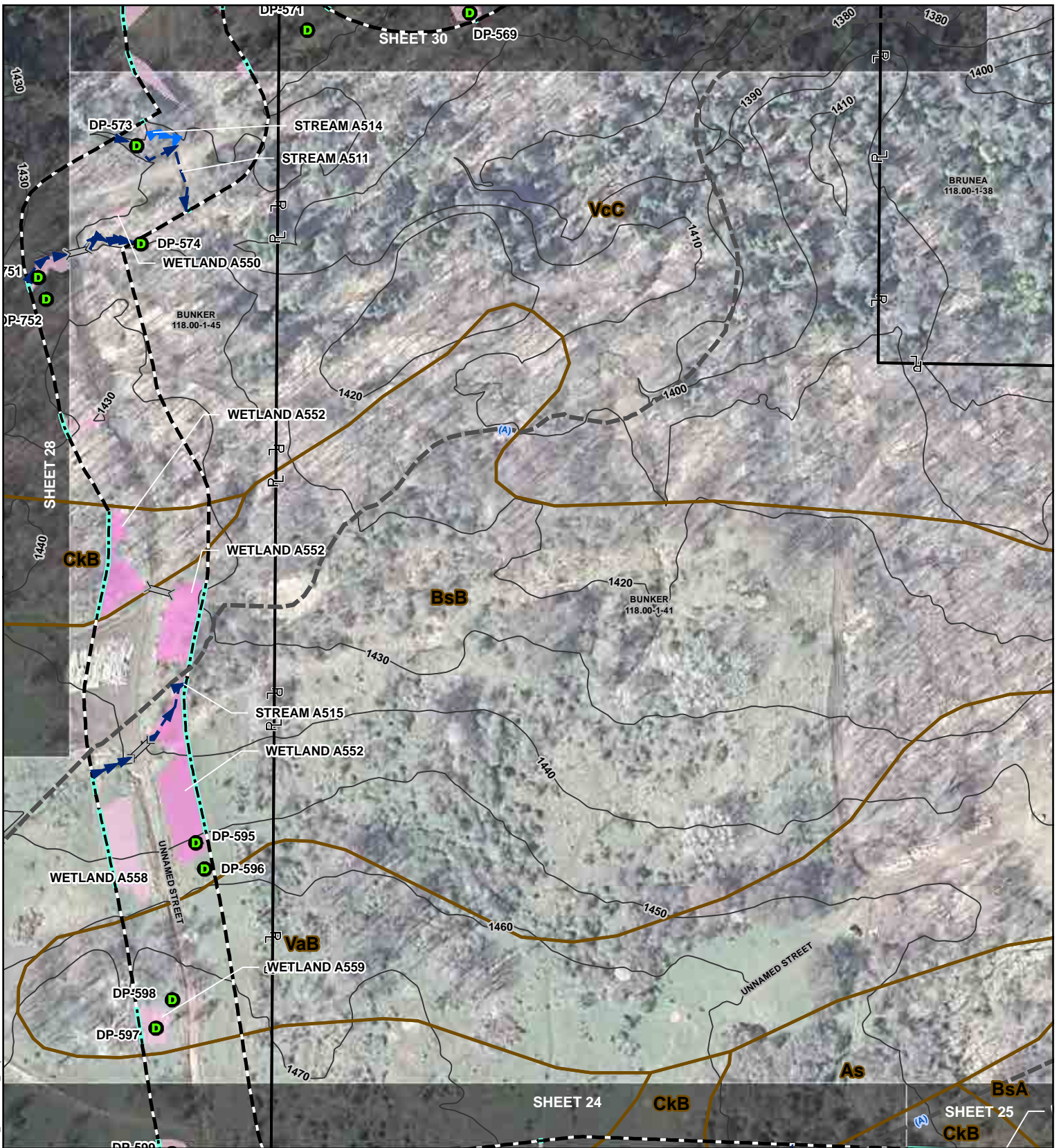
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
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	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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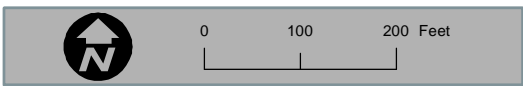
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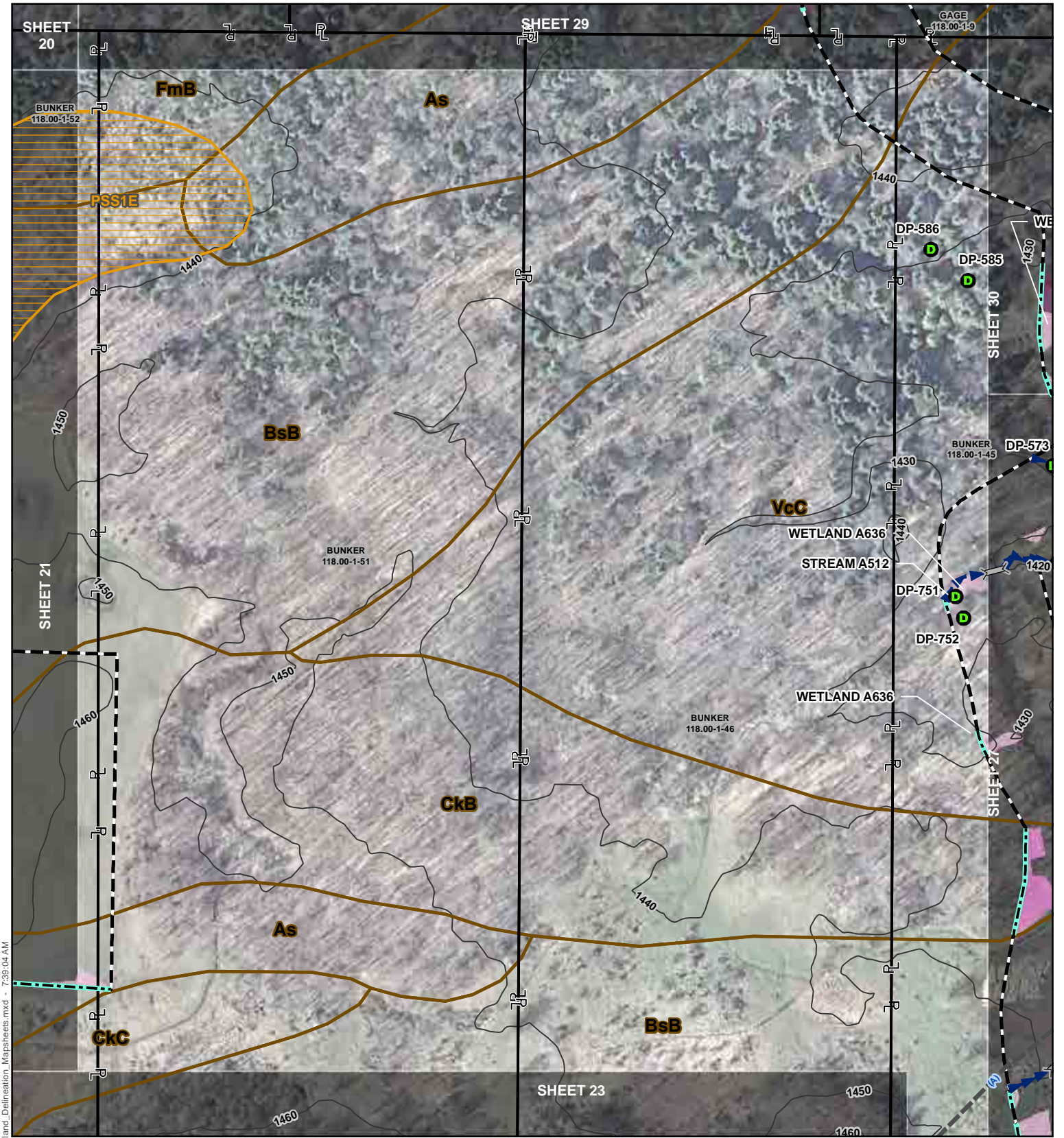


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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	




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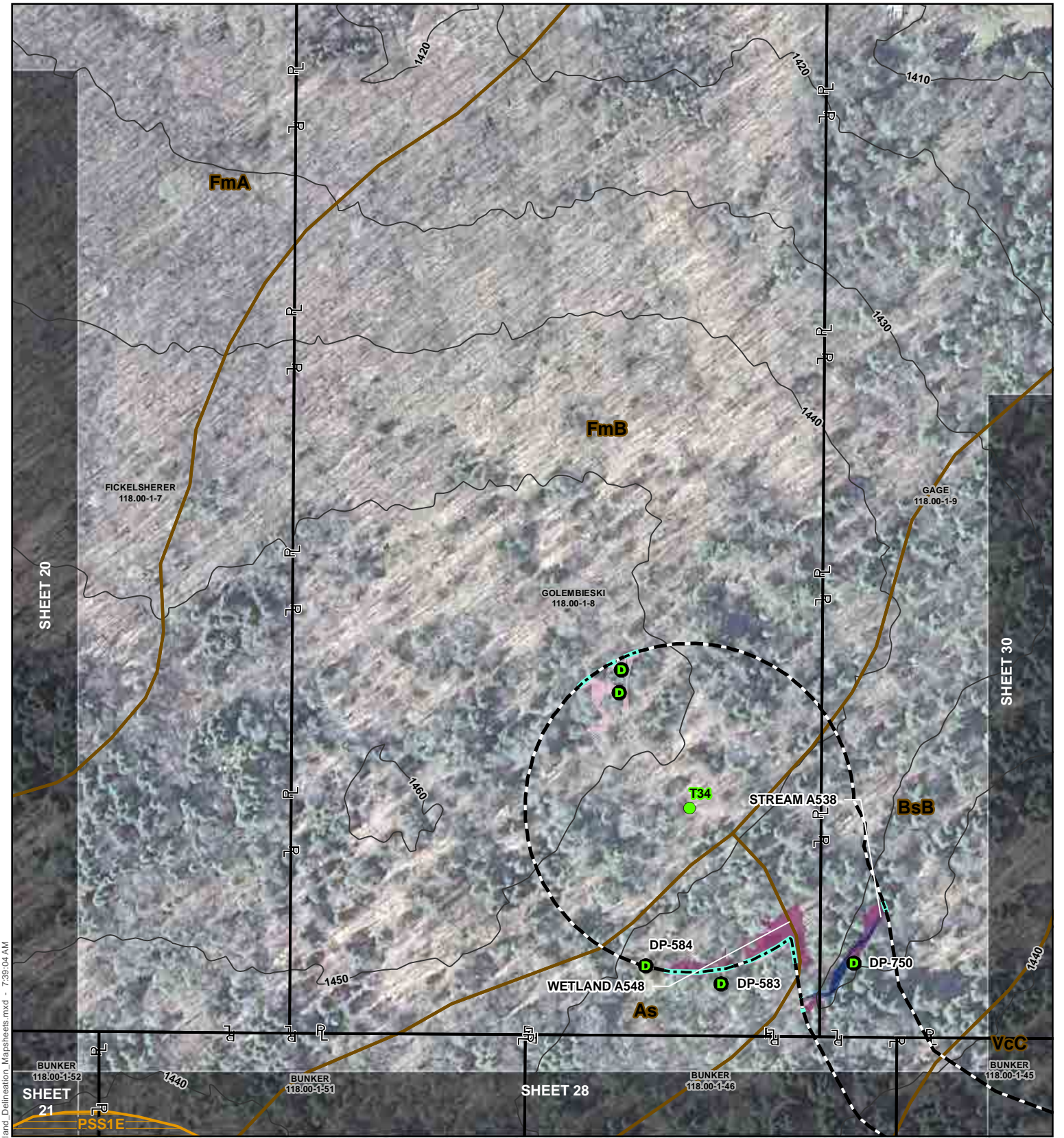


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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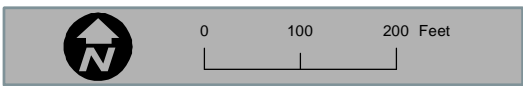
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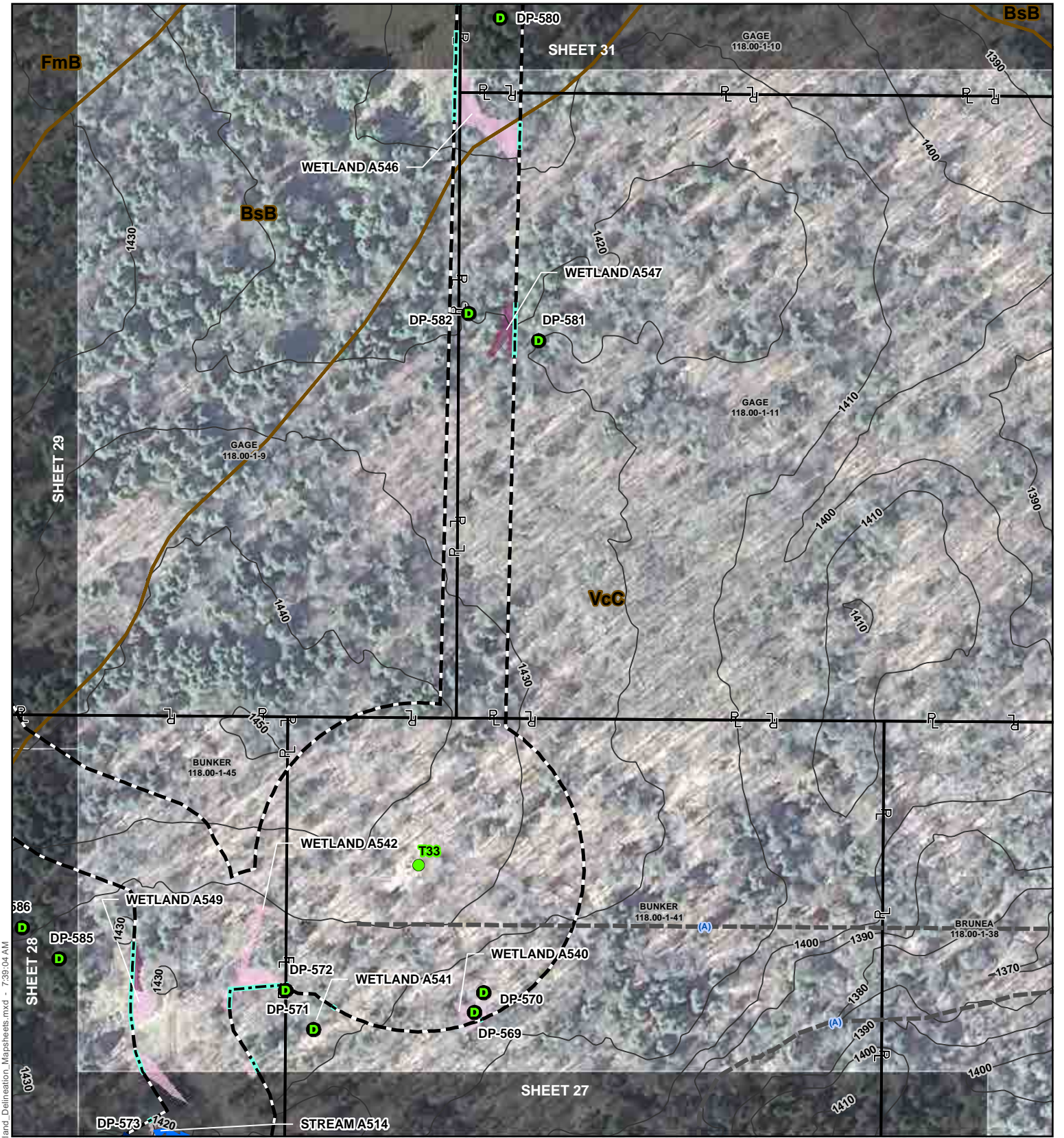
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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	Delineated Perennial Stream		Delineated PSS Wetland		



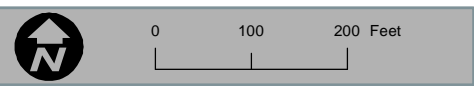
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BALL HILL WIND PROJECT
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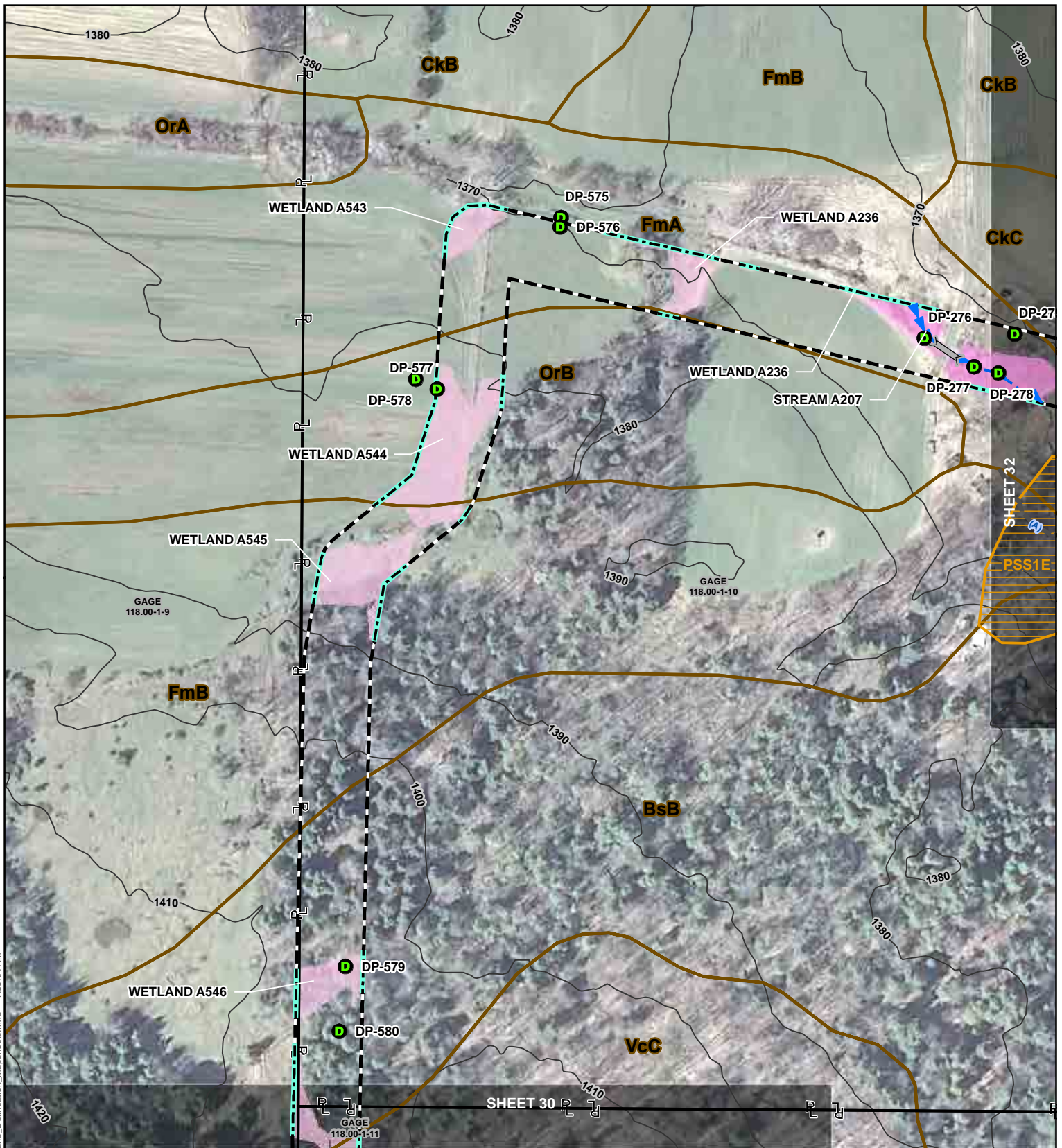


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| | Data Point | | NYSDEC Stream (Standard) | | NW1 Wetland |
| | Proposed Turbine | | Contours (10ft) | | NYSDEC Freshwater Wetland |
| | Culvert | | Delineated Intermittent Stream | | Soil Complex Boundary |
| | Delineation Continuation Line | | Delineated Perennial Stream | | Parcel |
| | Delineated Jurisdictional Ditch | | Delineated Pond | | Project Study Limits |
| | Delineated Ephemeral Stream | | Delineated PEM Wetland | | Matchline |
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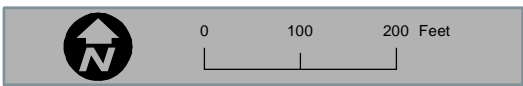


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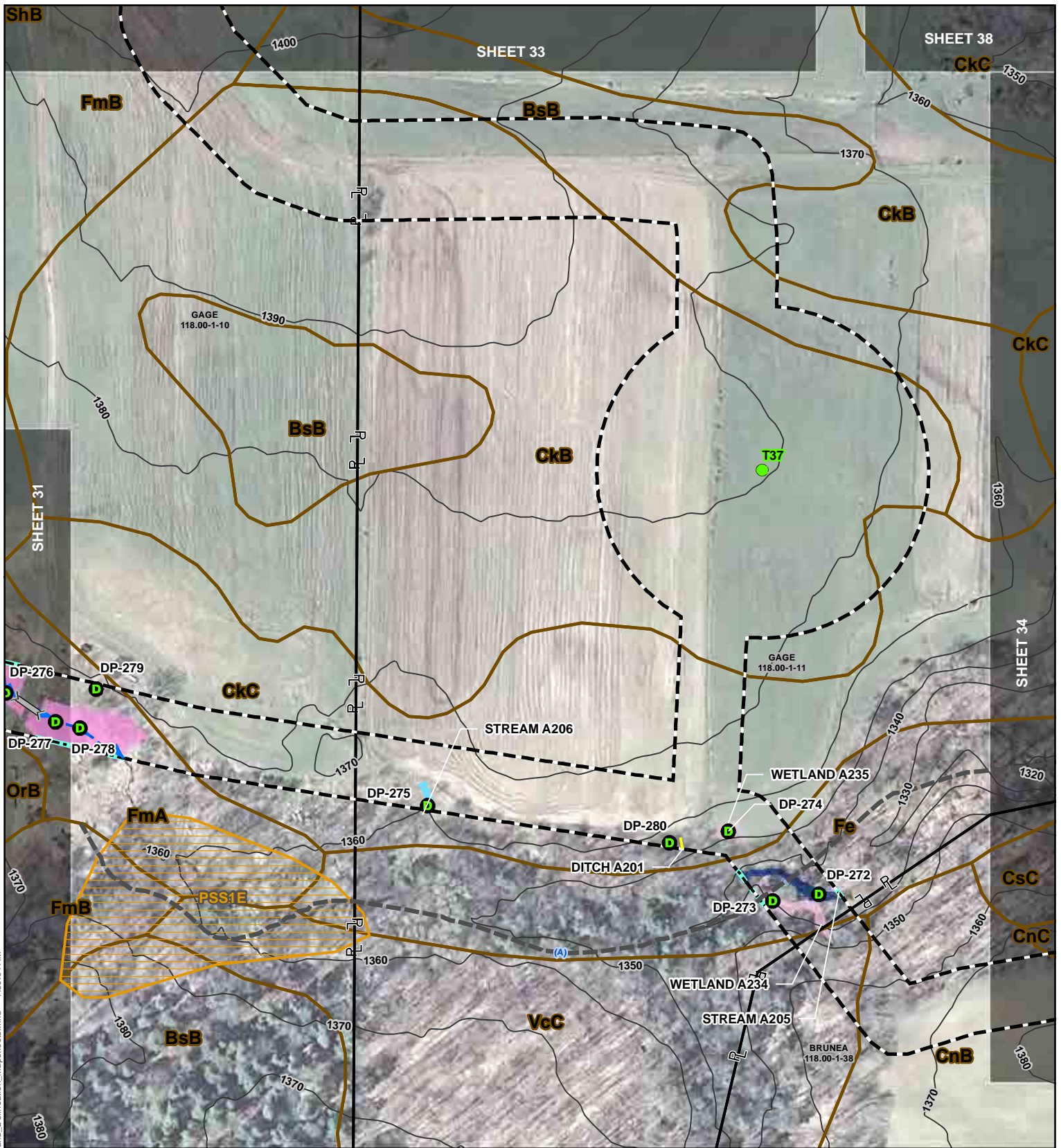
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



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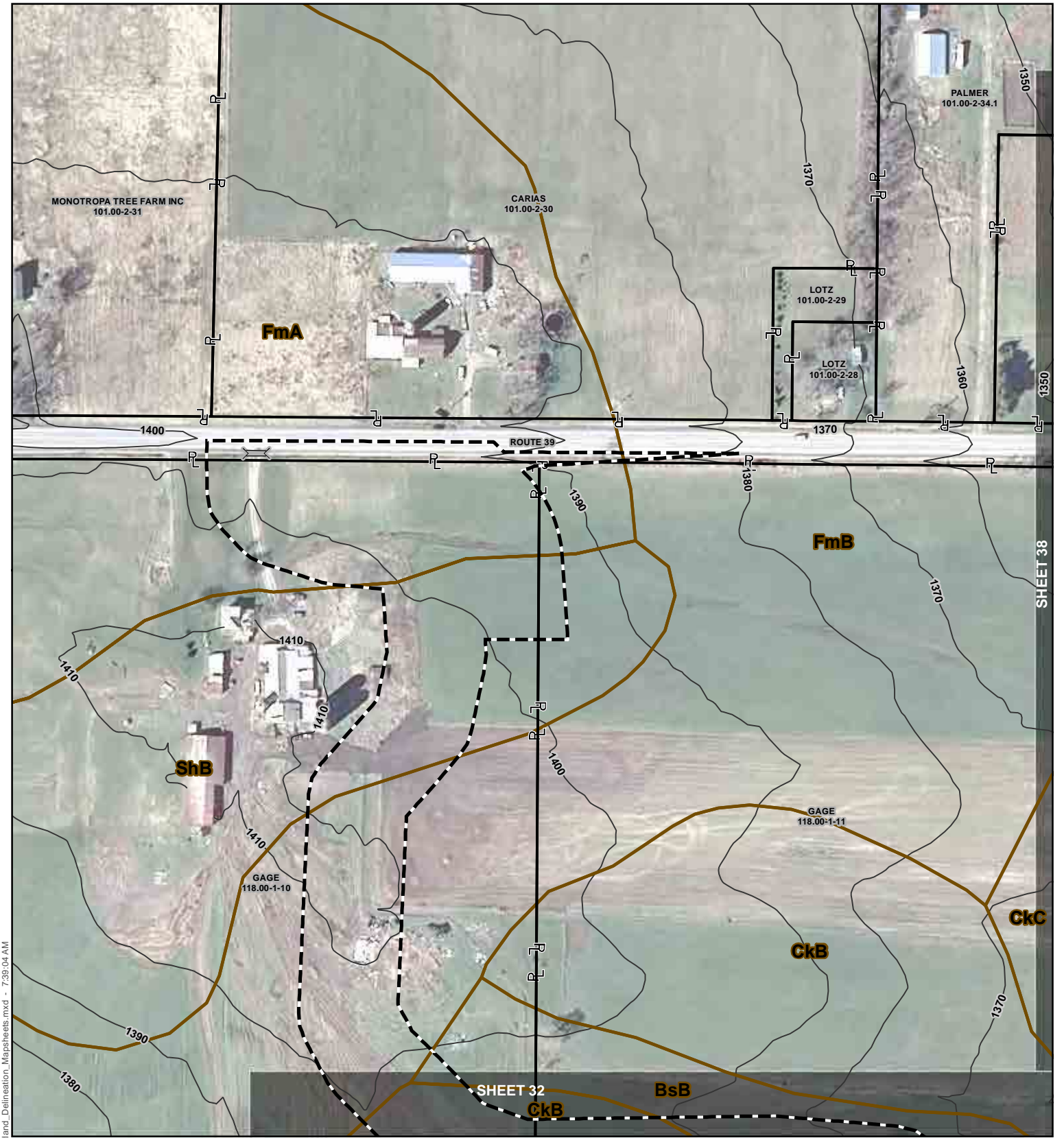


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	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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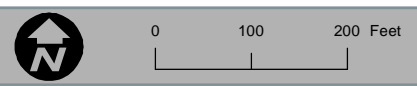
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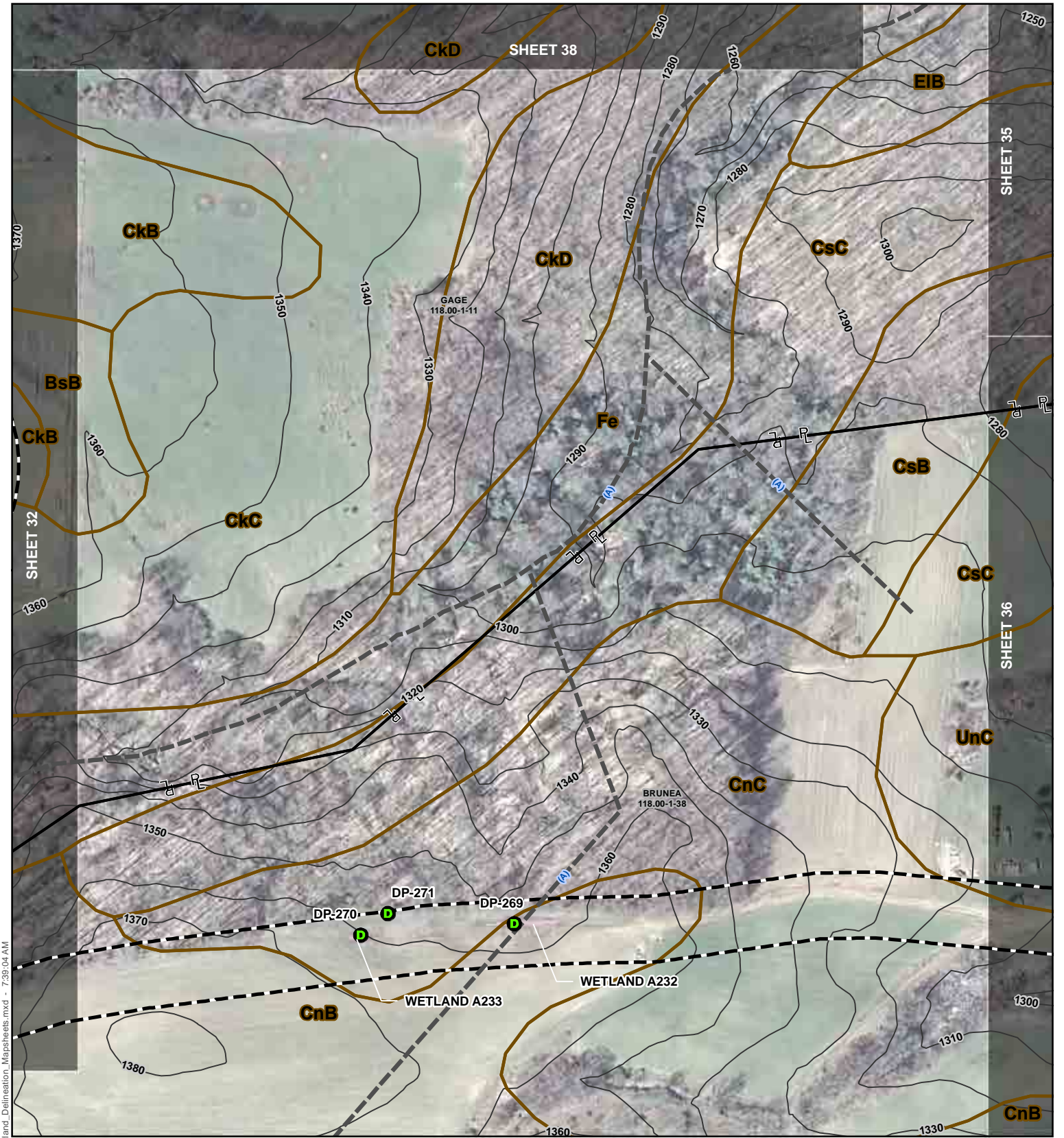


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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
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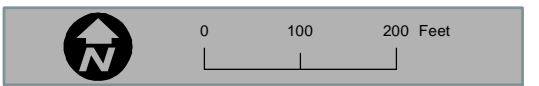


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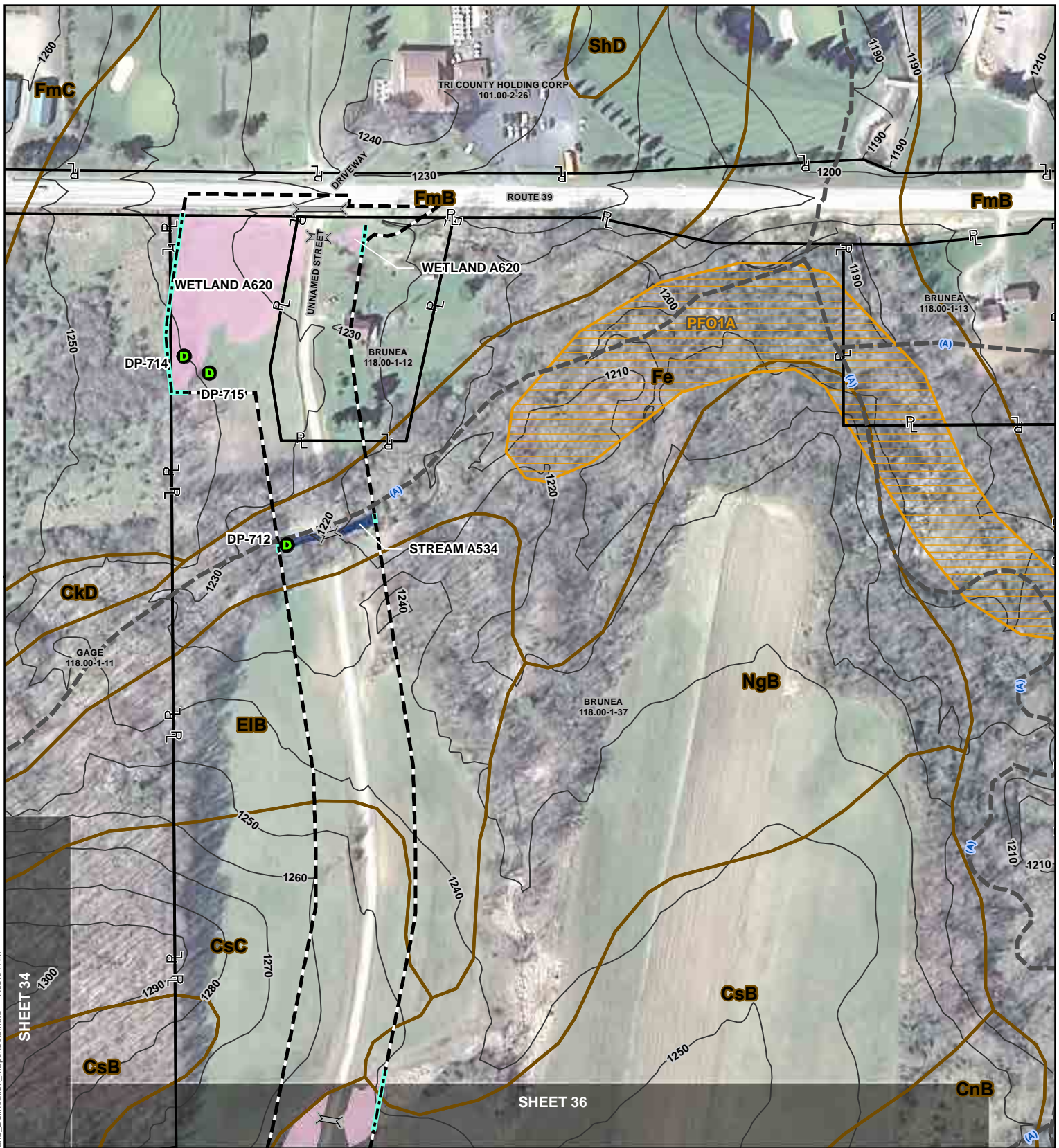
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
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Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



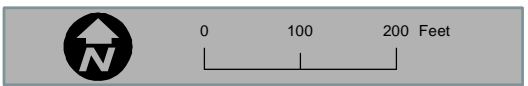
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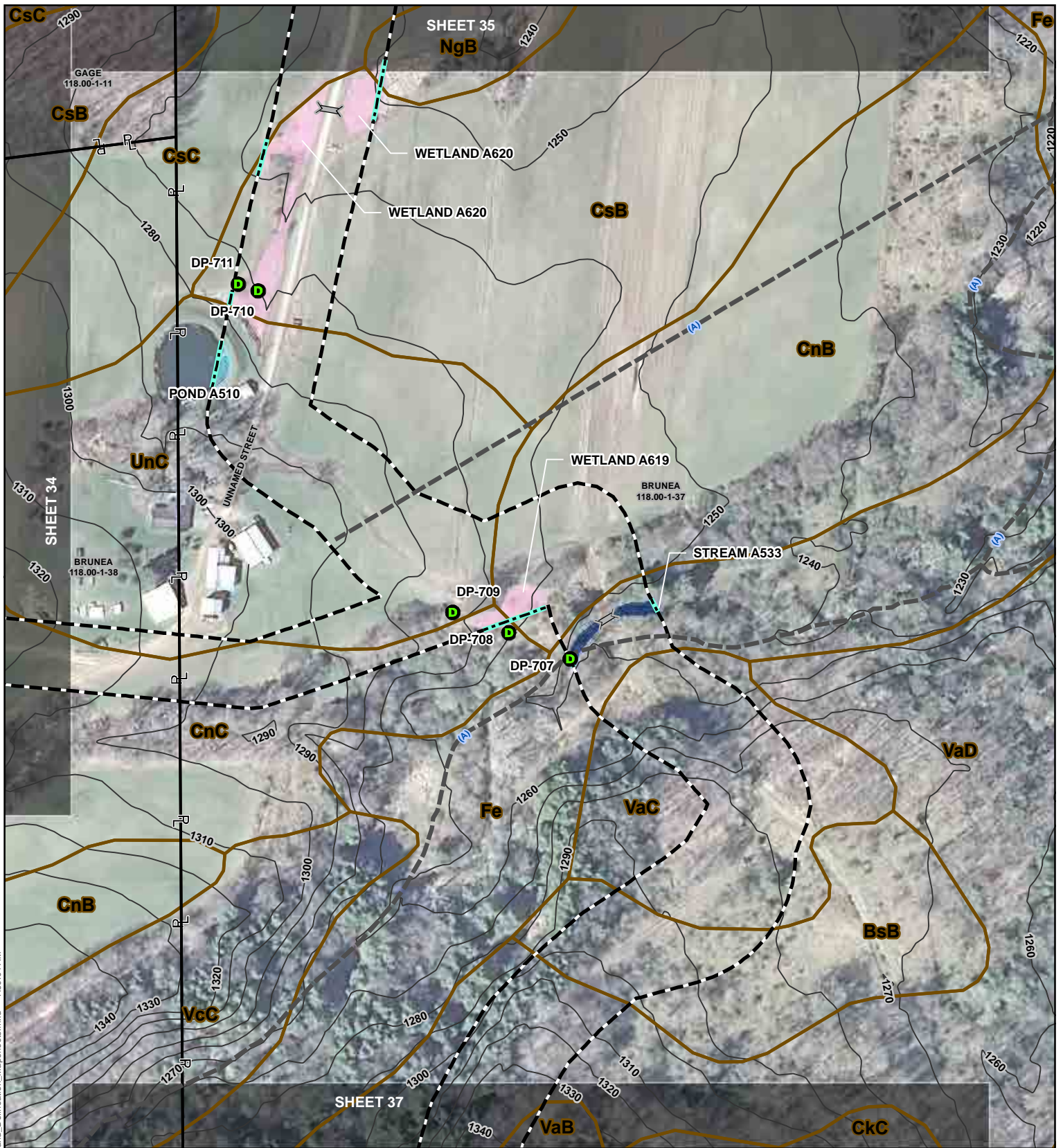


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	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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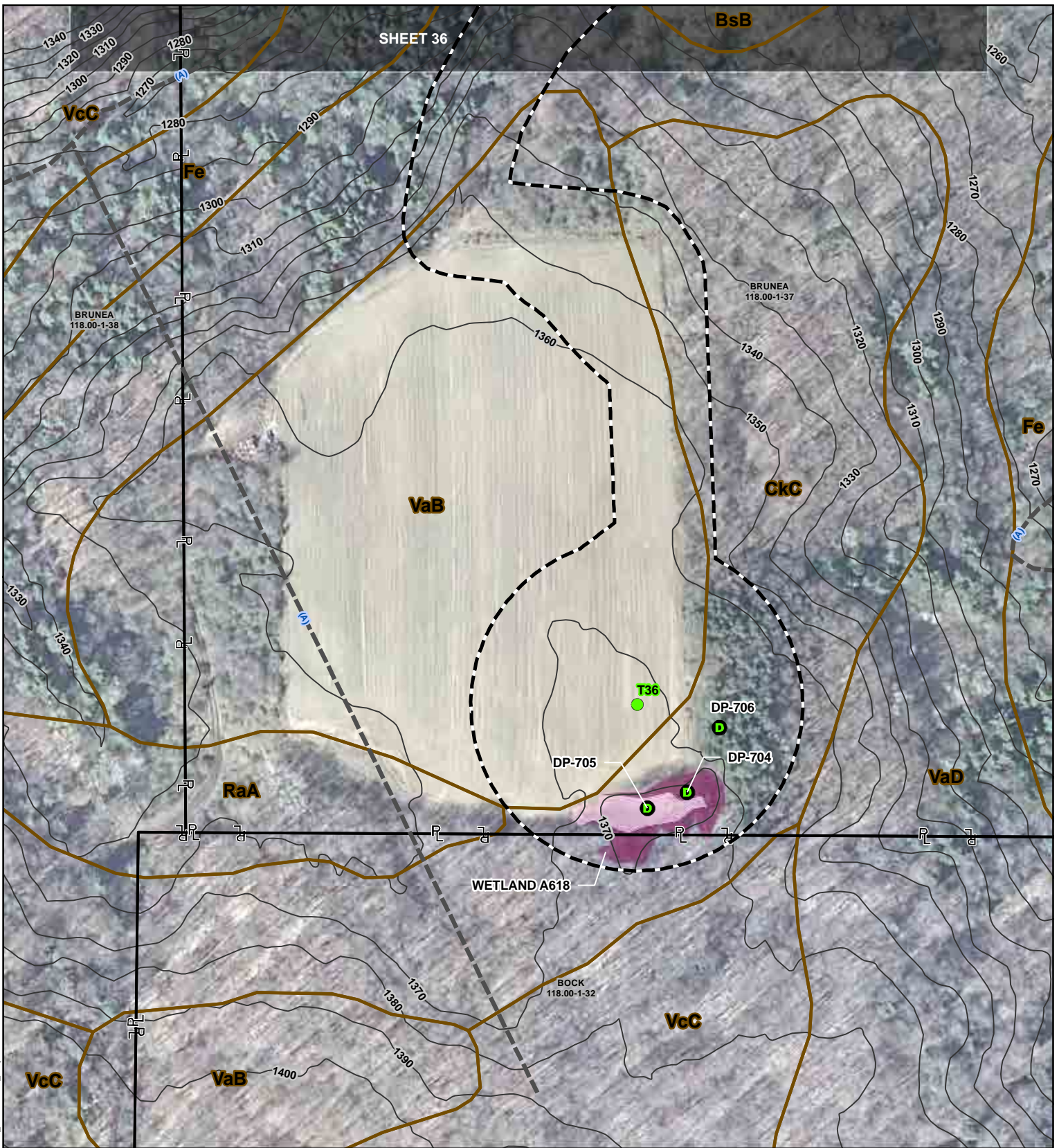
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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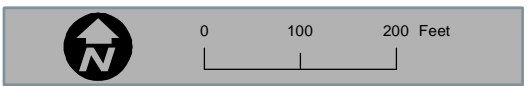
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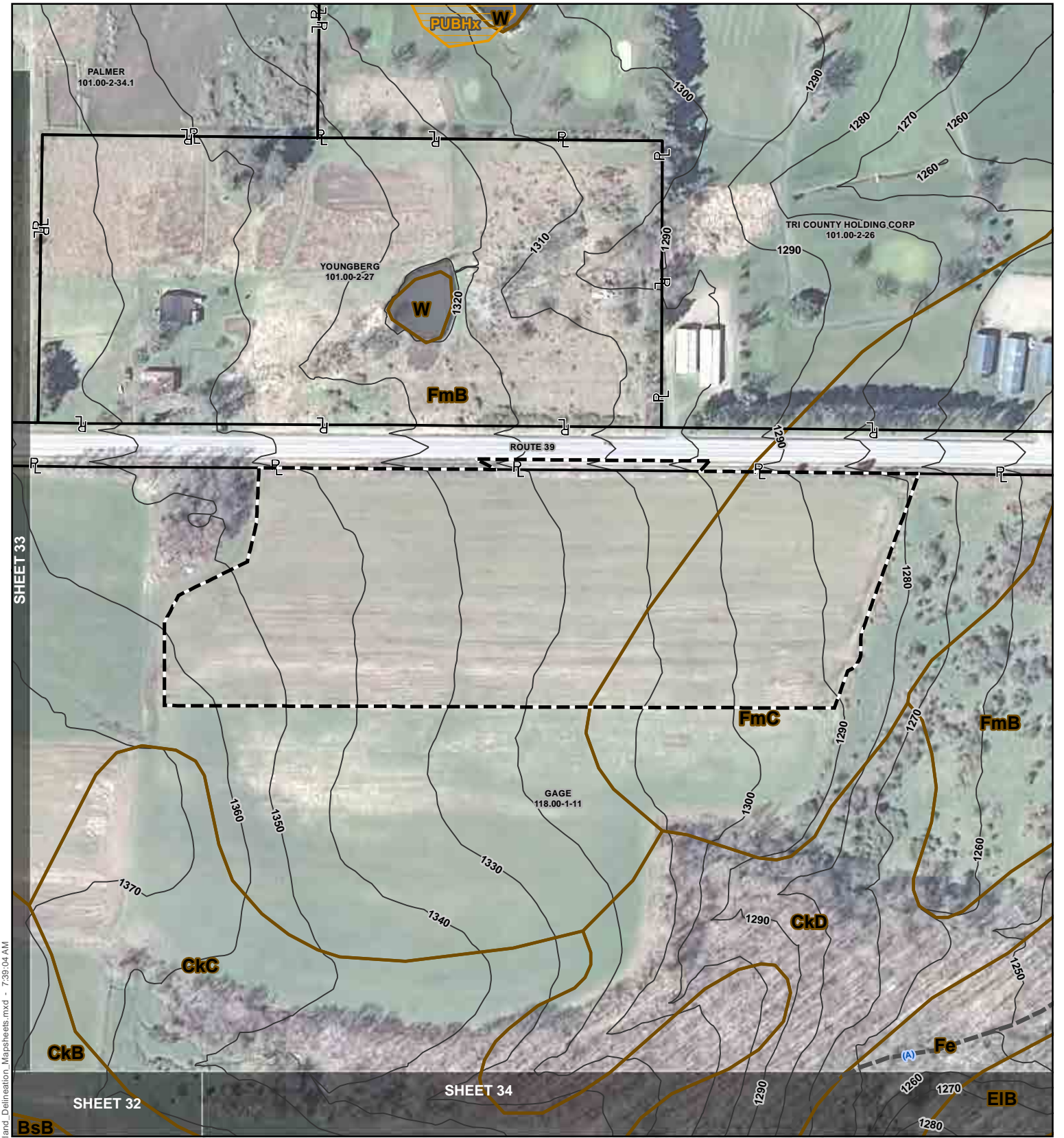
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
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	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016



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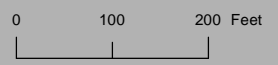
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SHEET 33

SHEET 32

SHEET 34

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| | Data Point | | NYSDEC Stream (Standard) | | NWI Wetland |
| | Proposed Turbine | | Contours (10ft) | | NYSDEC Freshwater Wetland |
| | Culvert | | Delineated Intermittent Stream | | Soil Complex Boundary |
| | Delineation Continuation Line | | Delineated Perennial Stream | | Parcel |
| | Delineated Jurisdictional Ditch | | Delineated Pond | | Project Study Limits |
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| | Delineated Intermittent Stream | | Delineated PFO Wetland | | |
| | Delineated Perennial Stream | | Delineated PSS Wetland | | |

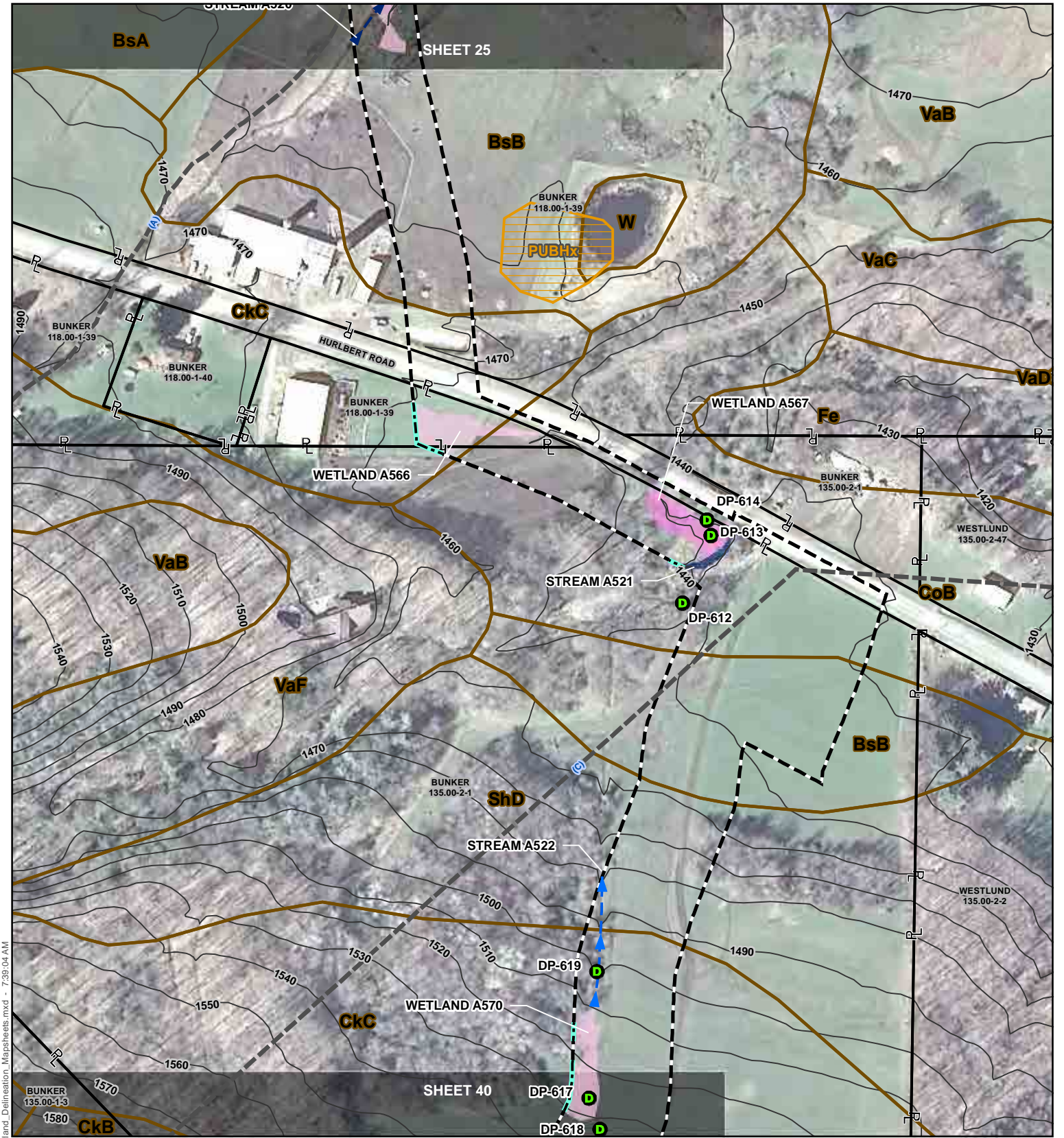


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Author: AK

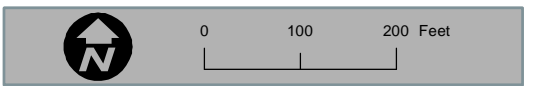
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Revision Date: 10/4/2016



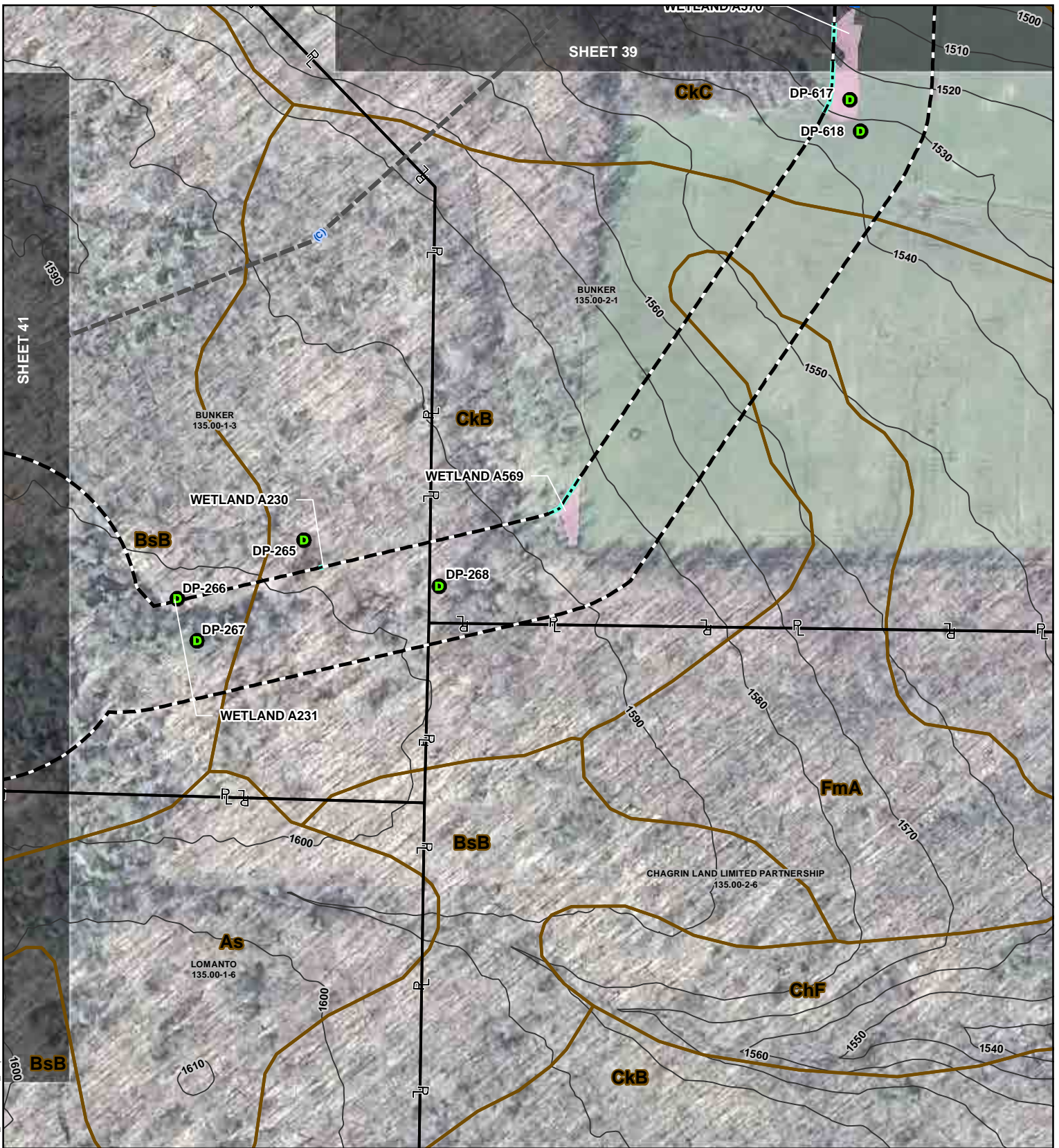
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



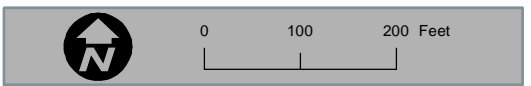
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



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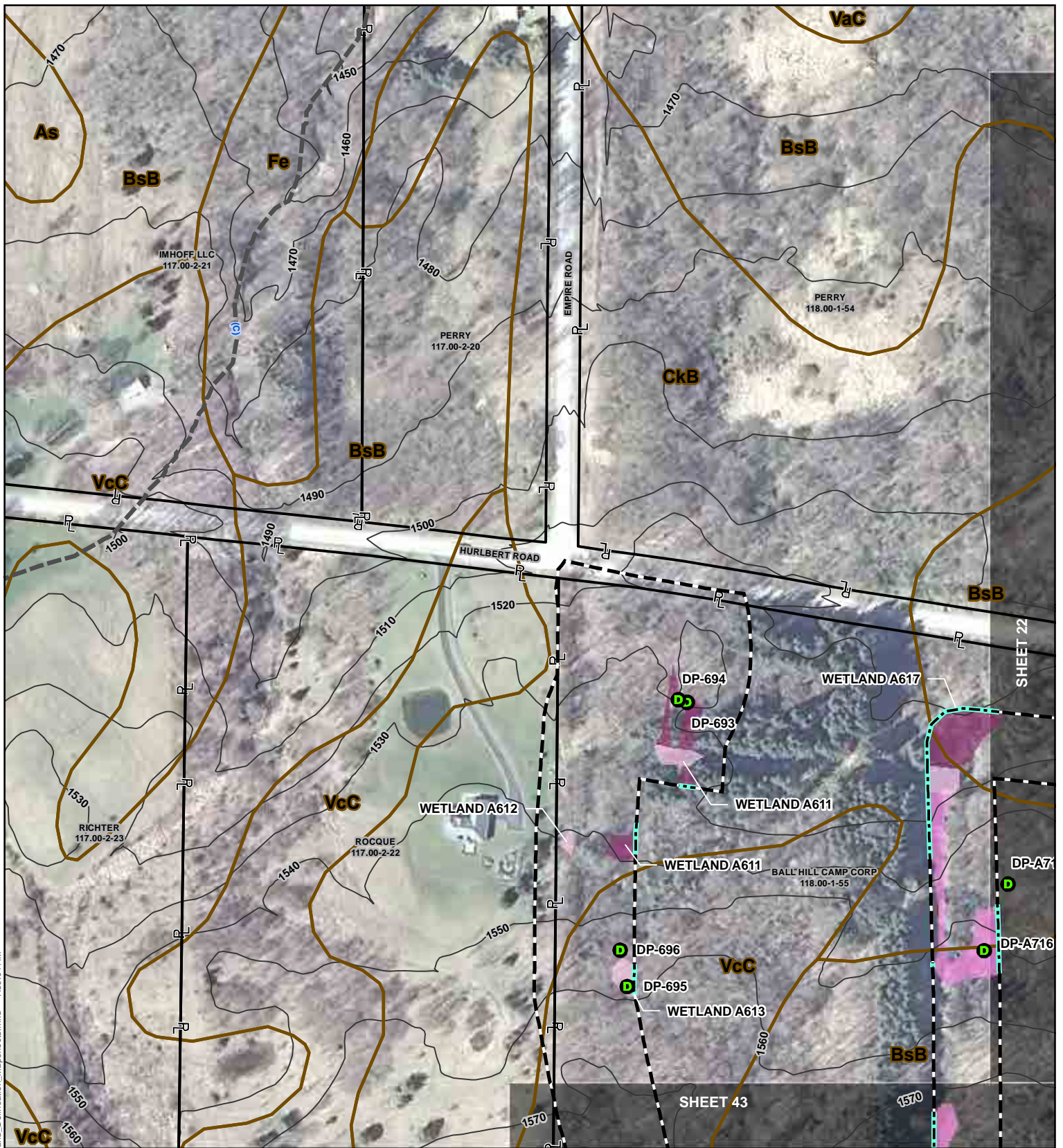
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| Data Point | NYSDEC Stream (Standard) | NW1 Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
| Delineated Intermittent Stream | Delineated PFO Wetland | |
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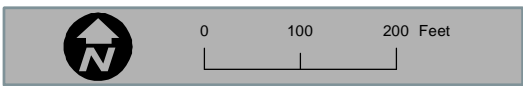


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 BALL HILL WIND PROJECT
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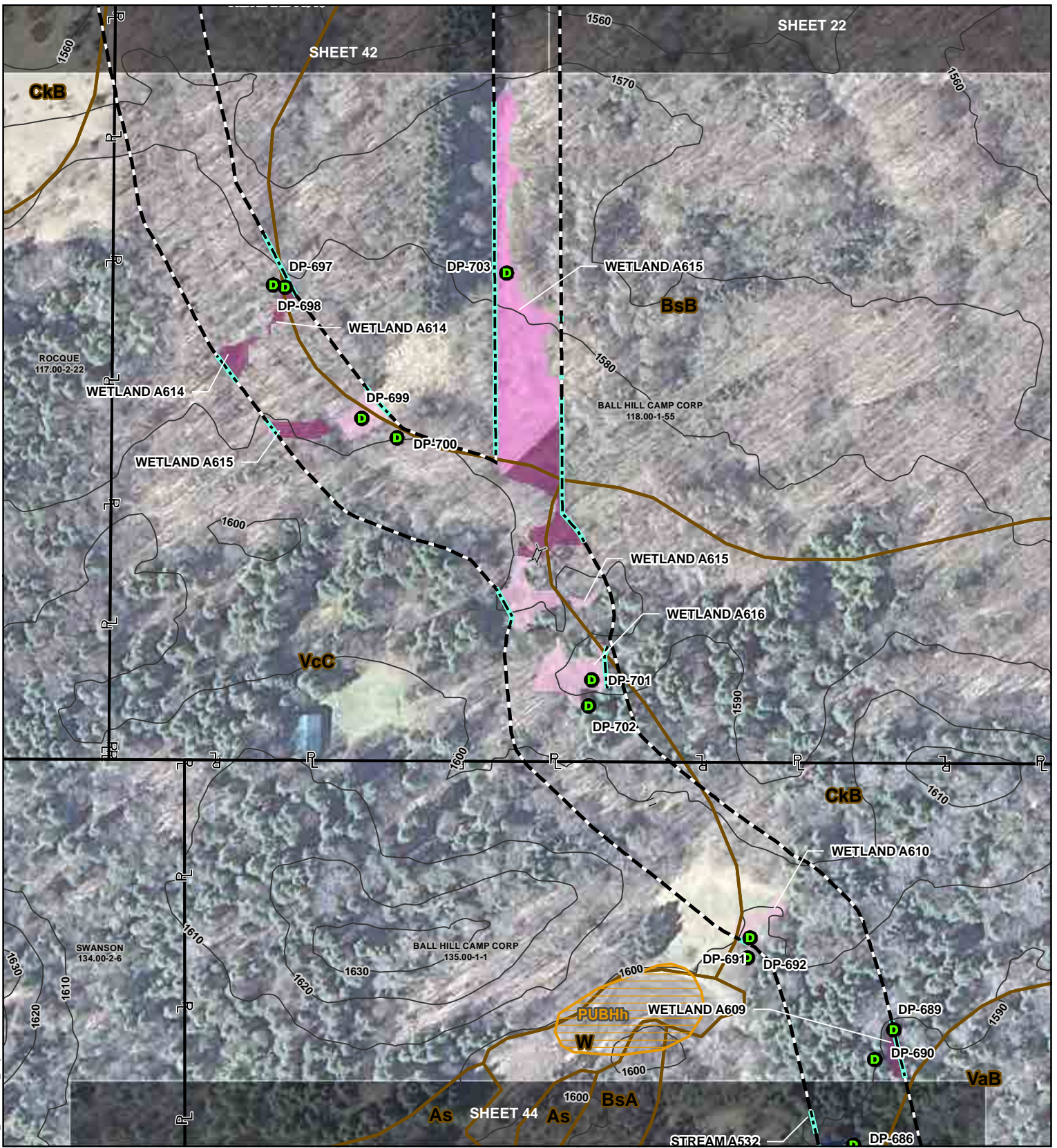
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
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	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



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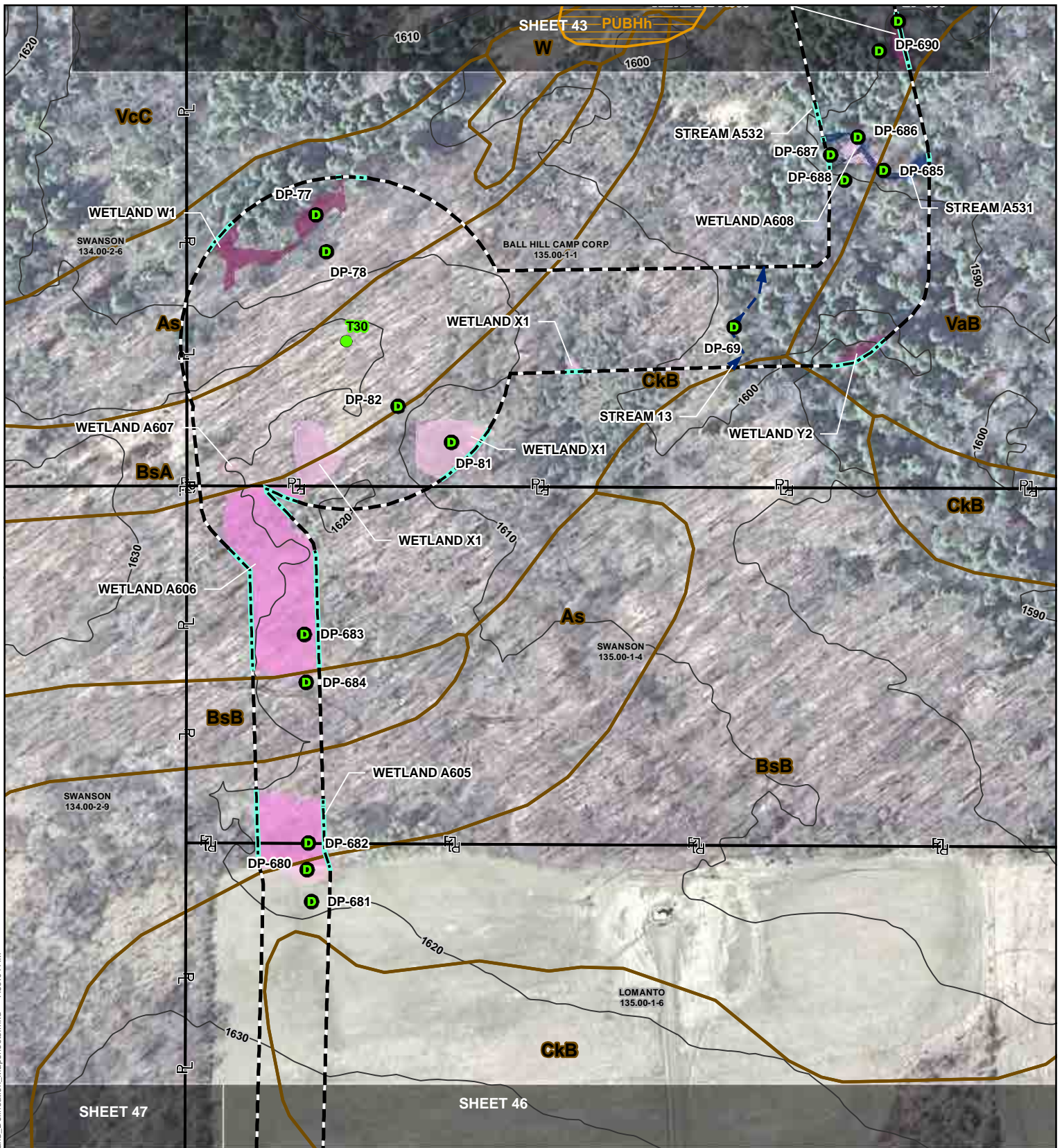


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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

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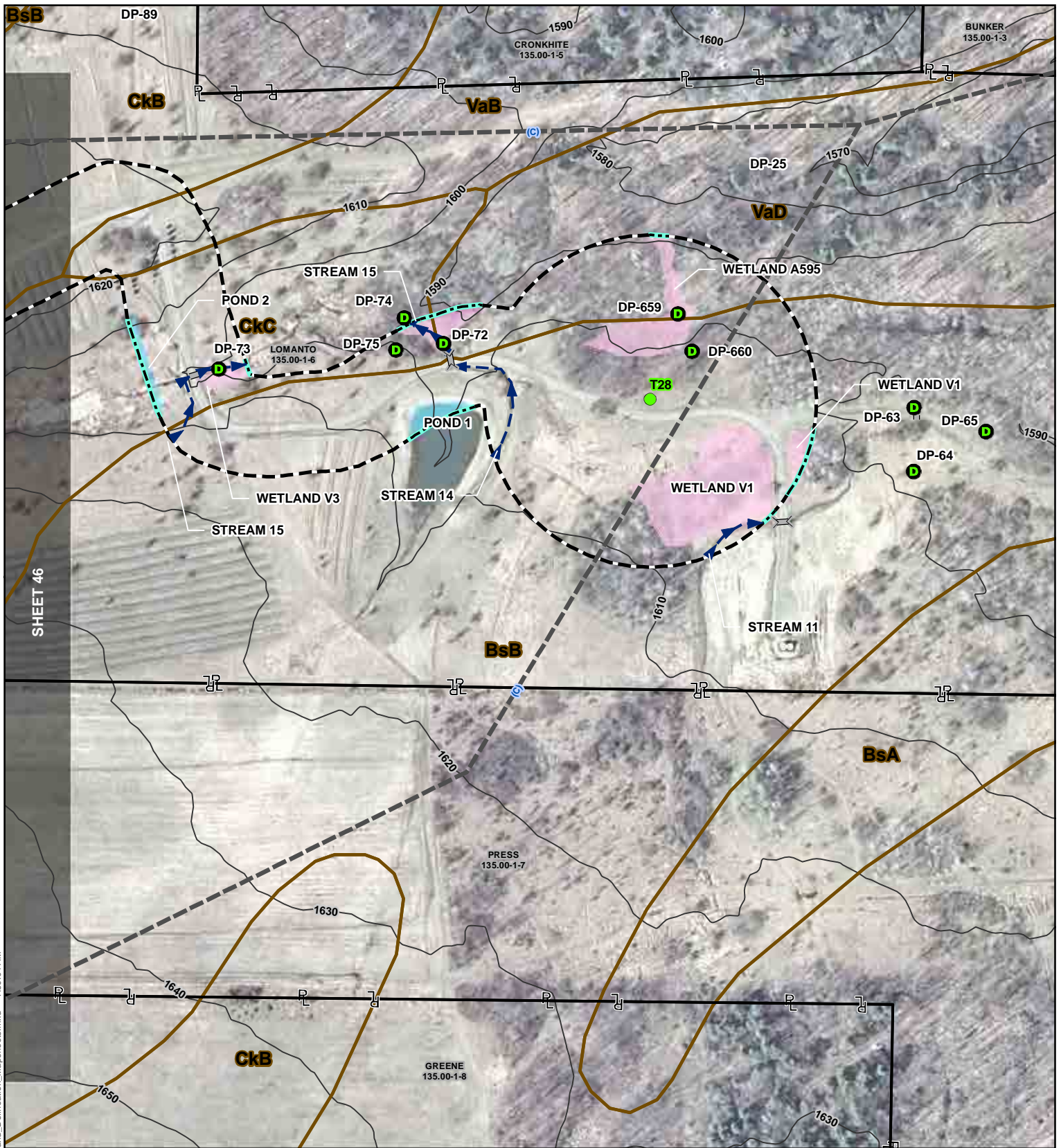
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016

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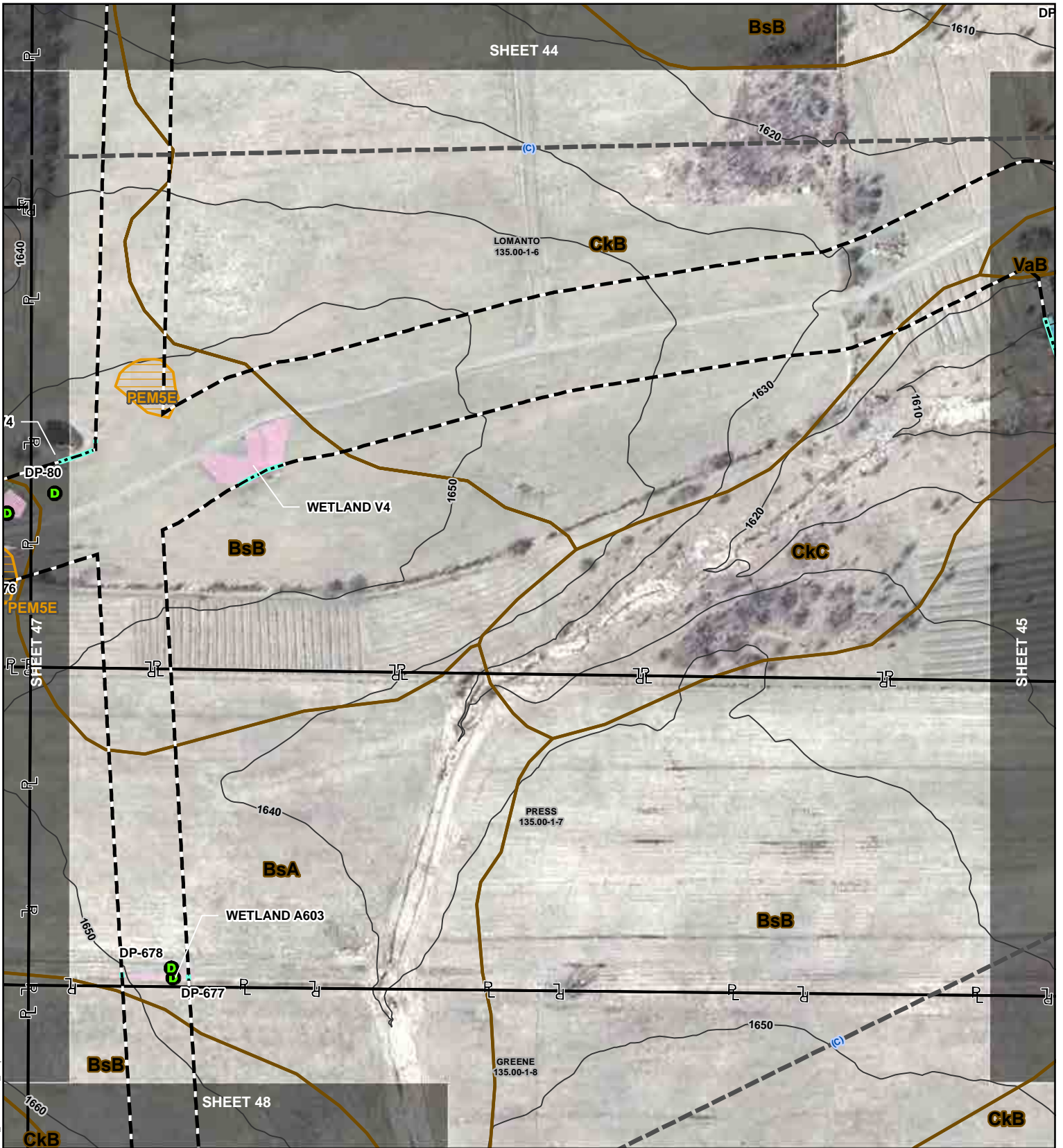
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SHEET 44 OF 101



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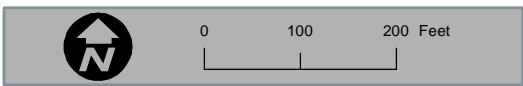
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

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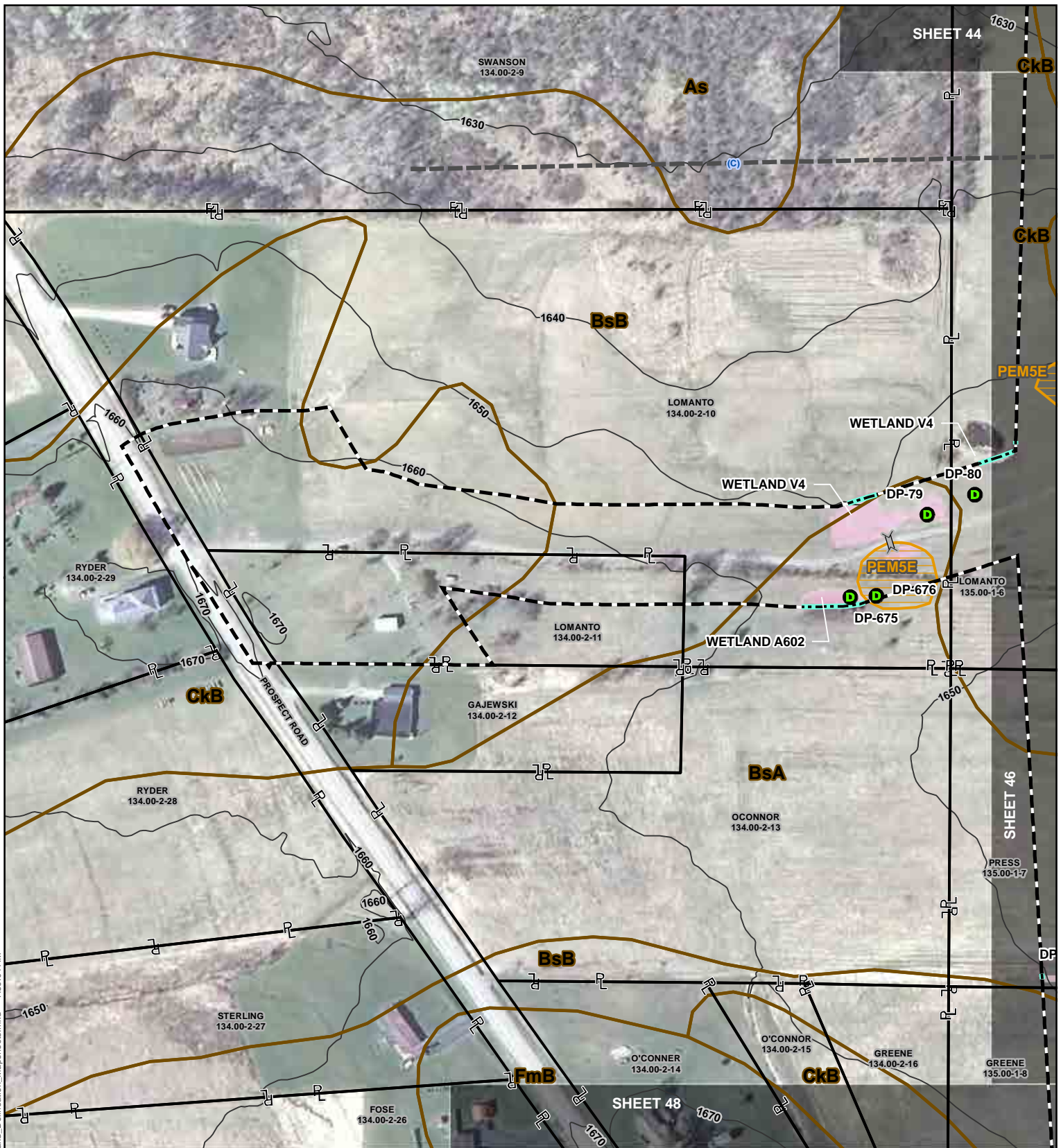
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



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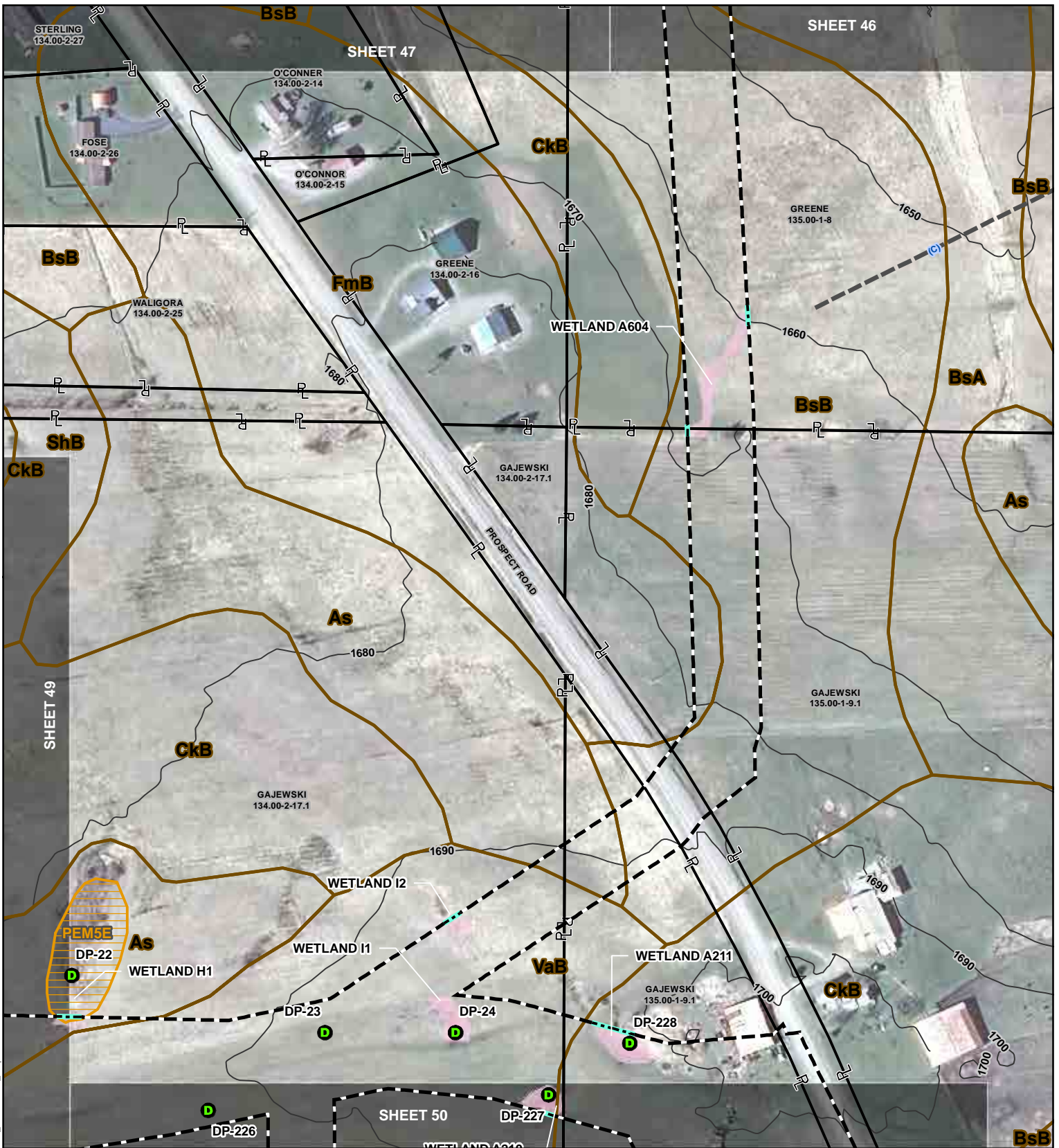


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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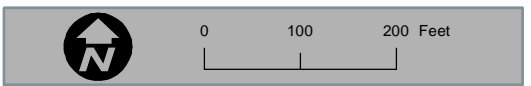
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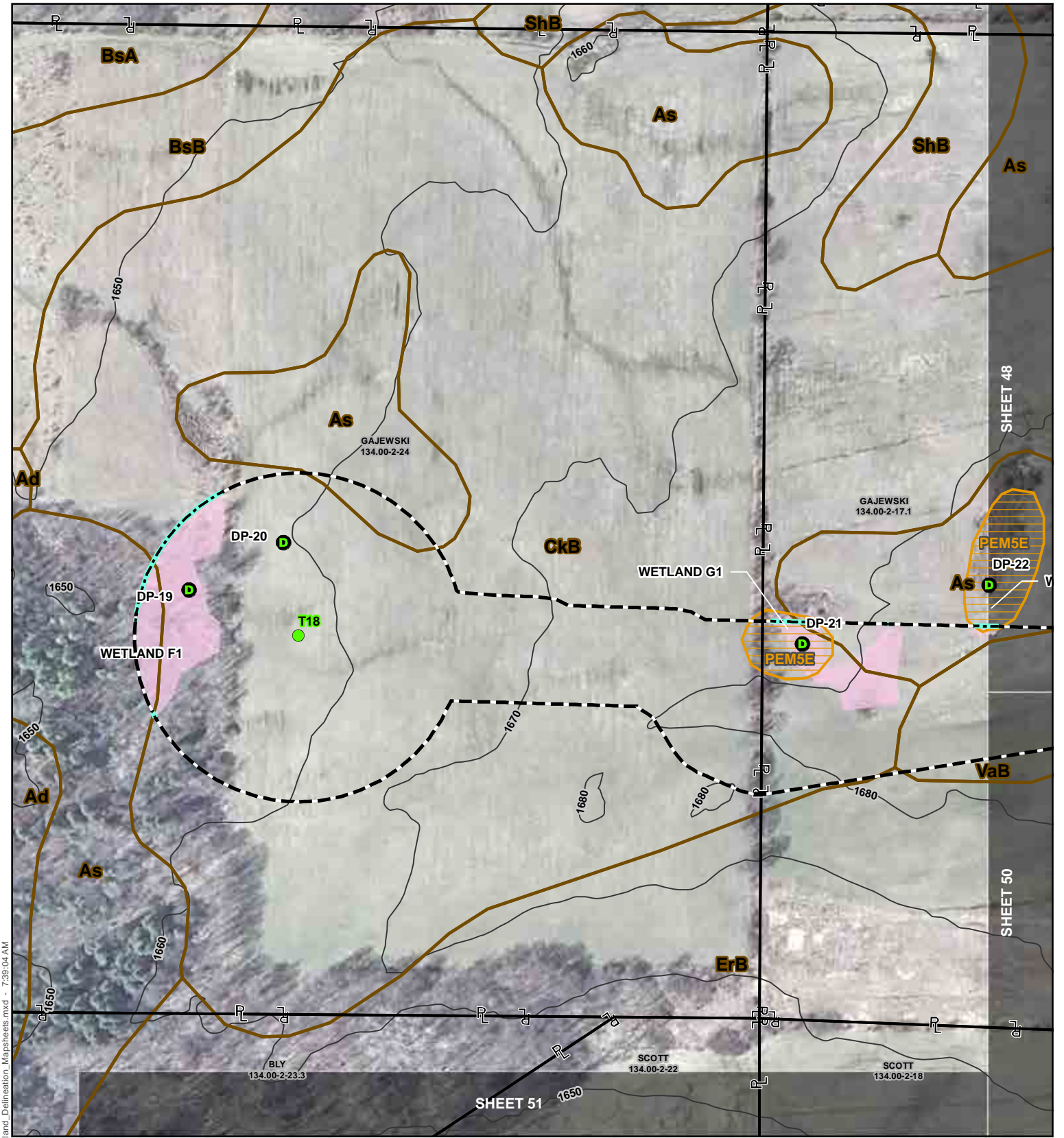
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



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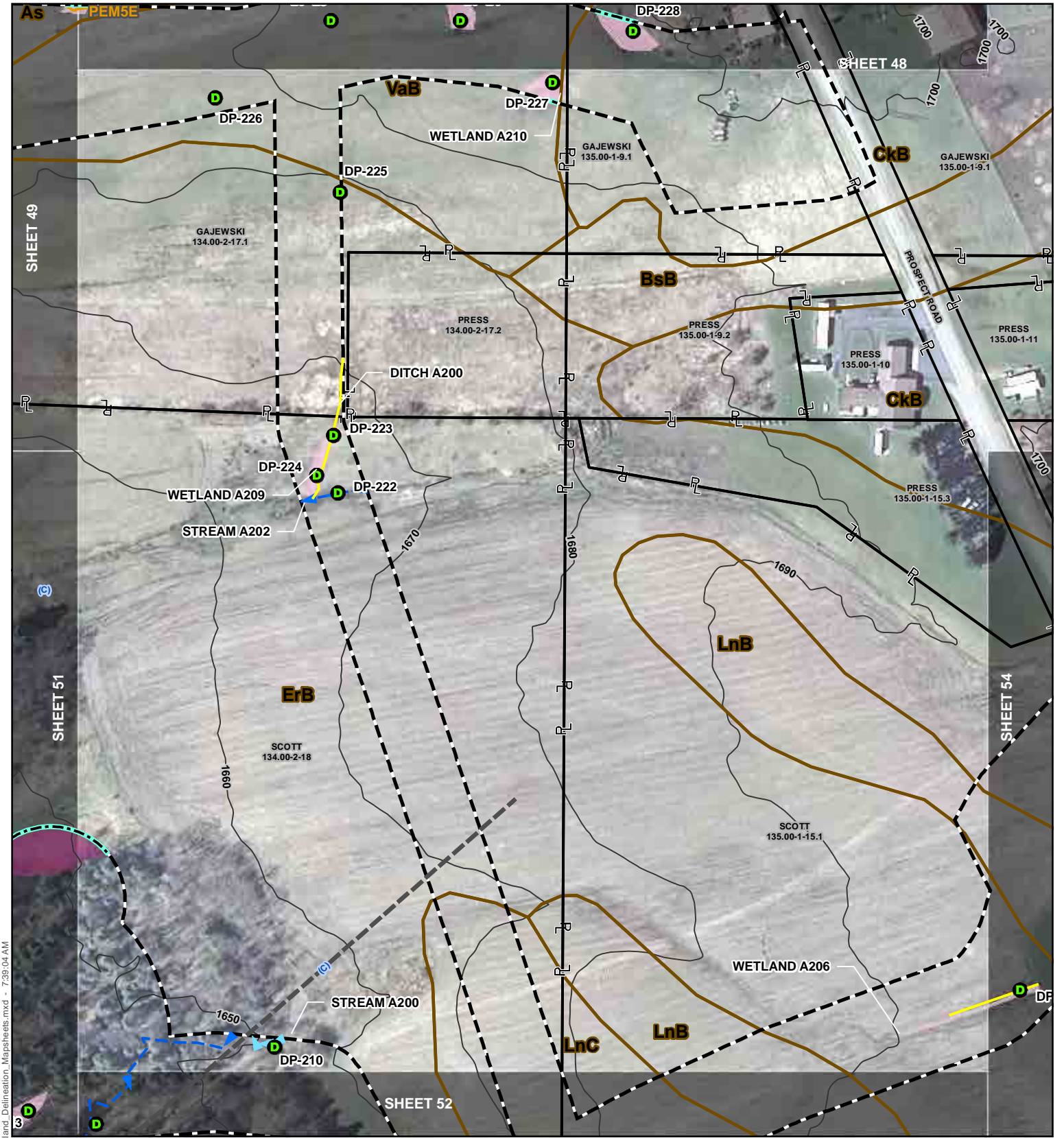


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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
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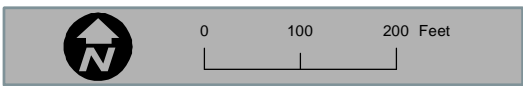
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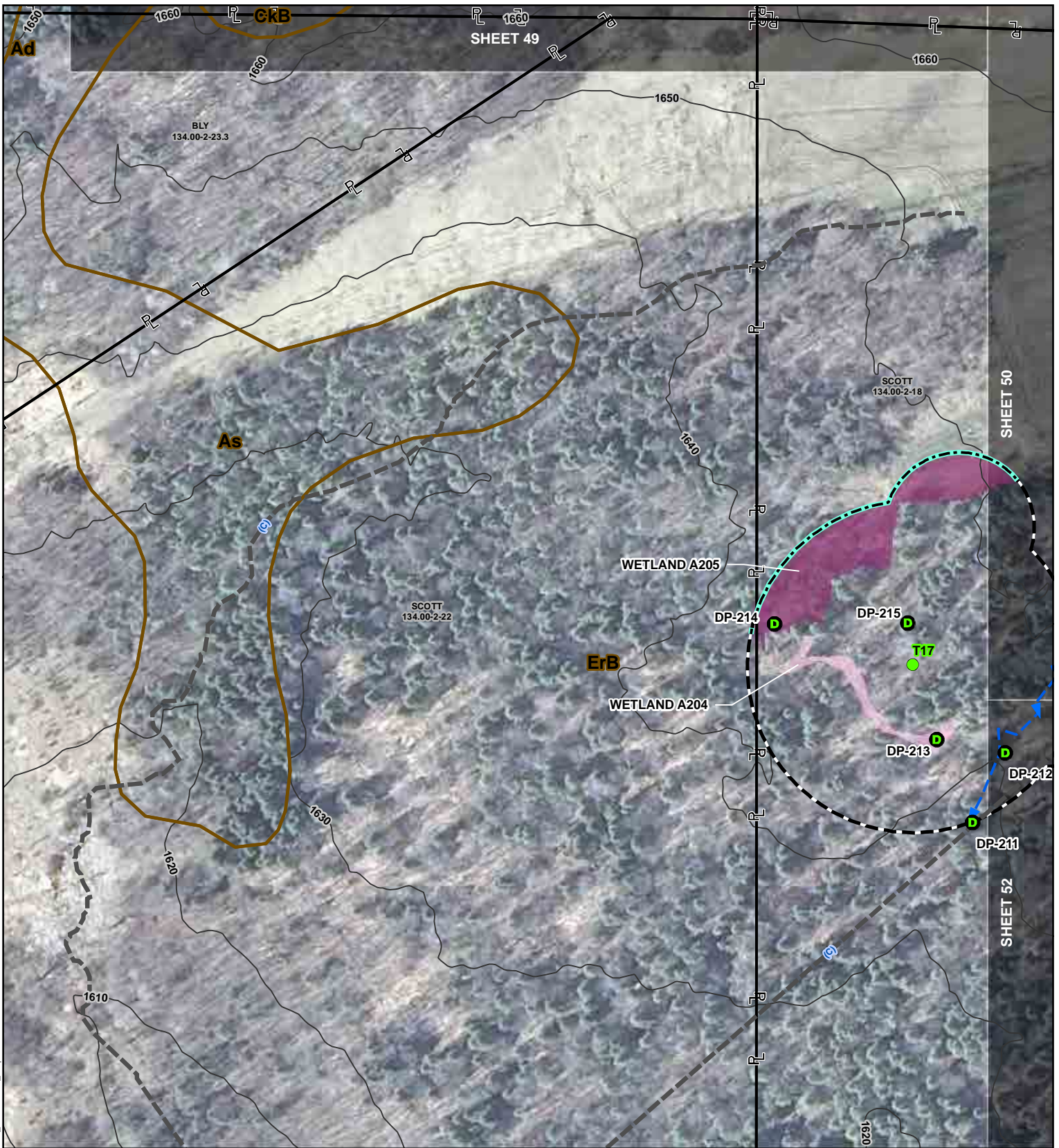
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
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| Delineated Intermittent Stream | Delineated PFO Wetland | |
| Delineated Perennial Stream | Delineated PSS Wetland | |



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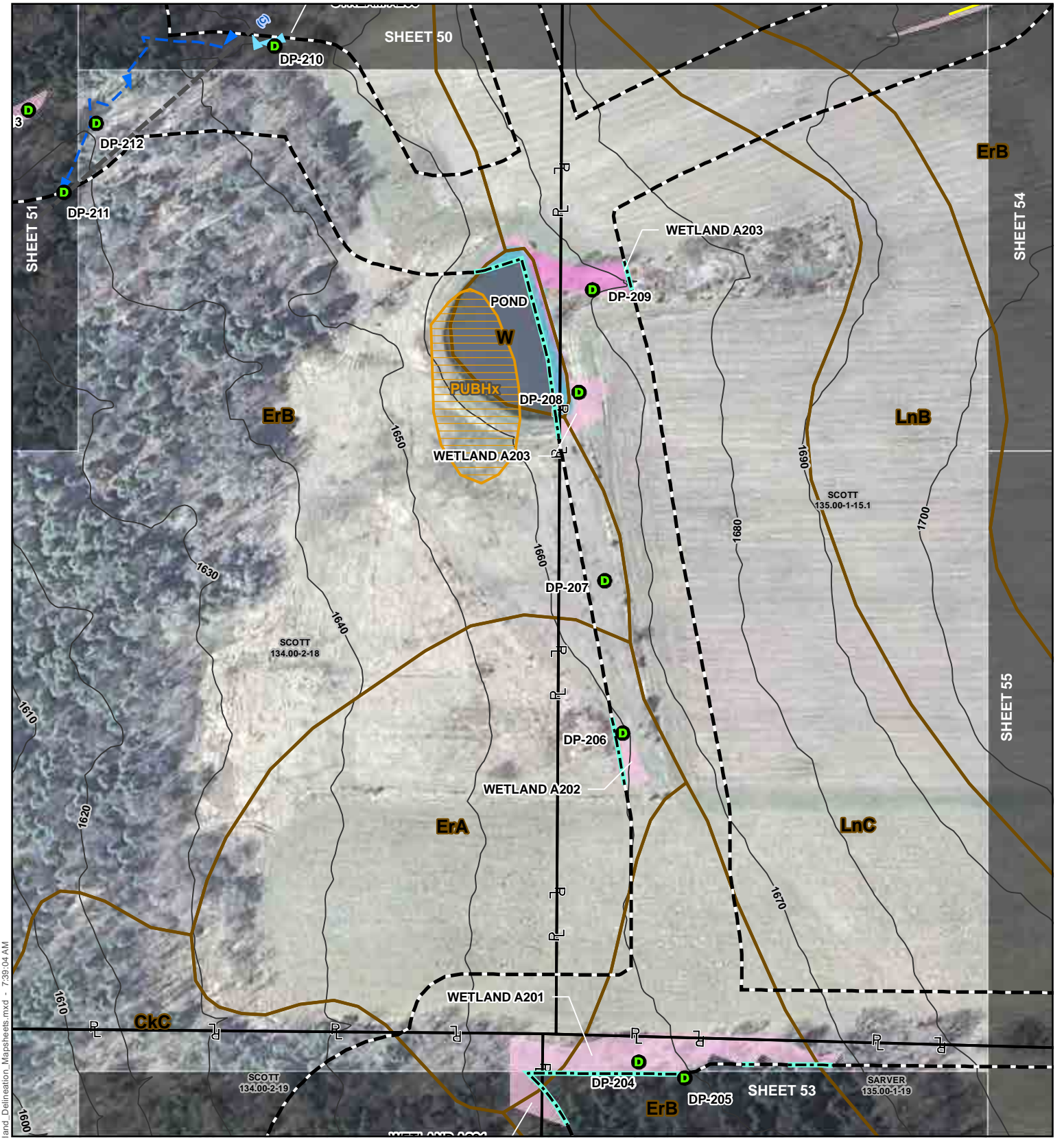


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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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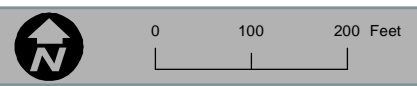
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
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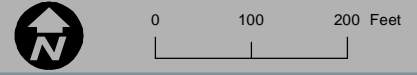


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BALL HILL WIND PROJECT
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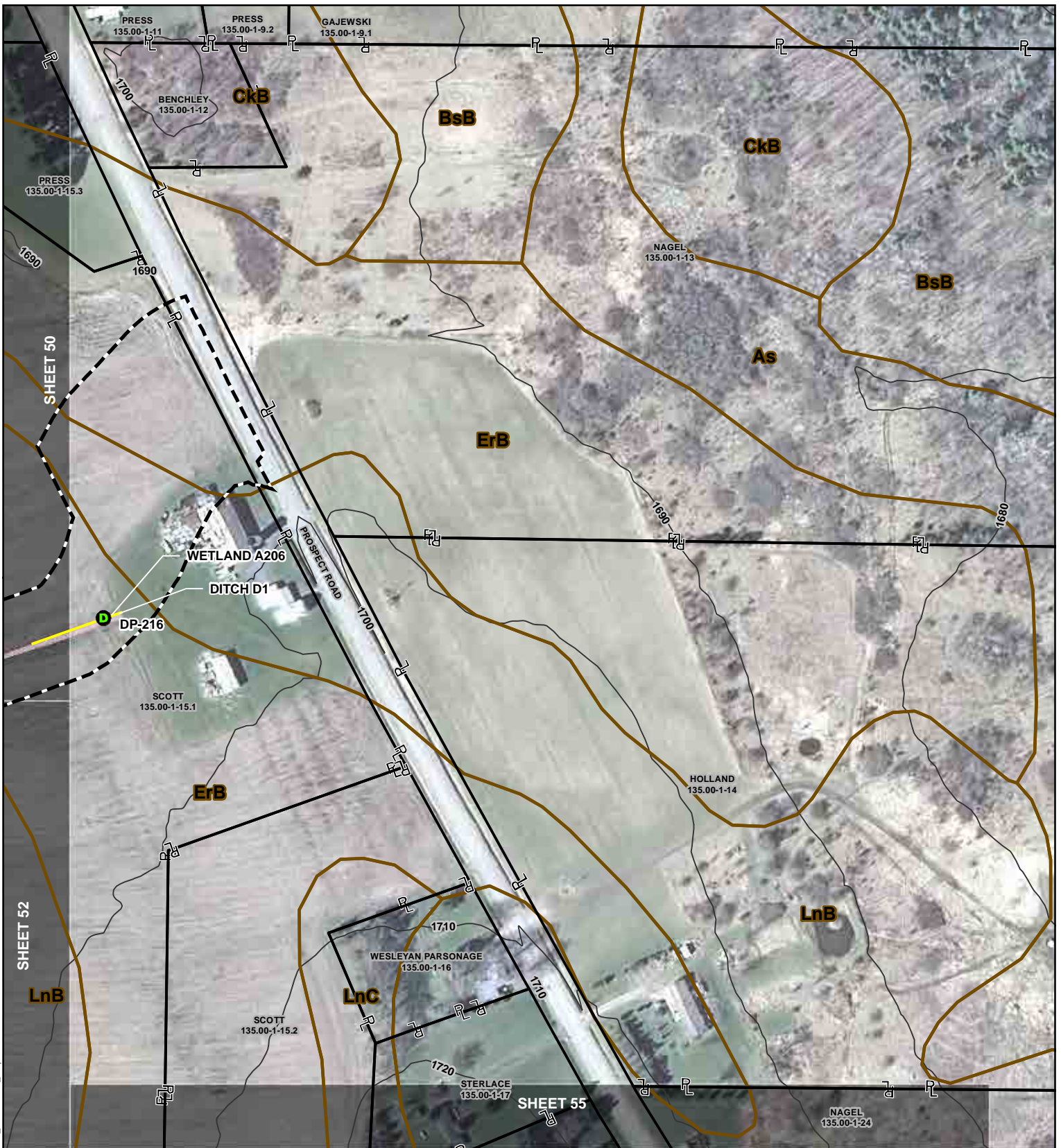


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| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
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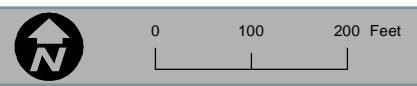


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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
Delineation Continuation Line	Delineated Perennial Stream	Parcel
Delineated Jurisdictional Ditch	Delineated Pond	Project Study Limits
Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
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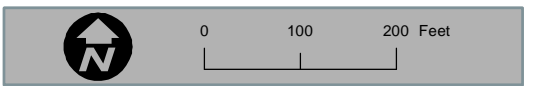


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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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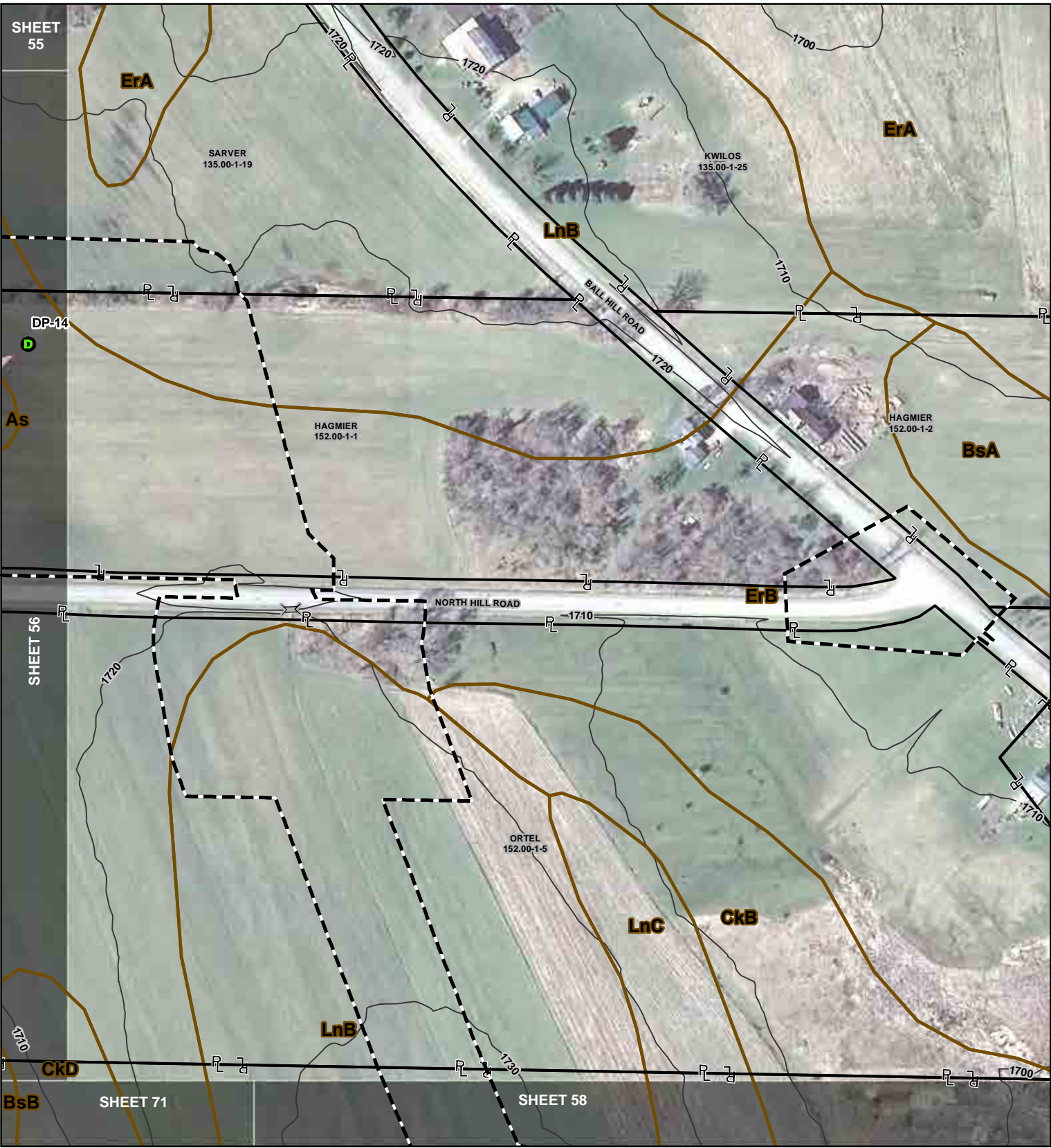
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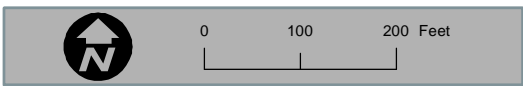
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	Delineated Intermittent Stream		Delineated PFO Wetland		
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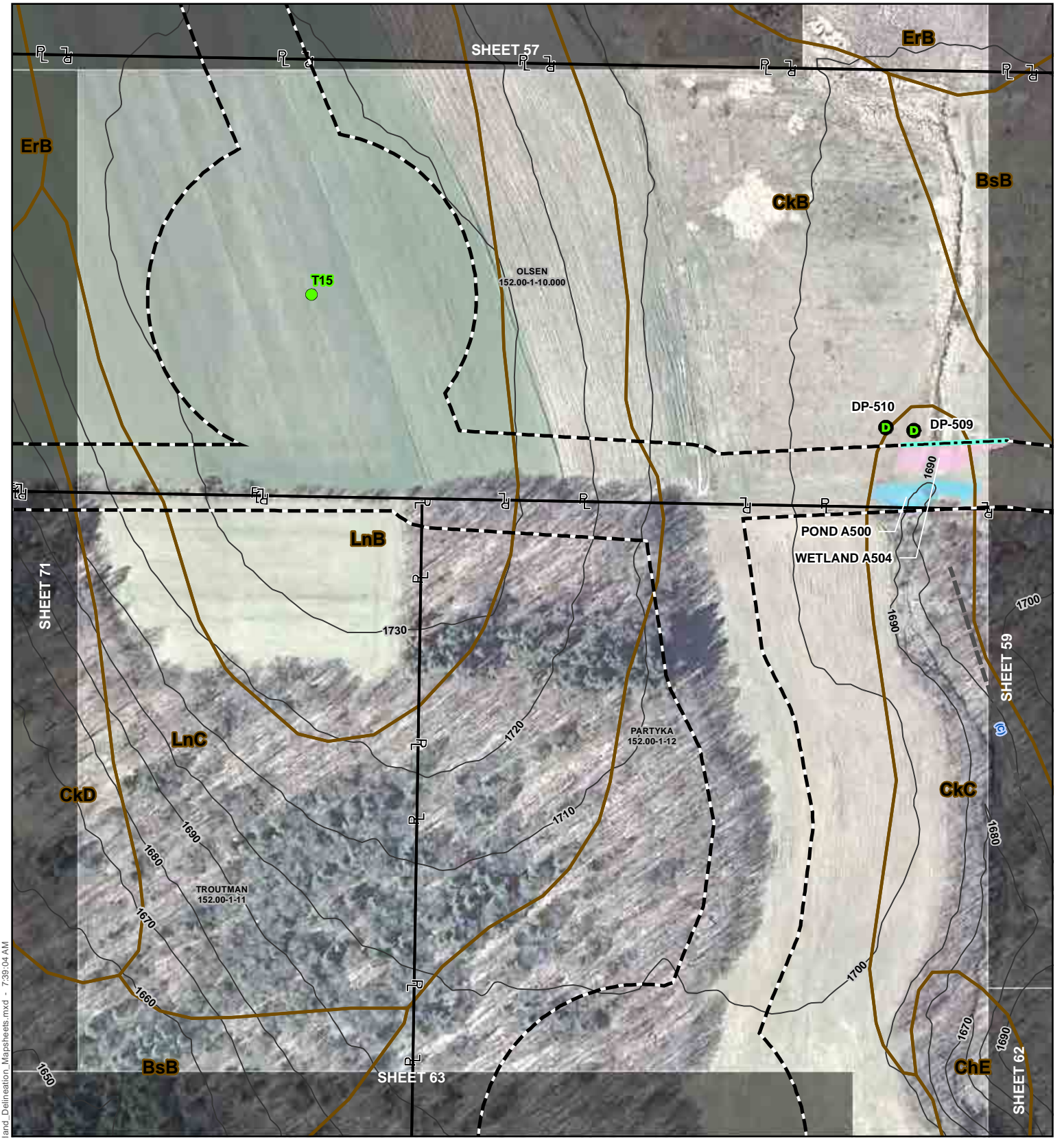
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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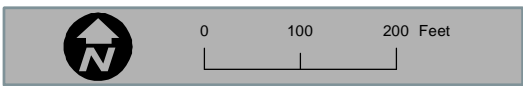
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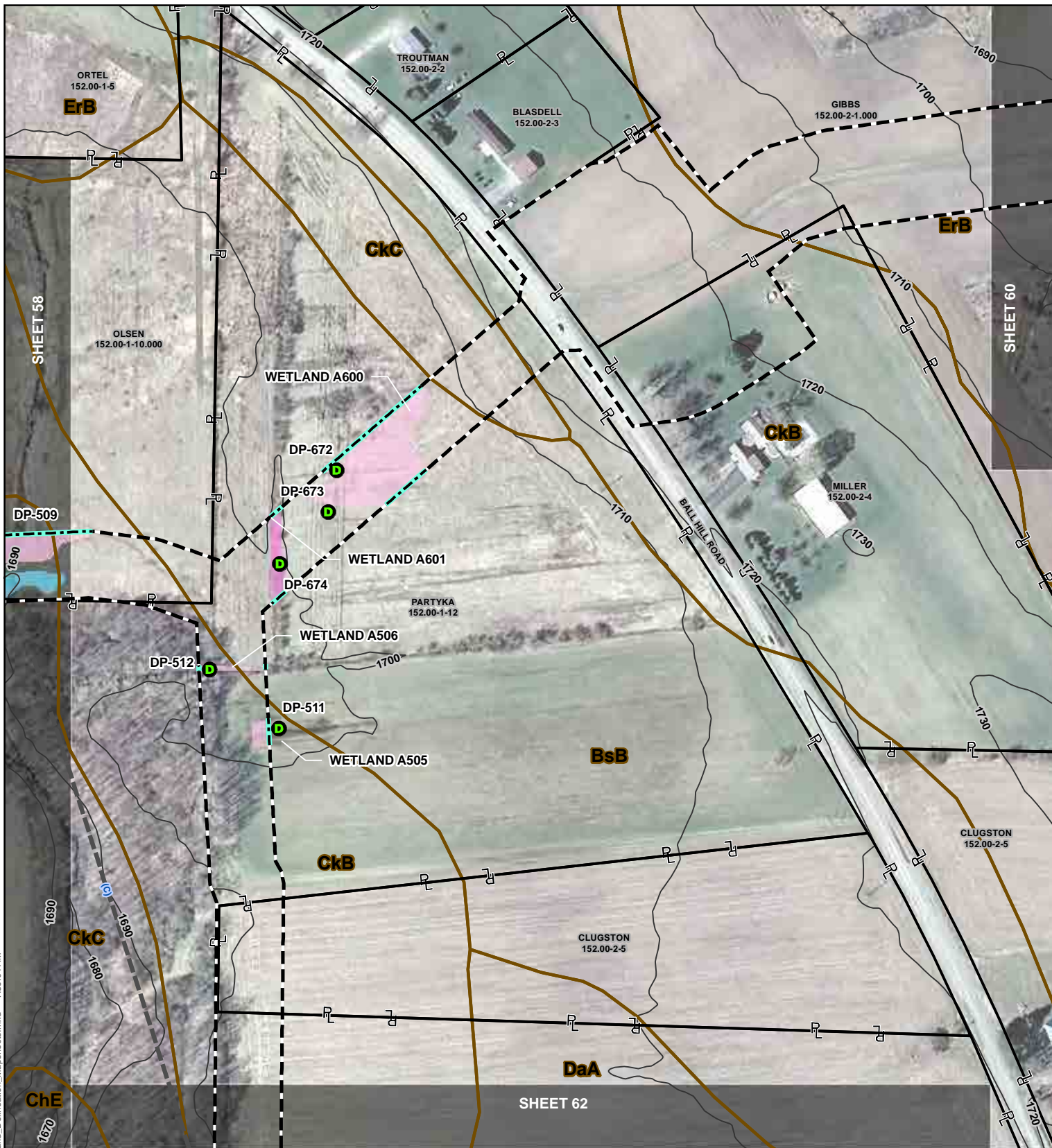
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Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



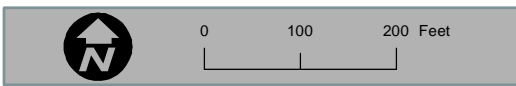
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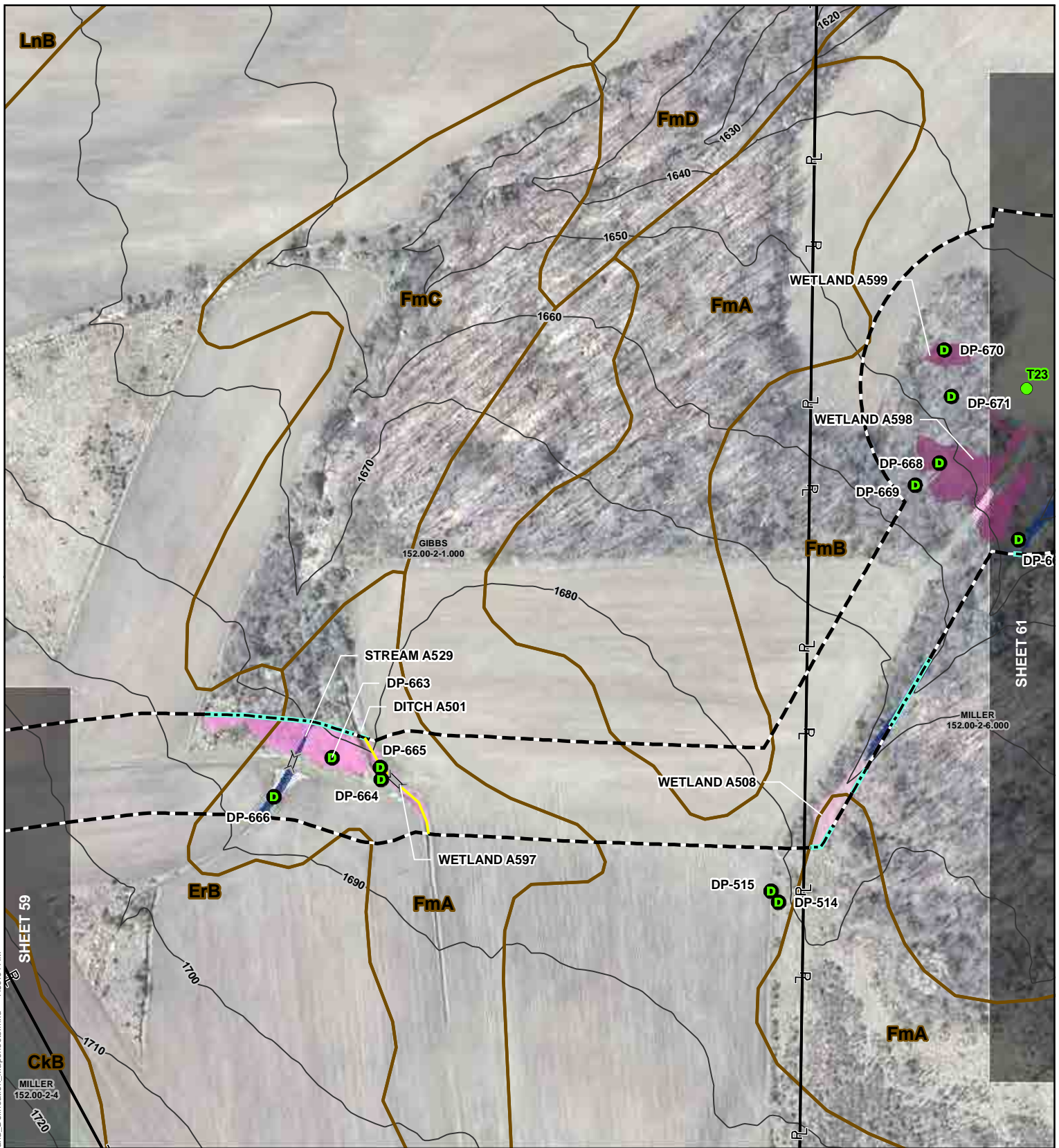


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		




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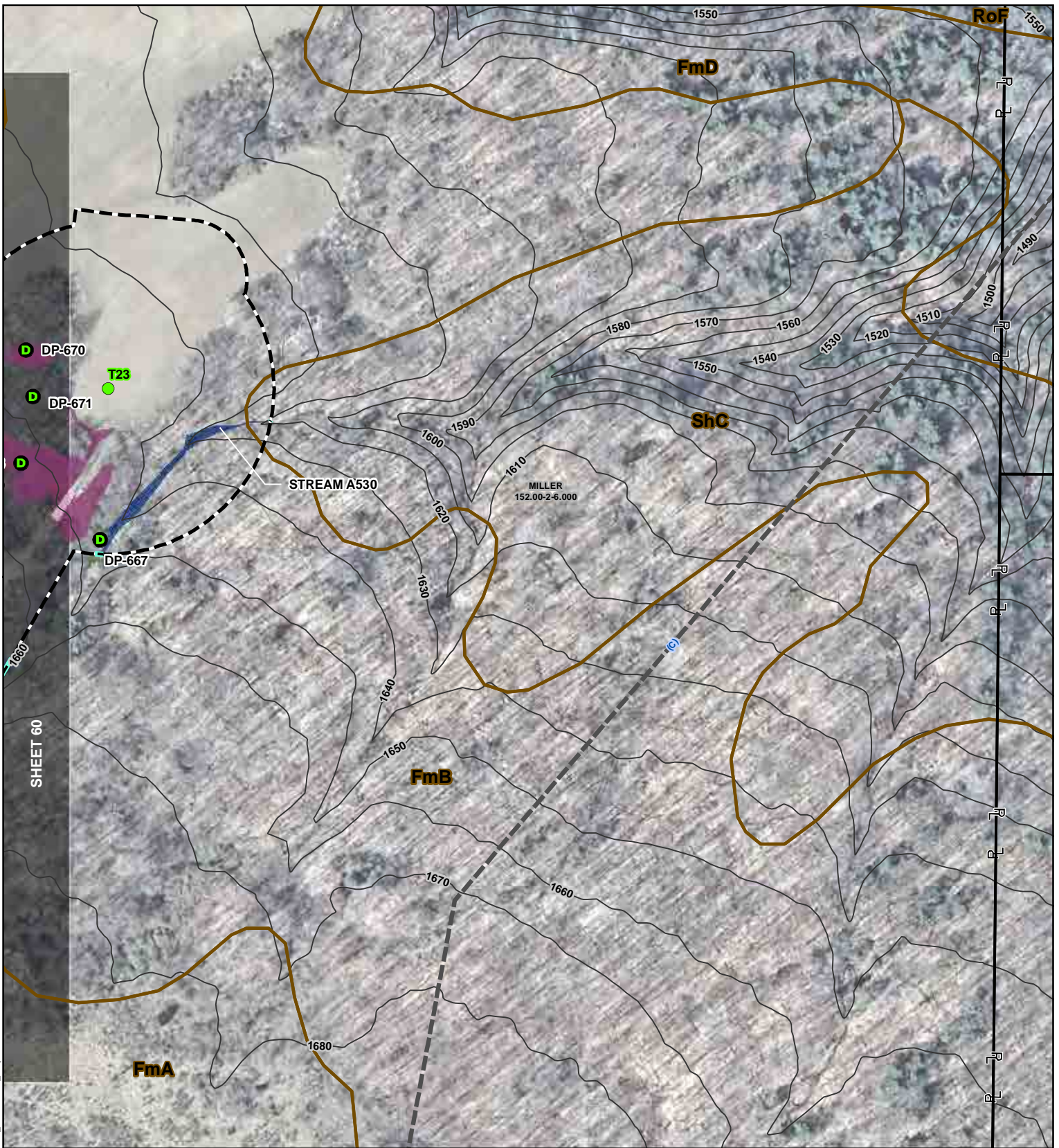


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016

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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
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| Delineated Intermittent Stream | Delineated PFO Wetland | |
| Delineated Perennial Stream | Delineated PSS Wetland | |



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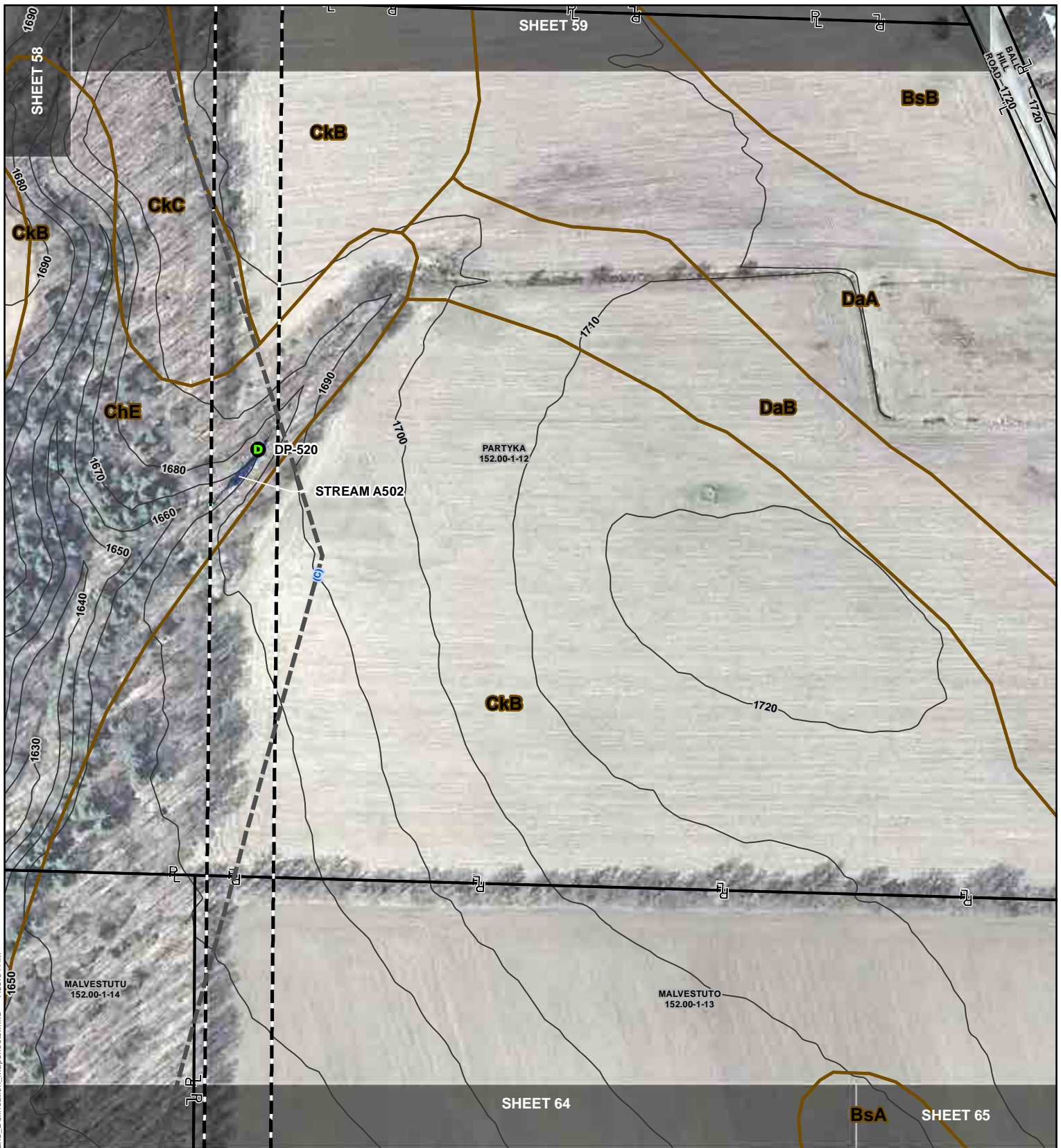


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Author: AK

Aerial Date: 3/21/2012

Revision Date: 10/4/2016



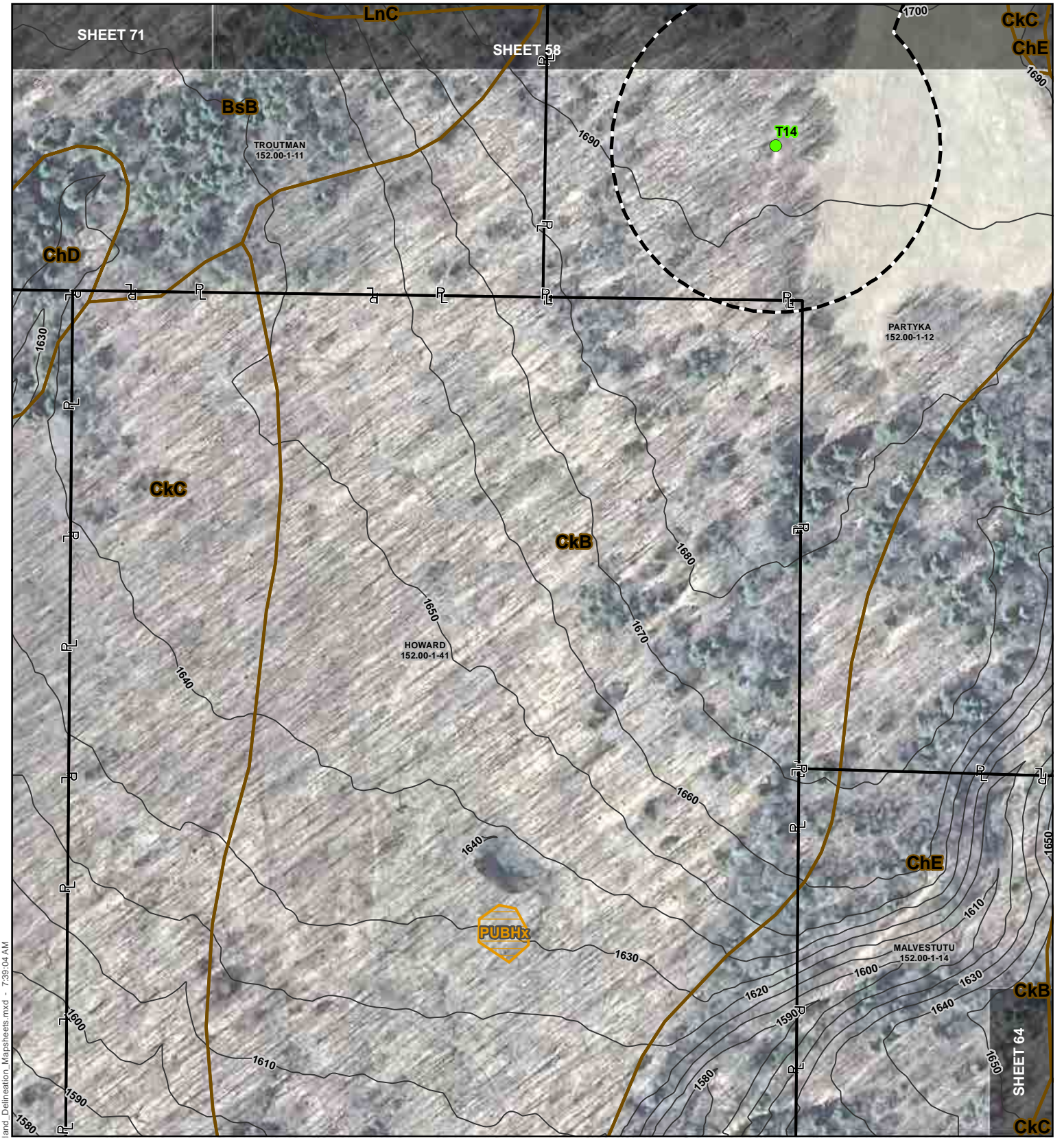
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
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	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016

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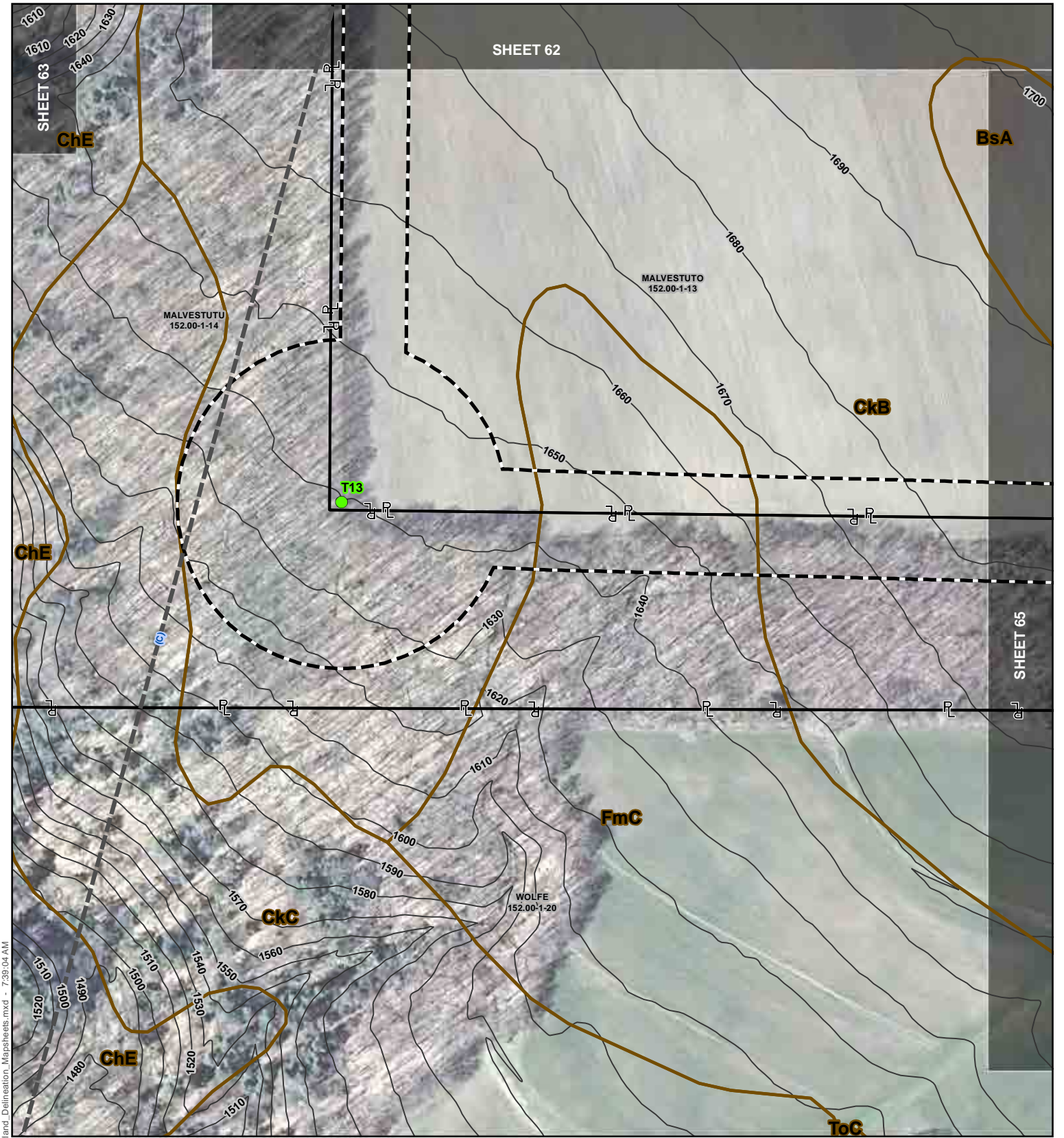


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
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	Delineated Intermittent Stream		Delineated PFO Wetland		
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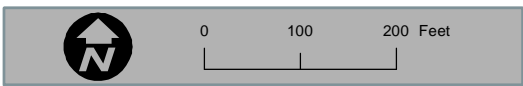
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
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	Delineated Intermittent Stream		Delineated PFO Wetland		
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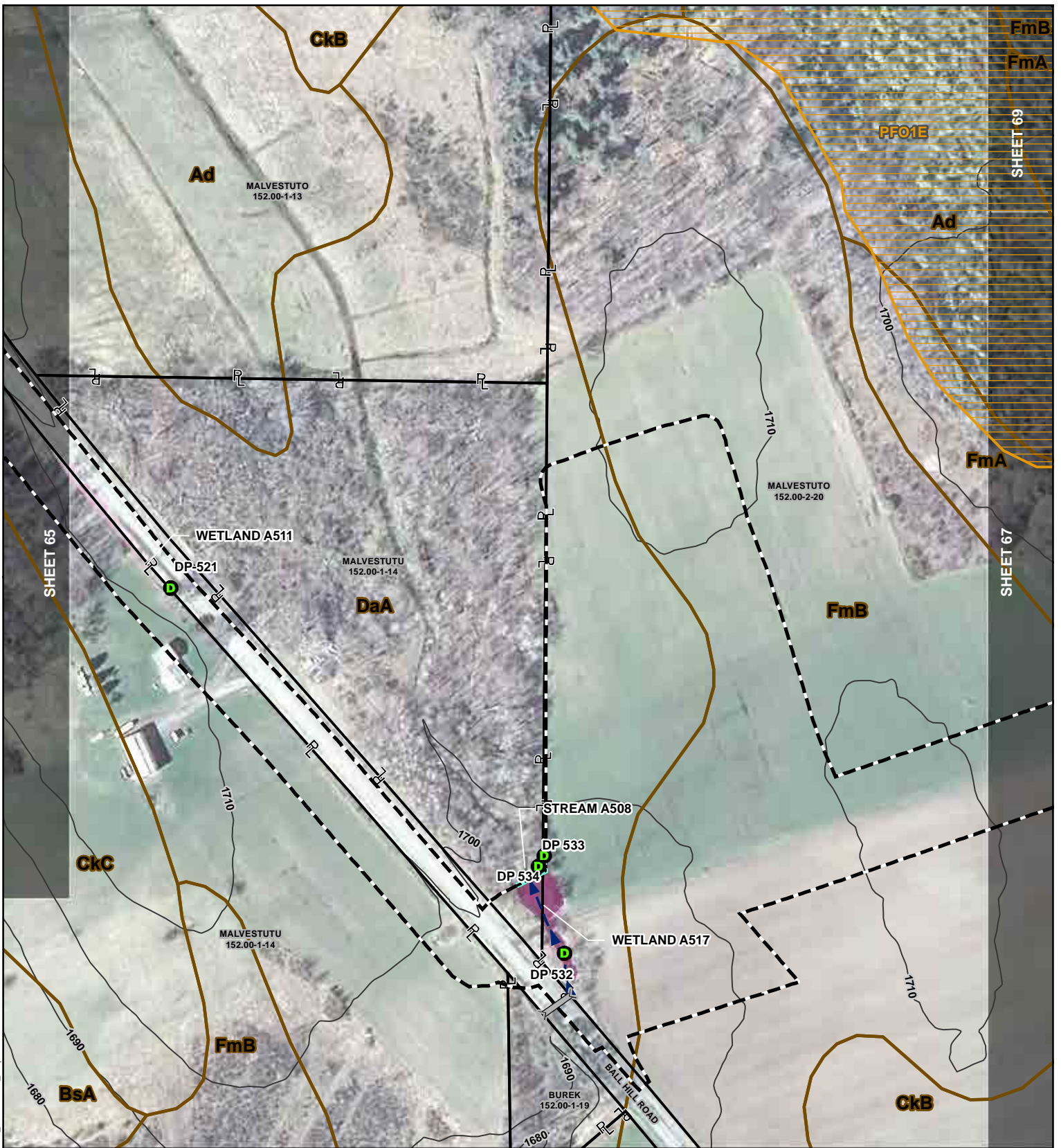
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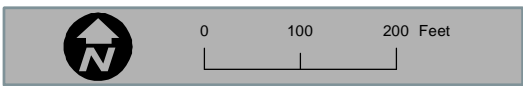
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	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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	Delineated Perennial Stream		Delineated PSS Wetland		

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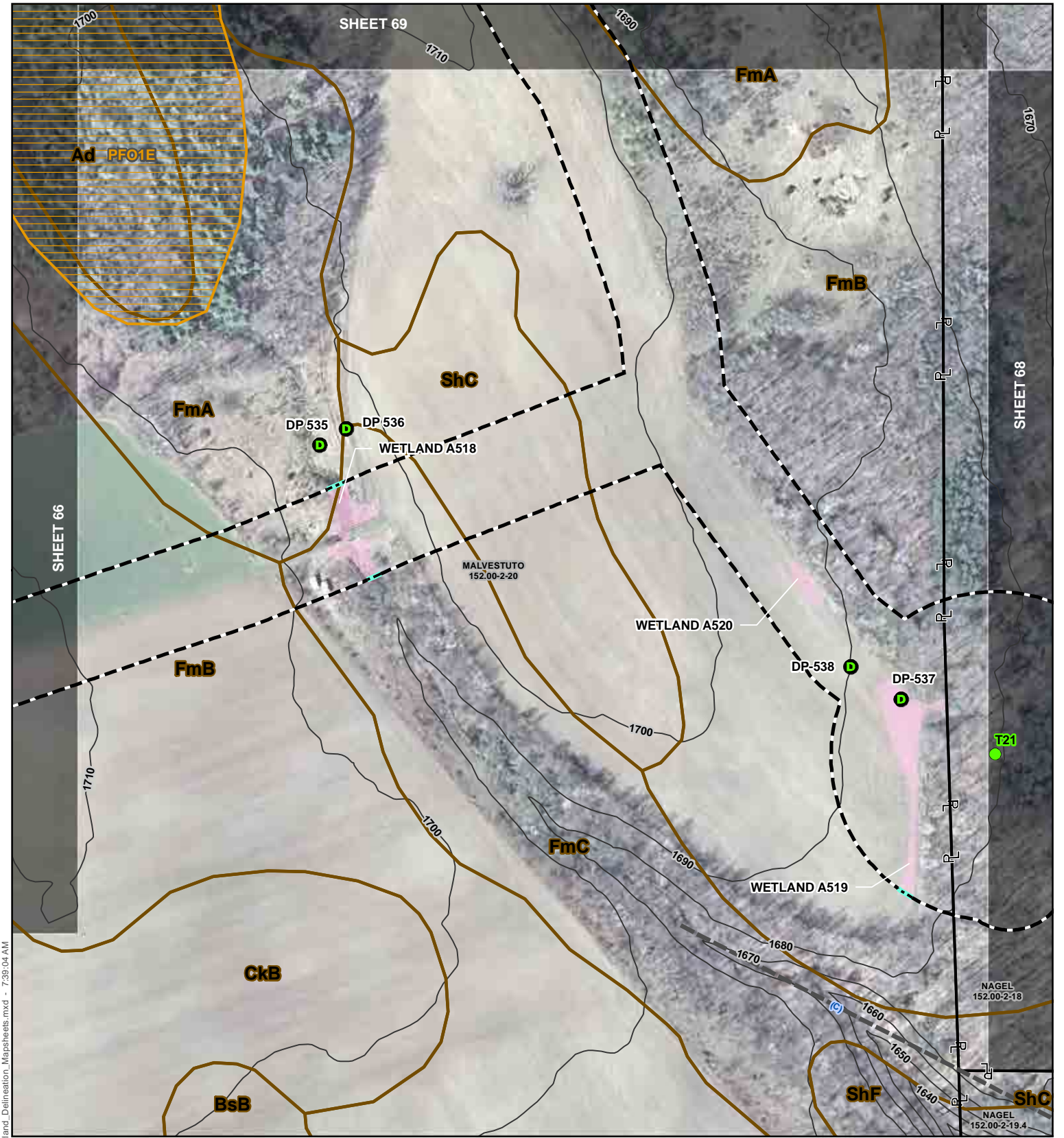


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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
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Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	

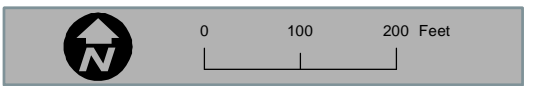



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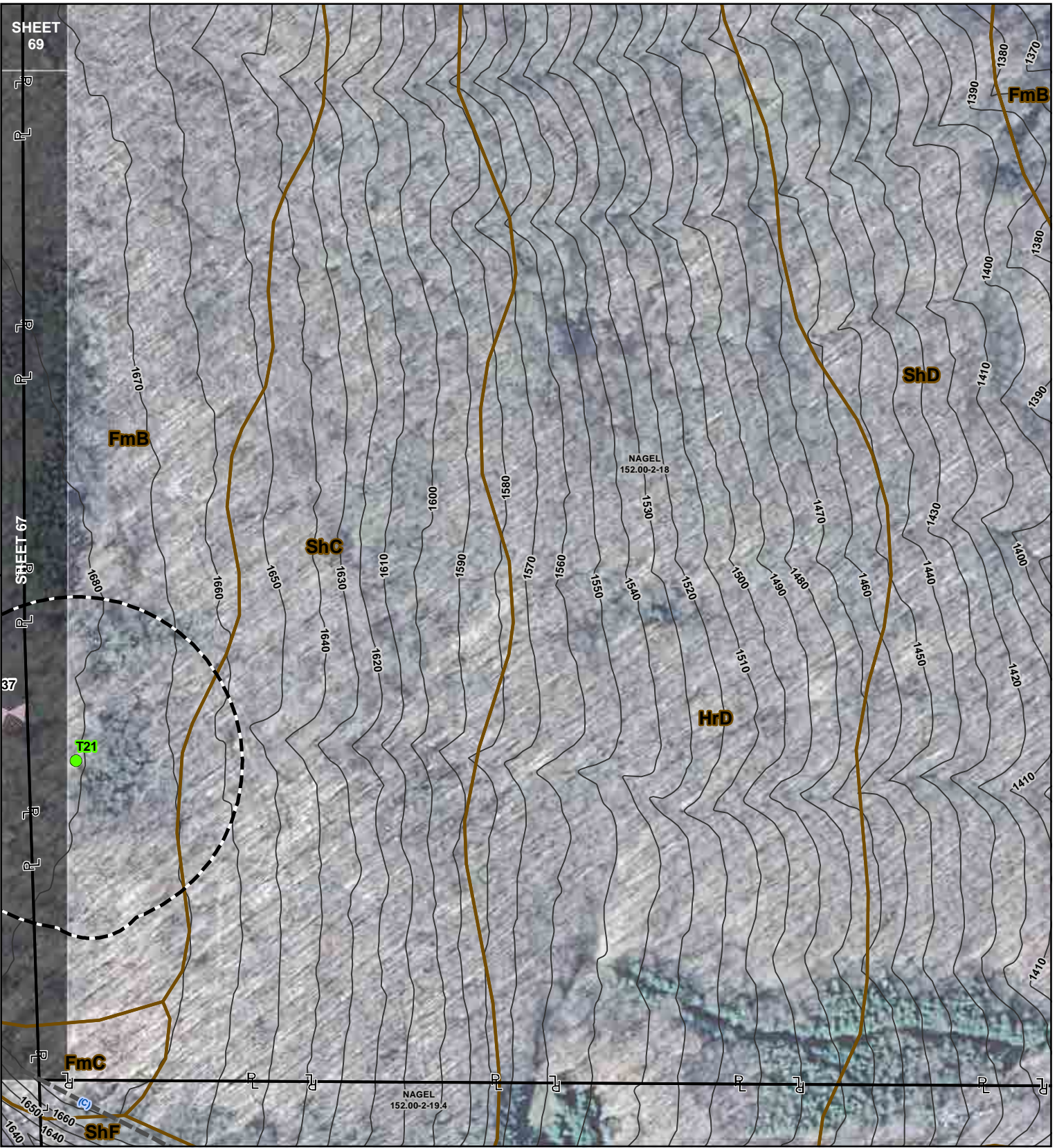
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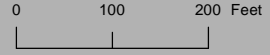
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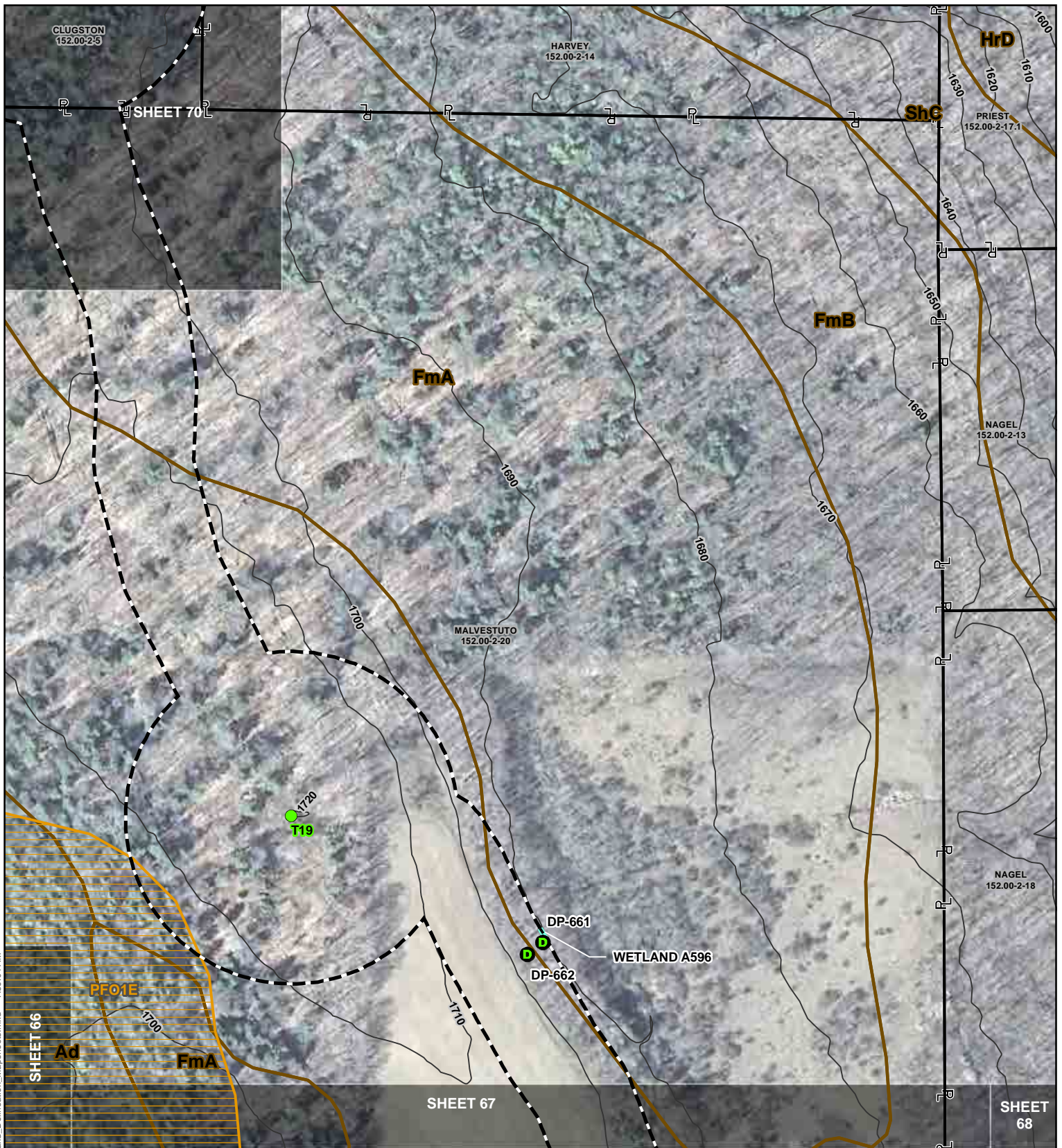
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- Data Point
- Proposed Turbine
- Culvert
- Delineation Continuation Line
- Delineated Jurisdictional Ditch
- Delineated Ephemeral Stream
- Delineated Intermittent Stream
- Delineated Perennial Stream
- NYSDEC Stream (Standard)
- Contours (10ft)
- Delineated Intermittent Stream
- Delineated Perennial Stream
- NWI Wetland
- NYSDEC Freshwater Wetland
- Soil Complex Boundary
- Parcel
- Project Study Limits
- Matchline
- Delineated PEM Wetland
- Delineated PFO Wetland
- Delineated PSS Wetland




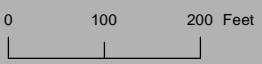
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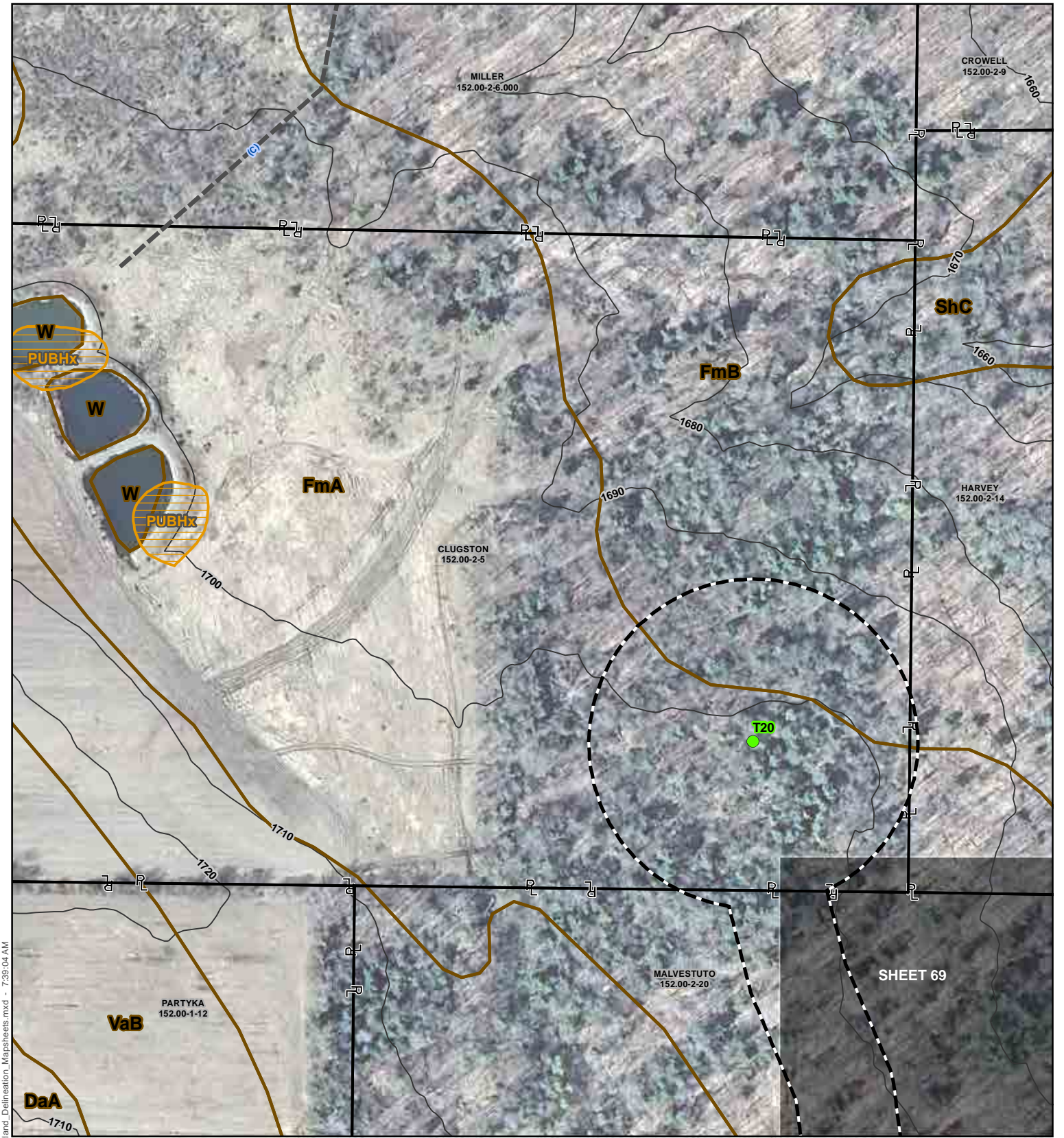
	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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	Delineated Perennial Stream		Delineated PSS Wetland		

Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016



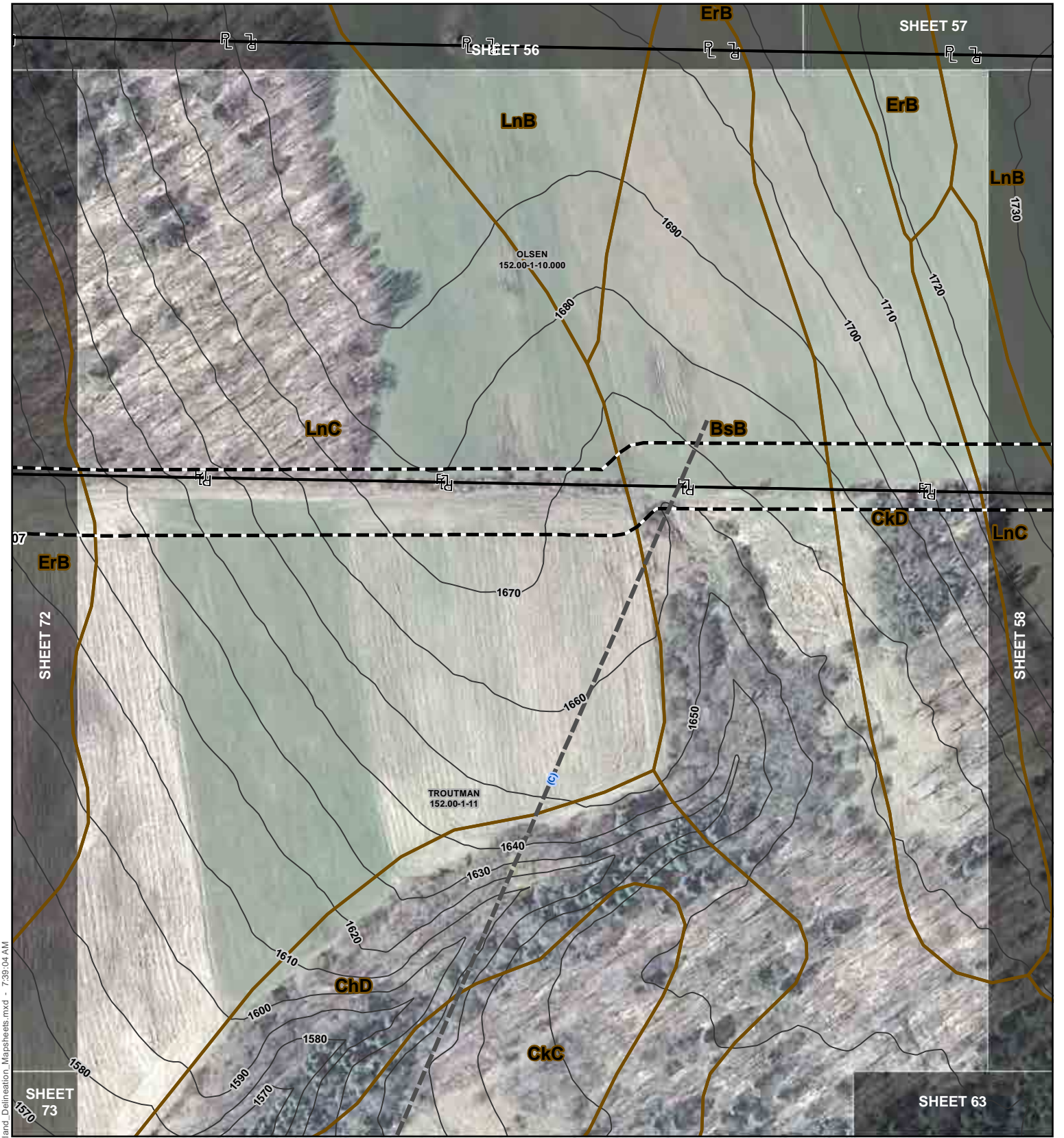
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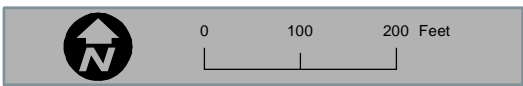
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
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	Delineated Perennial Stream		Delineated PSS Wetland		

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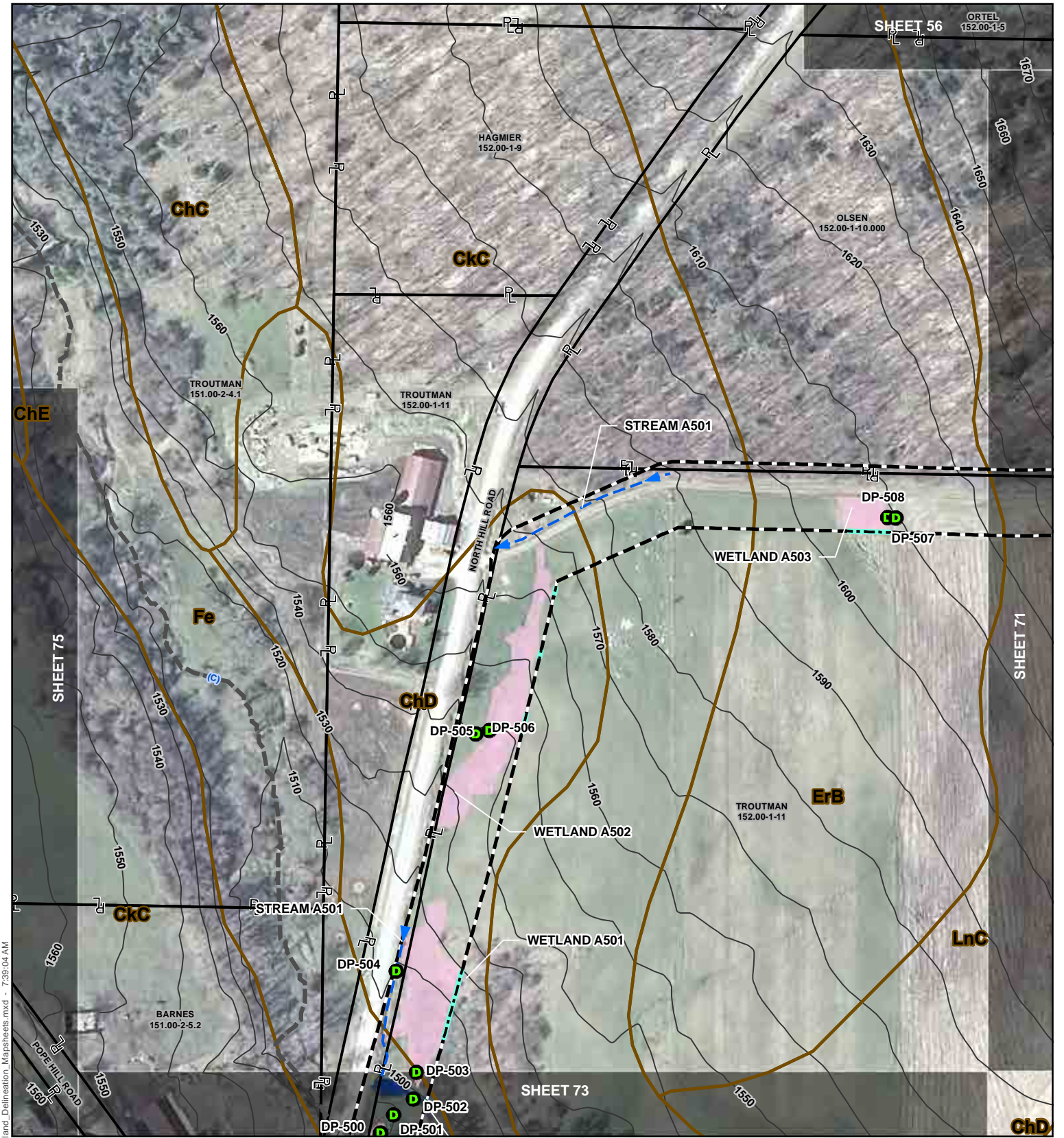


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
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	Delineated Perennial Stream		Delineated PSS Wetland		




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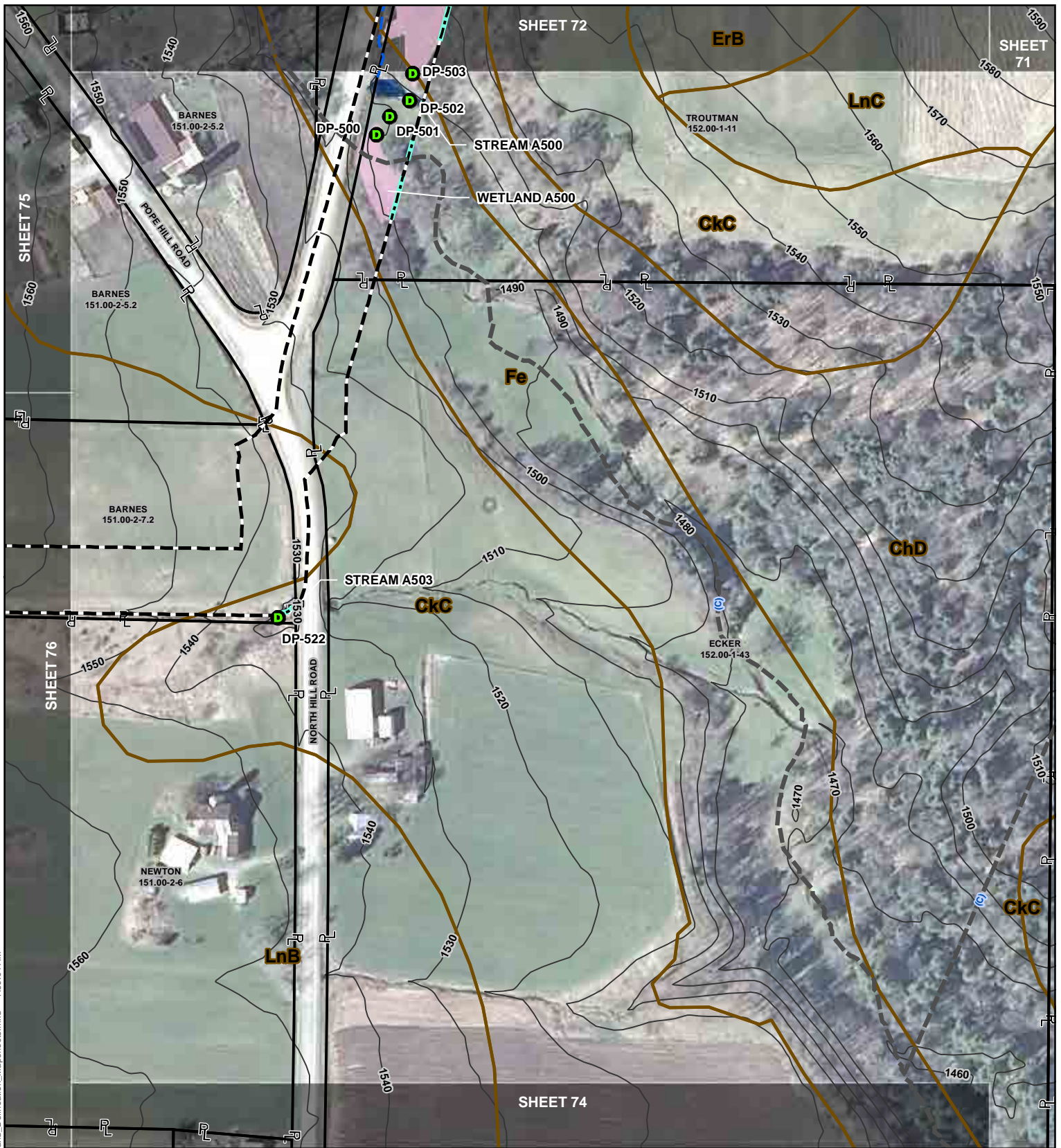
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
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	Delineated Intermittent Stream		Delineated PFO Wetland		
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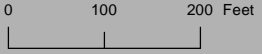
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
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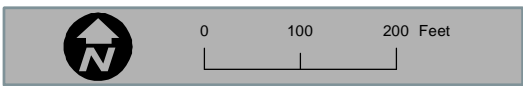


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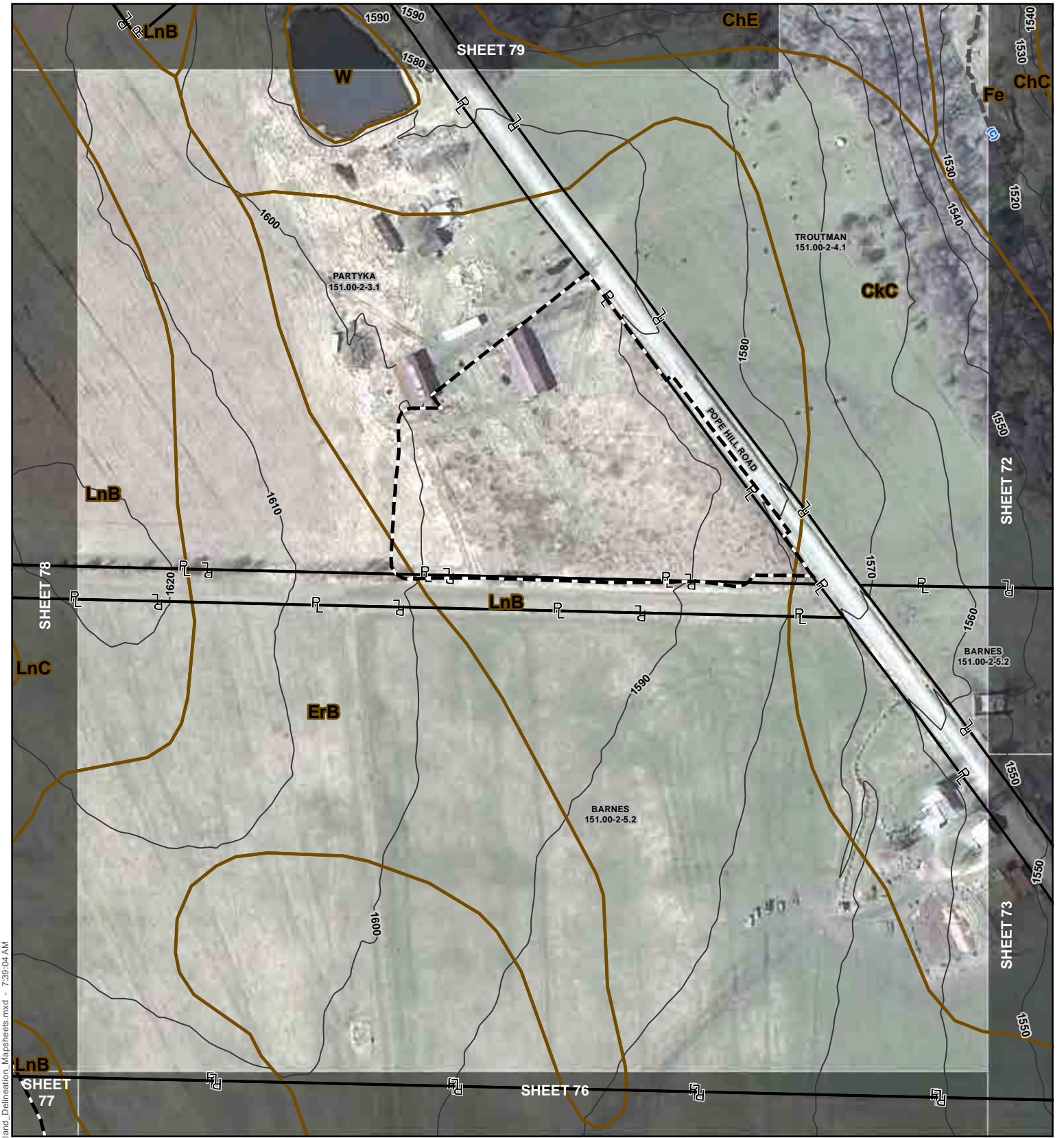
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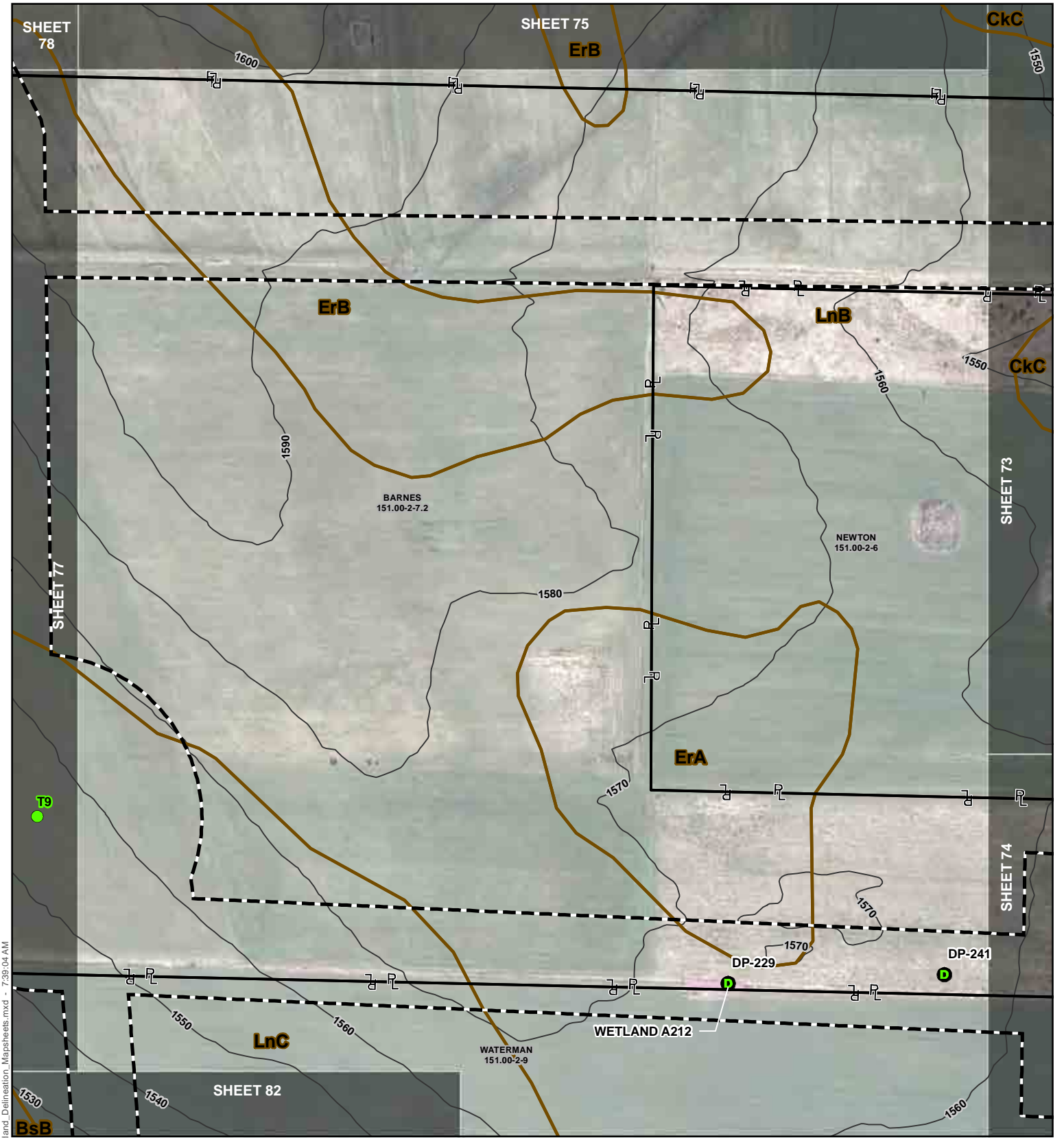


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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
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Delineated Perennial Stream	Delineated PSS Wetland	

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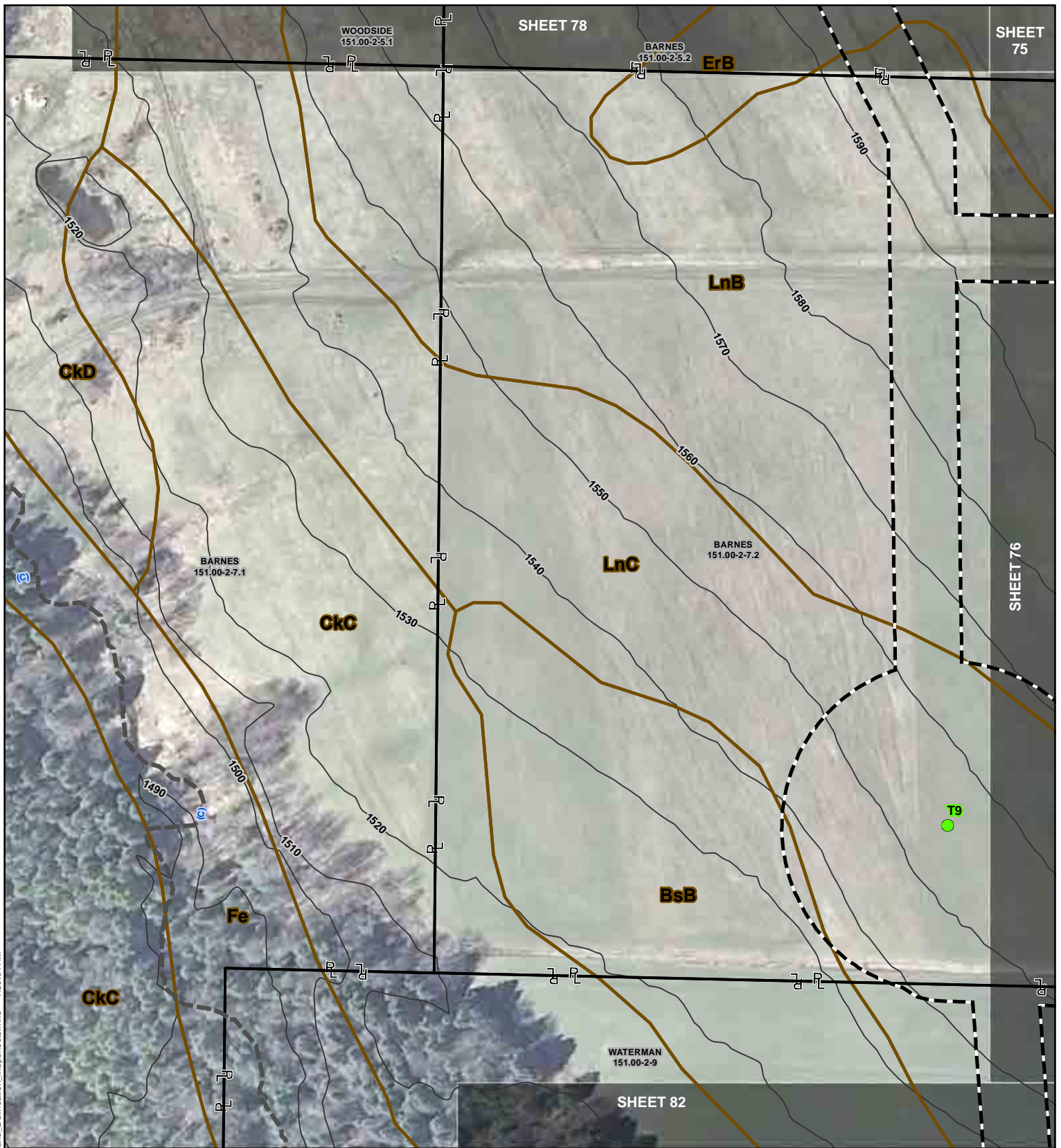
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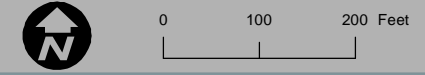
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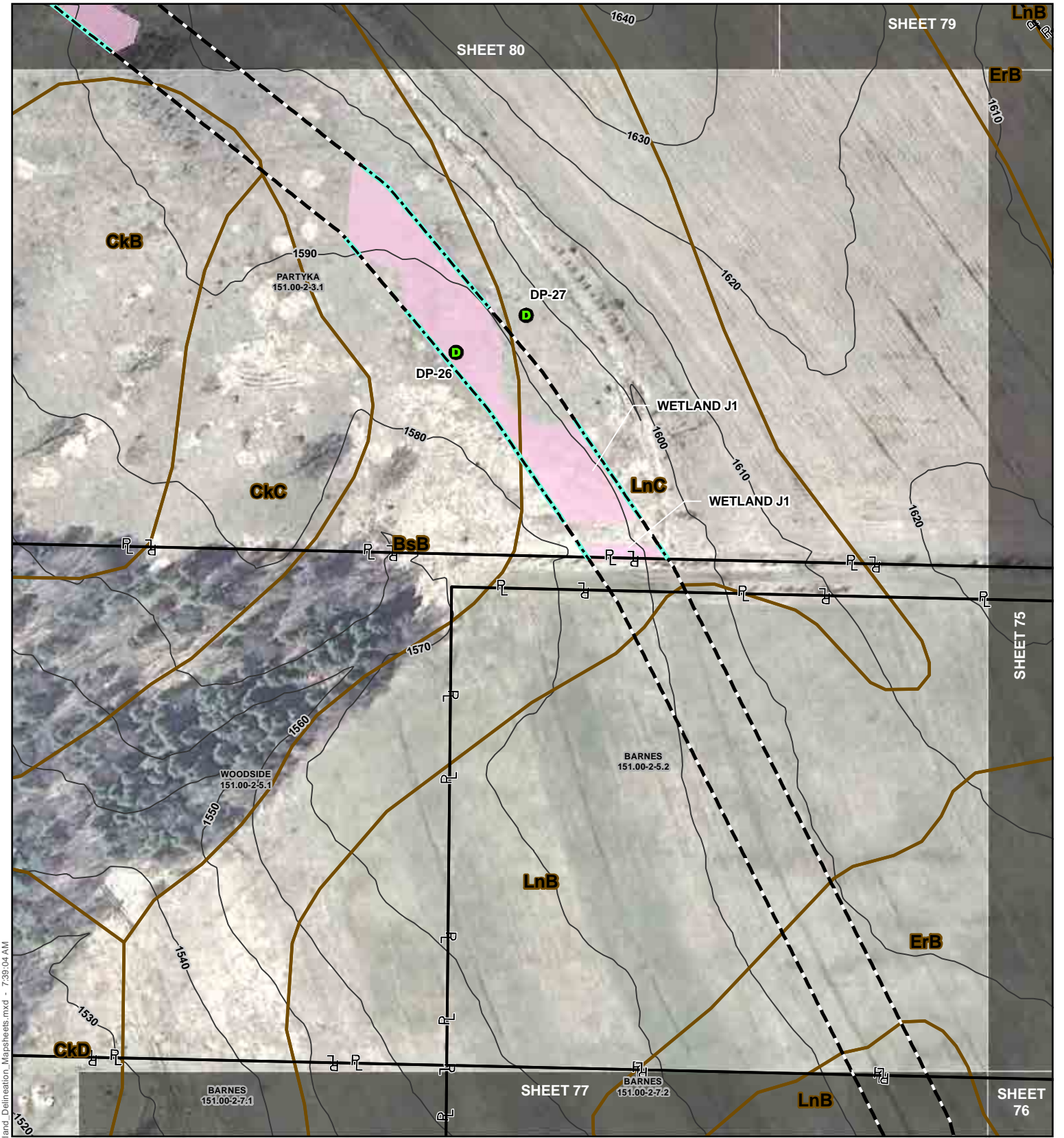


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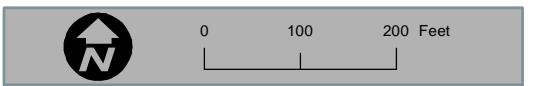


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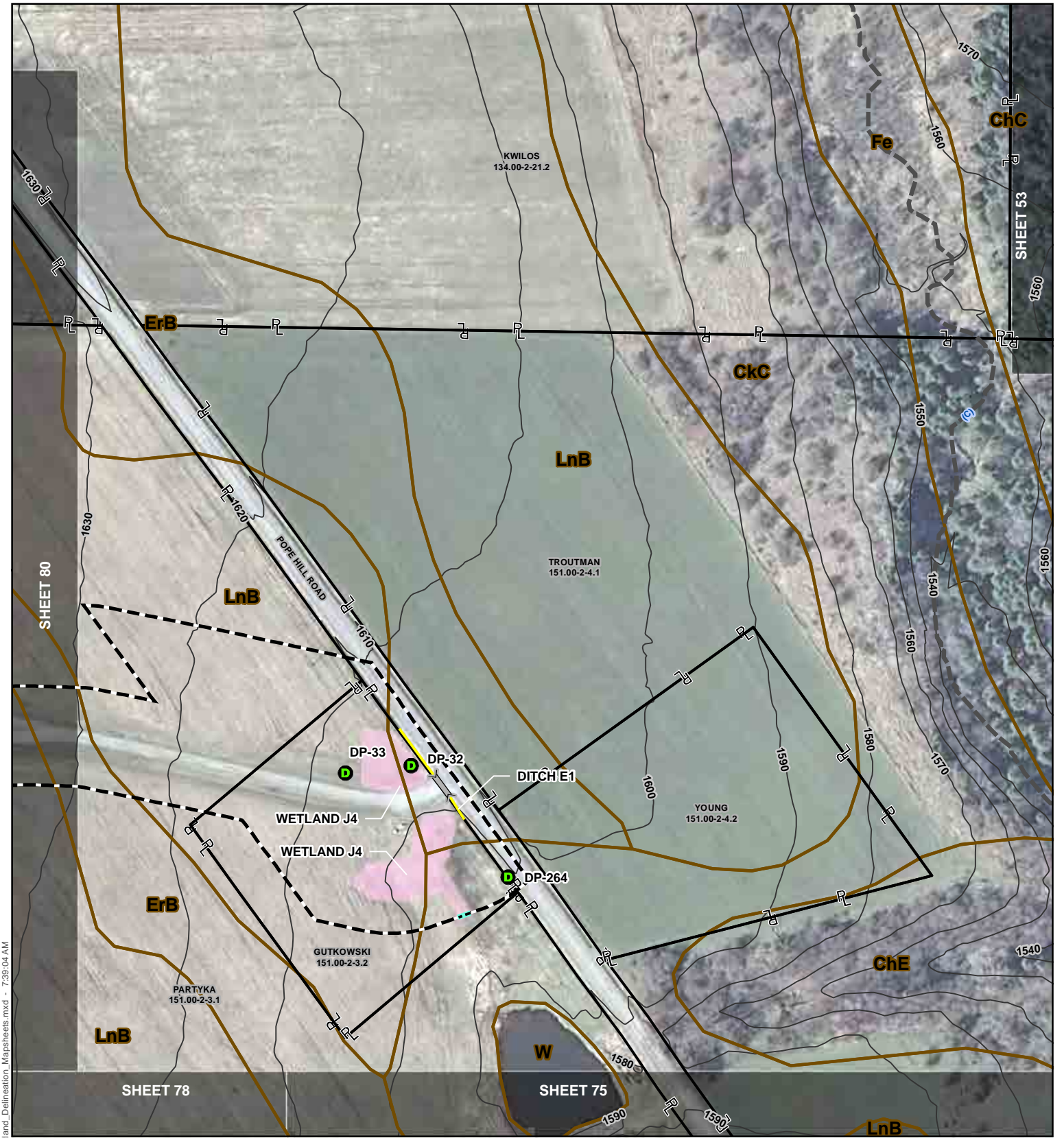
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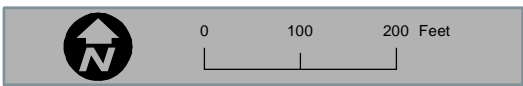
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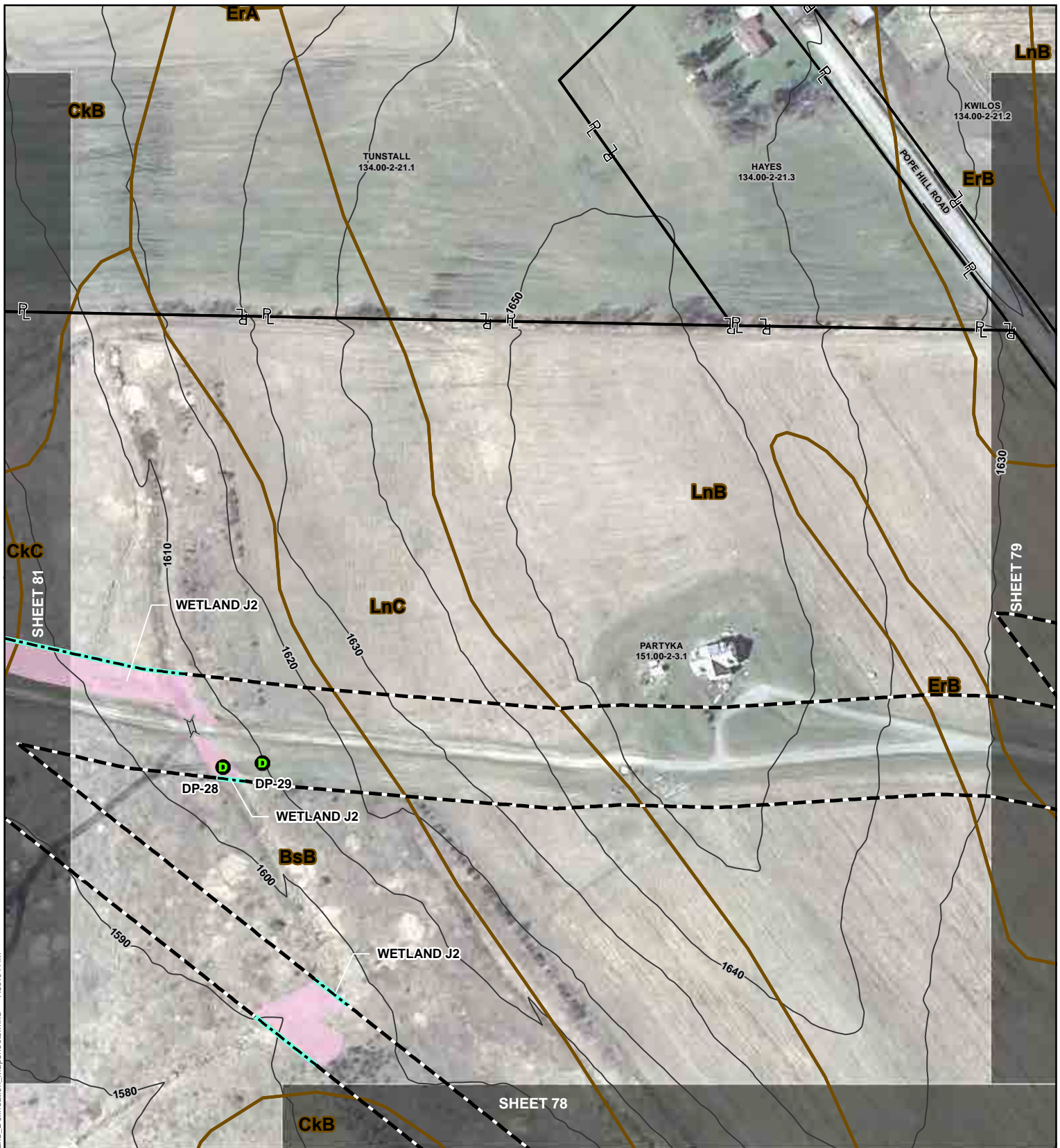
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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



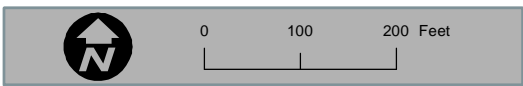
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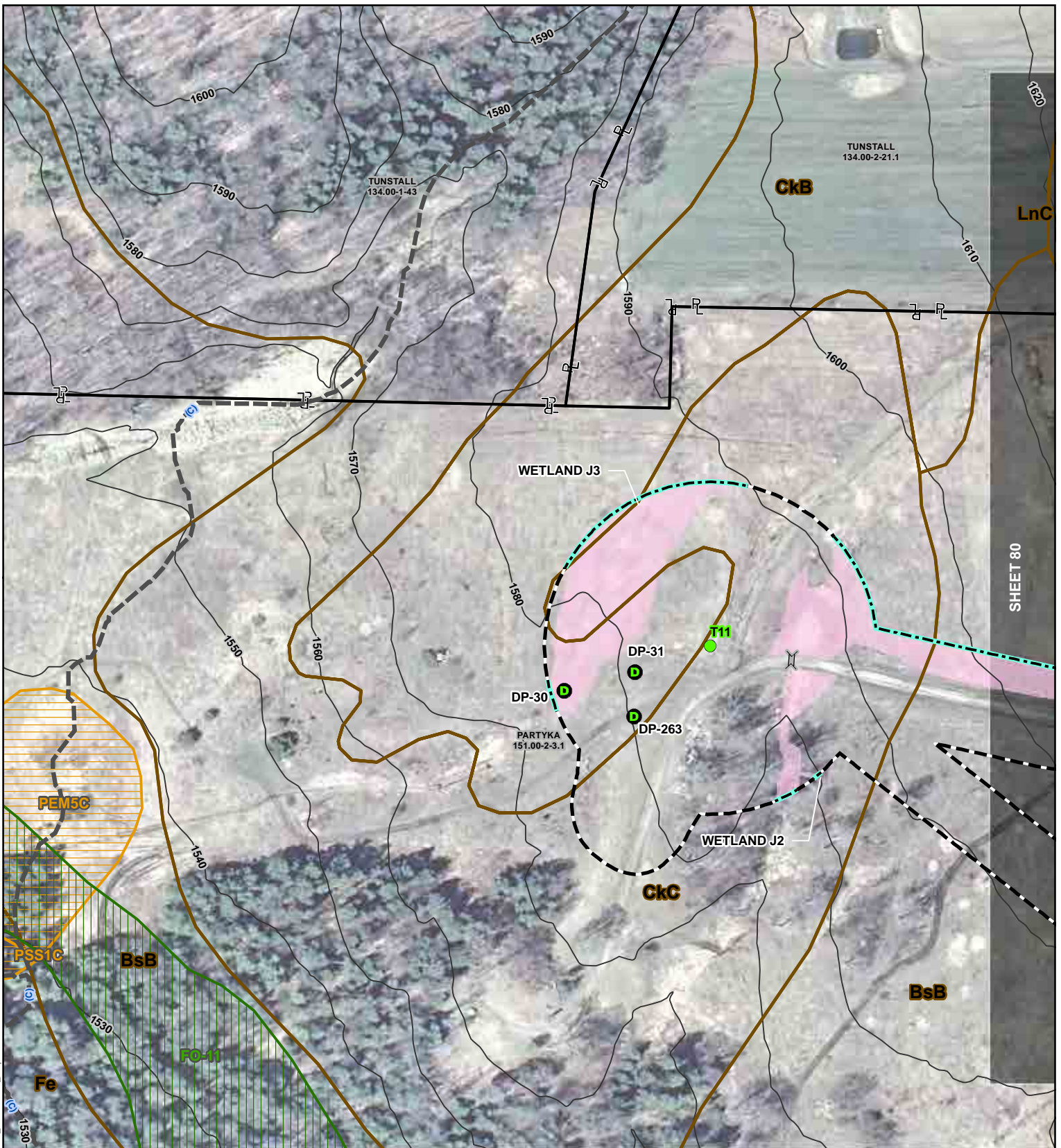
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	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
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	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



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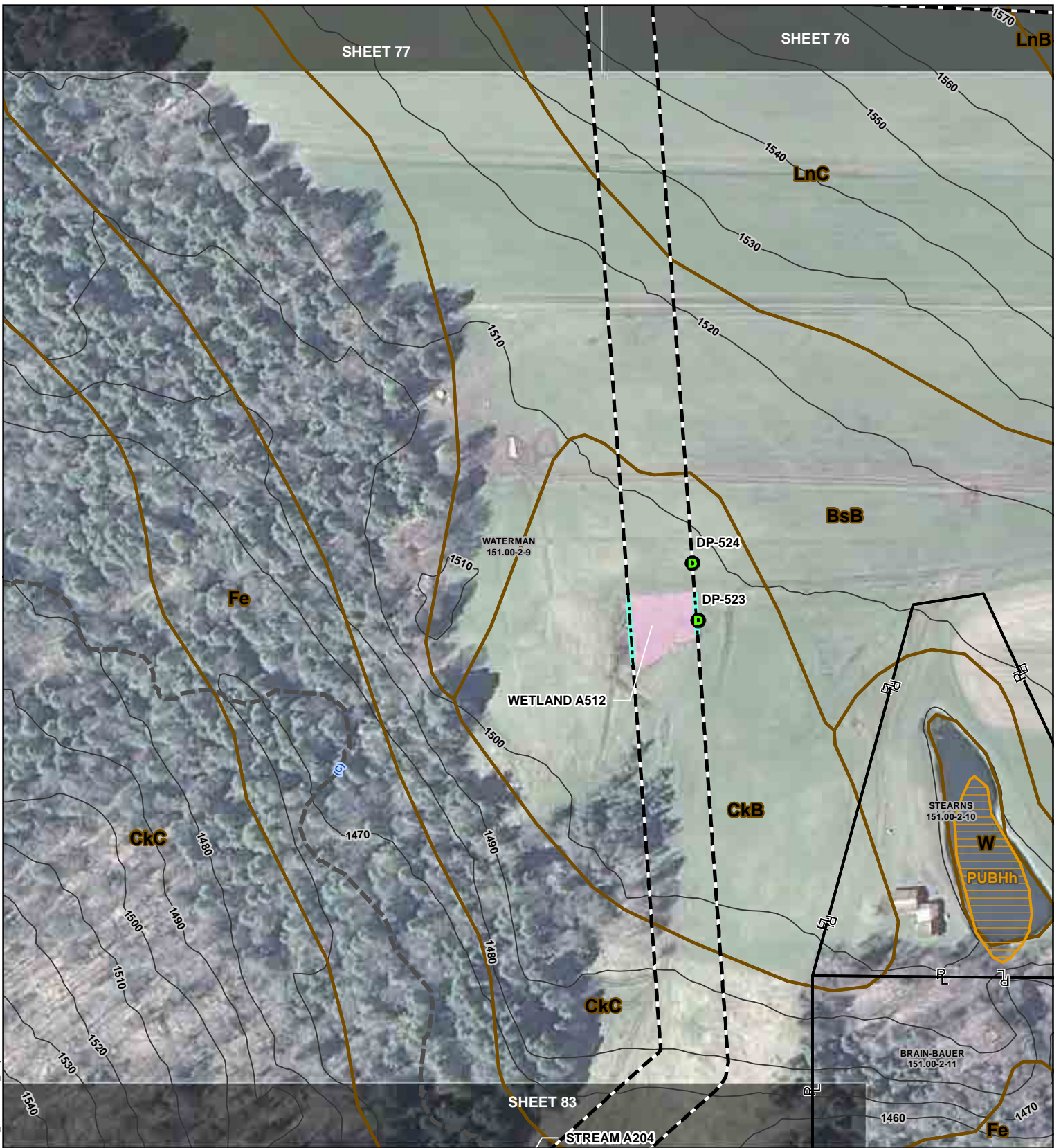


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	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016


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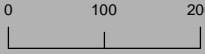
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	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
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Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016

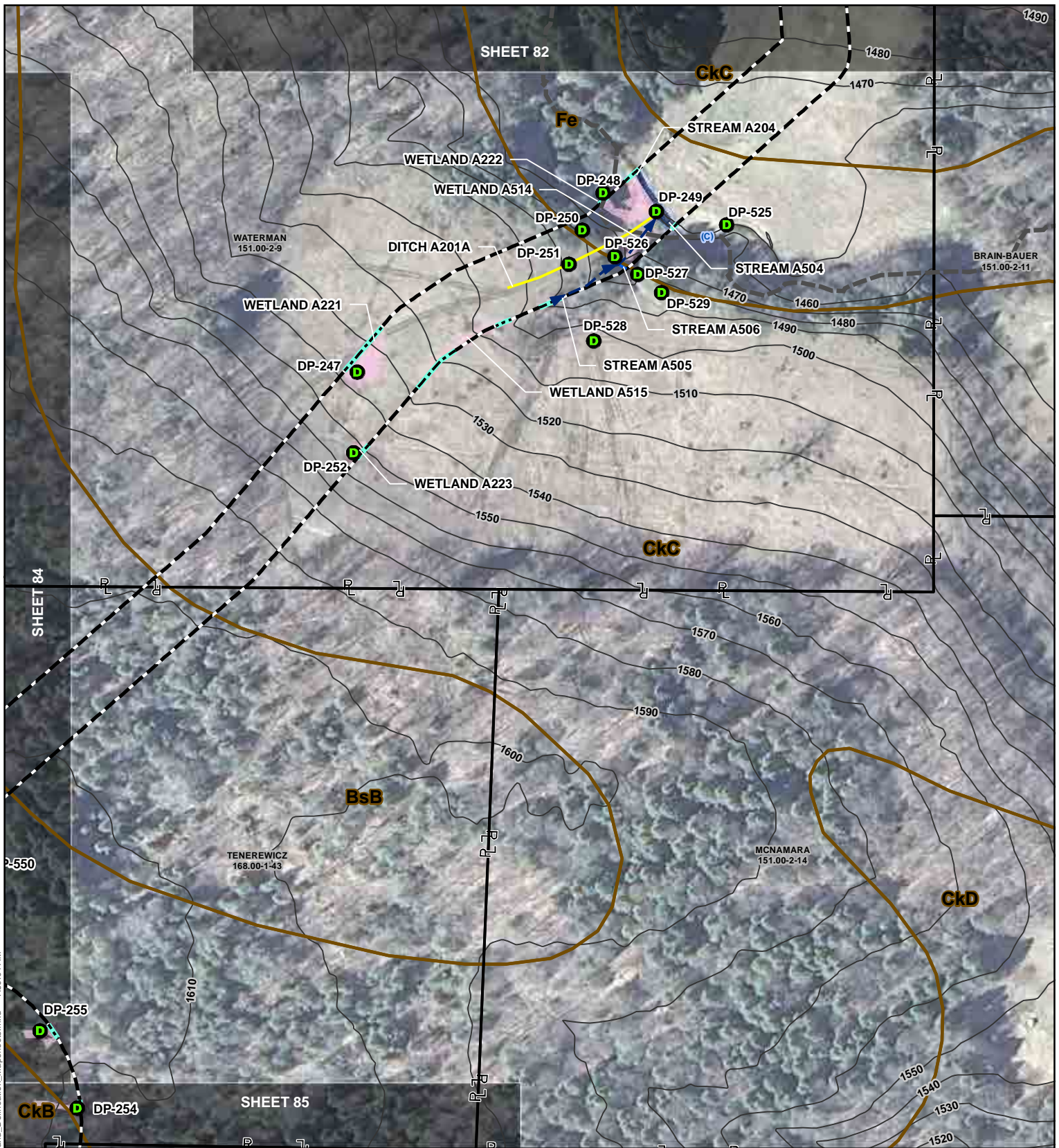


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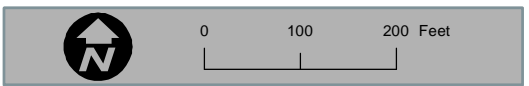


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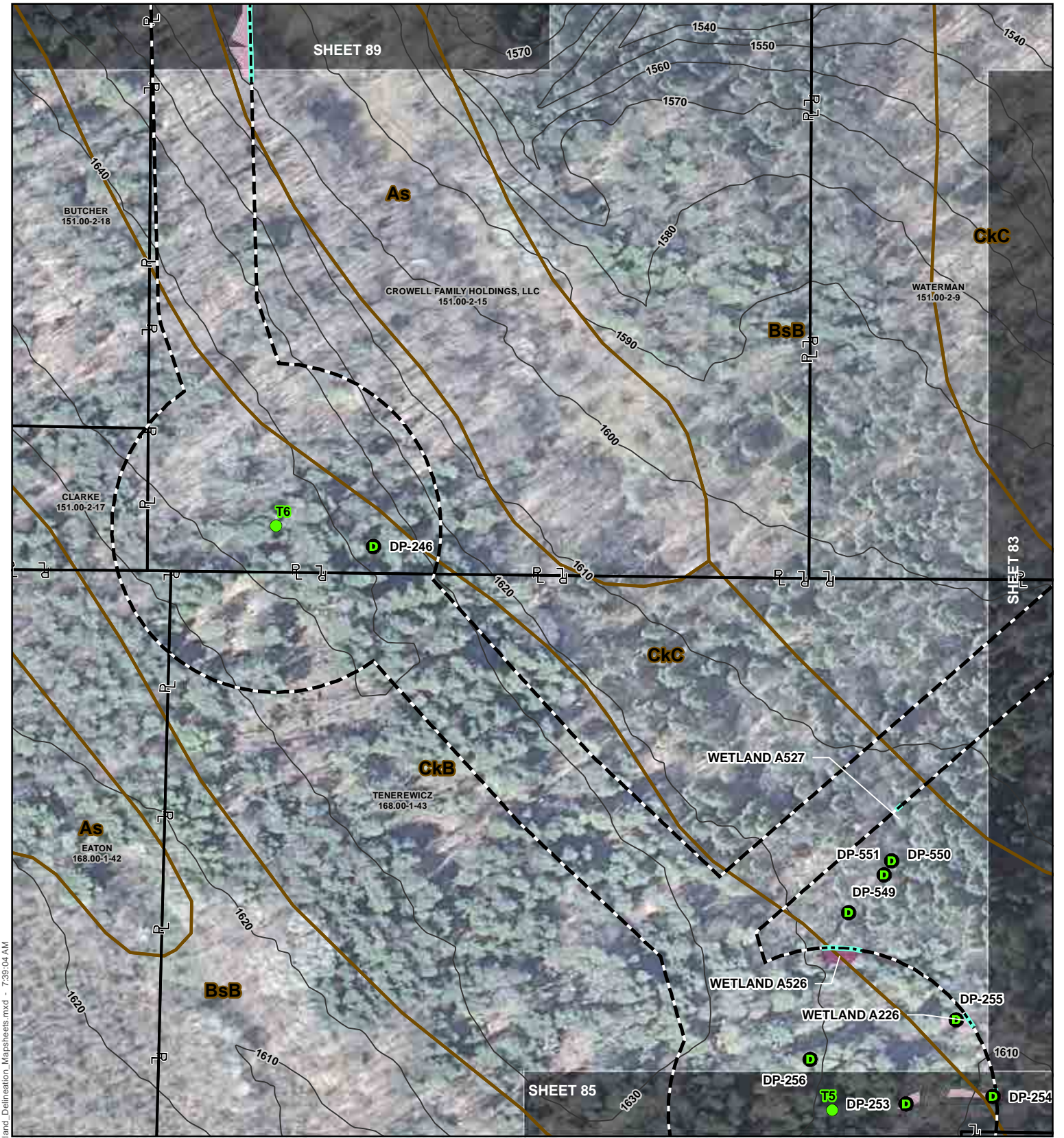


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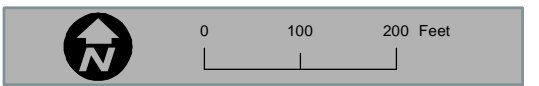


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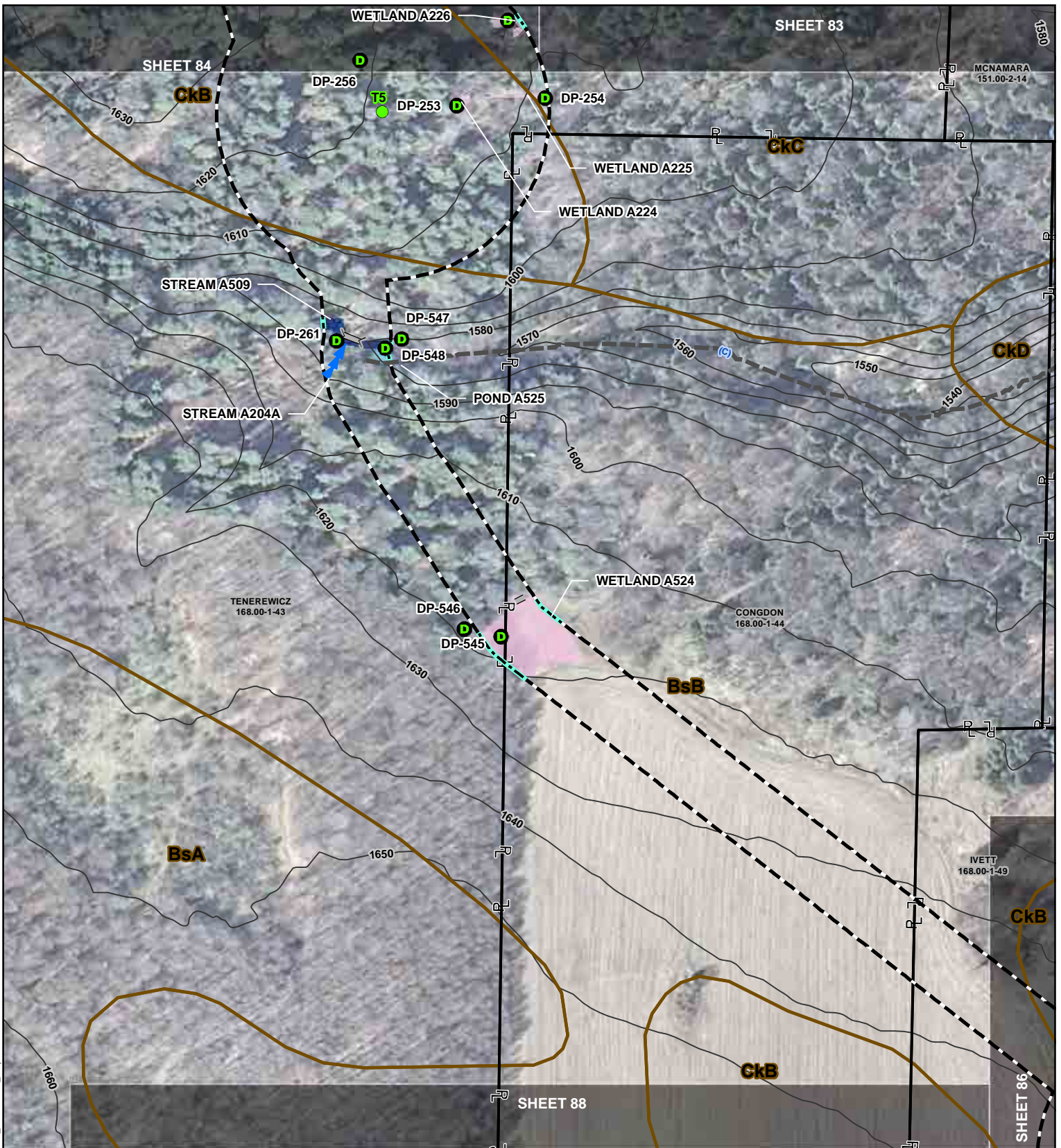
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Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



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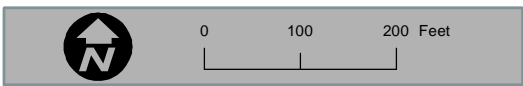
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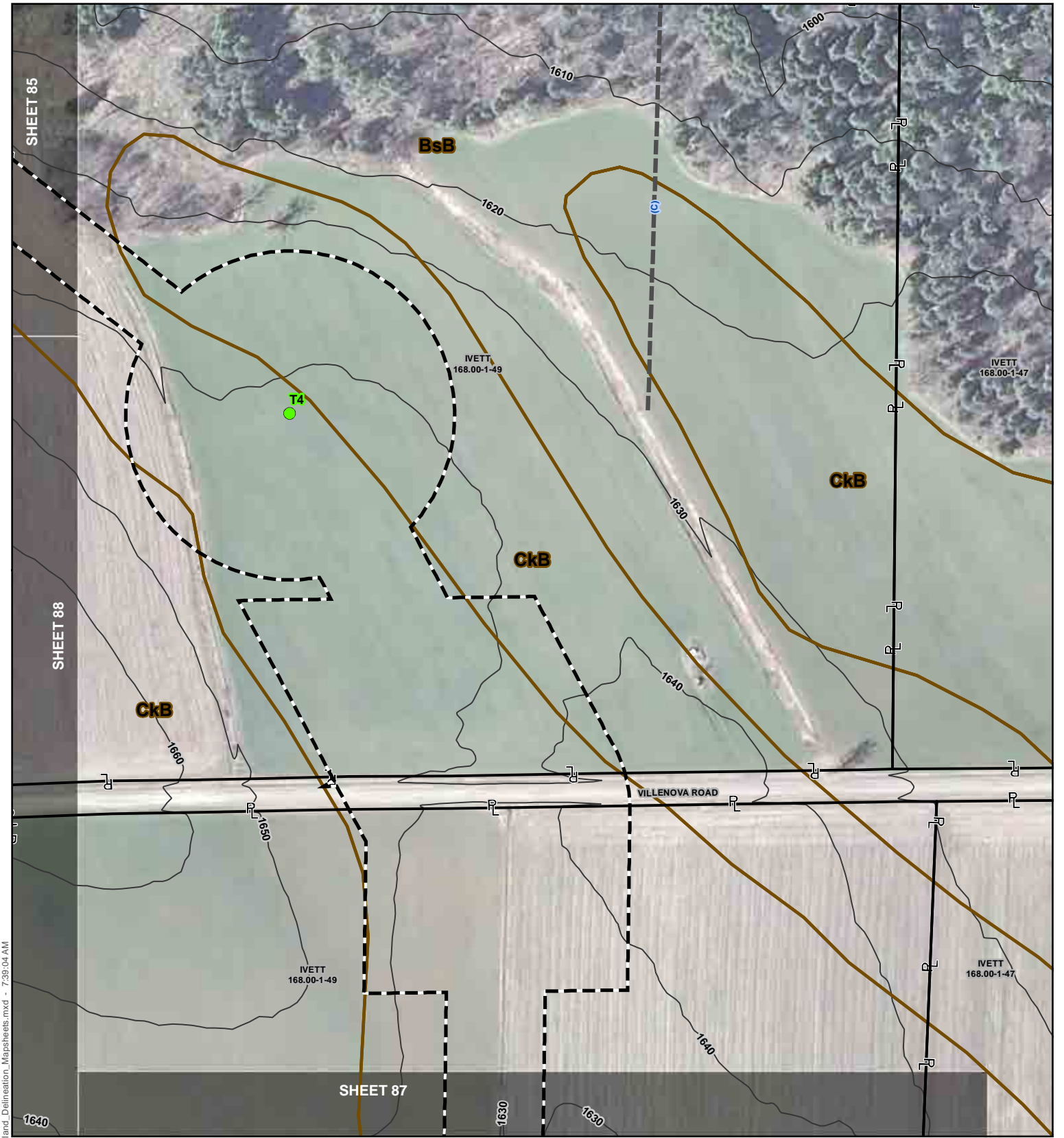
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Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016

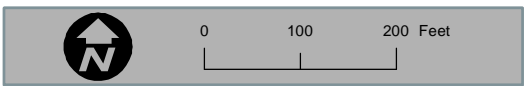



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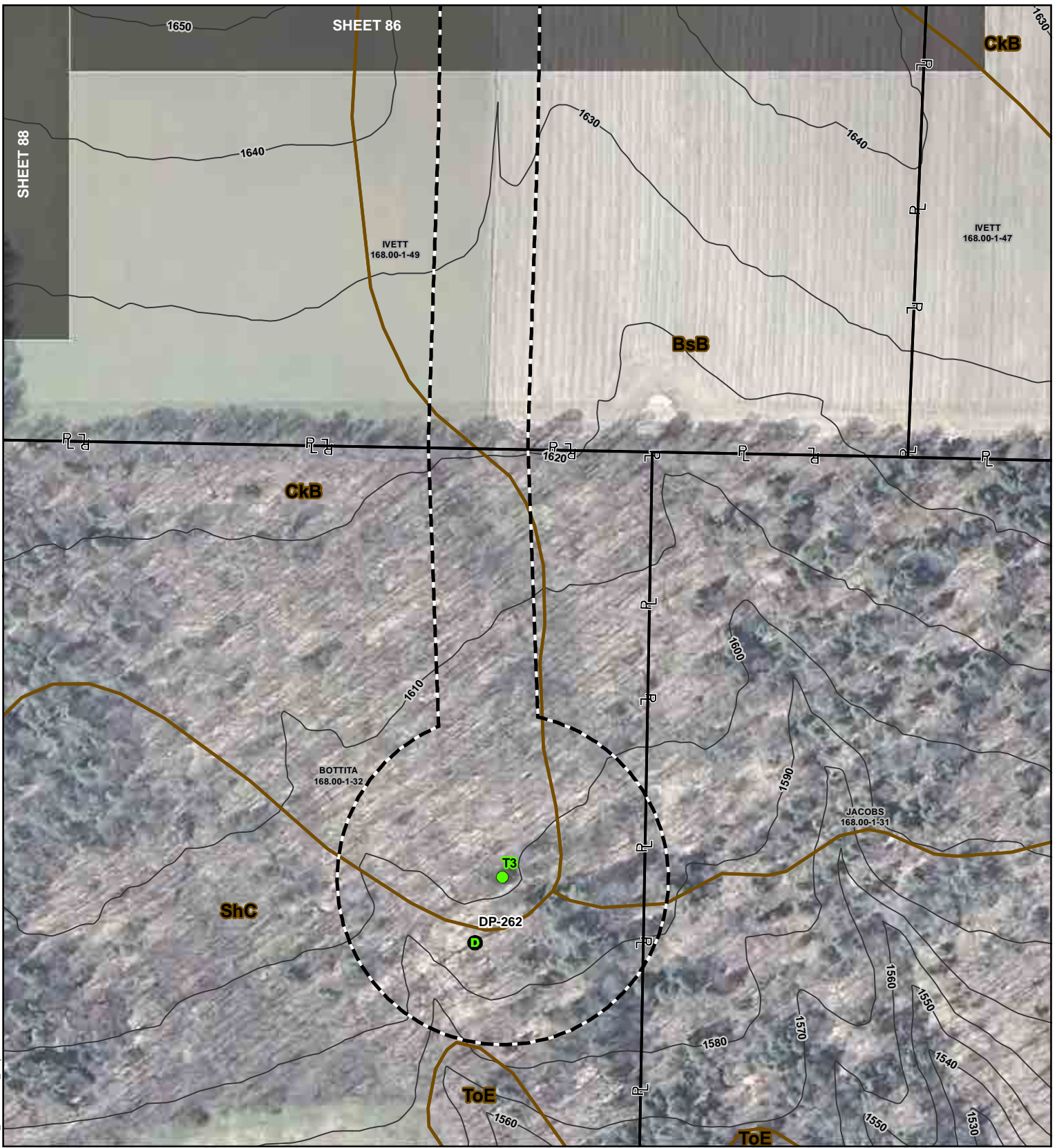
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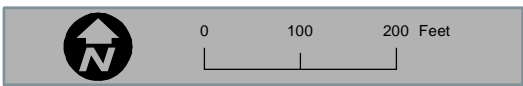
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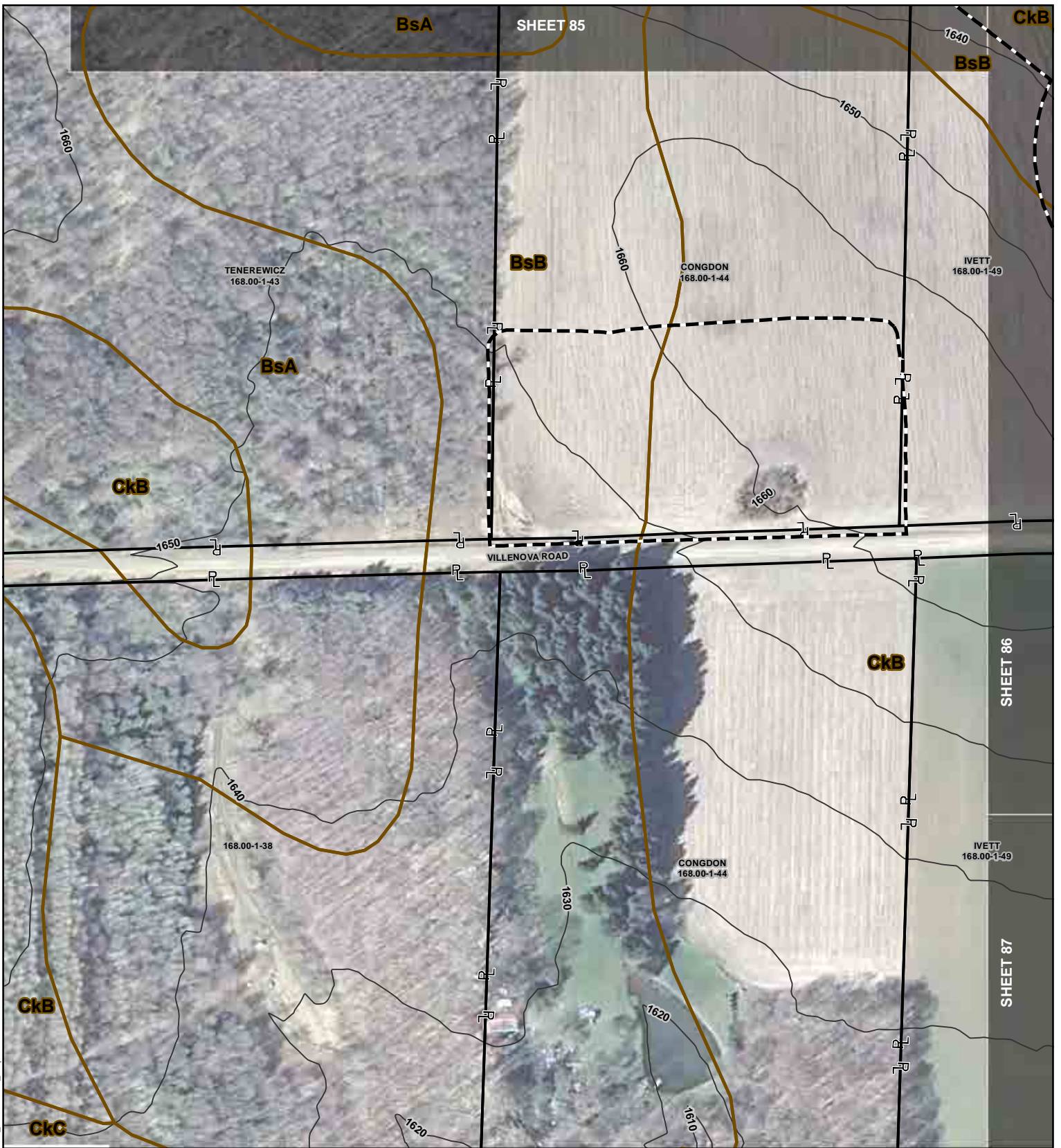
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
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| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
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| Delineated Intermittent Stream | Delineated PFO Wetland | |
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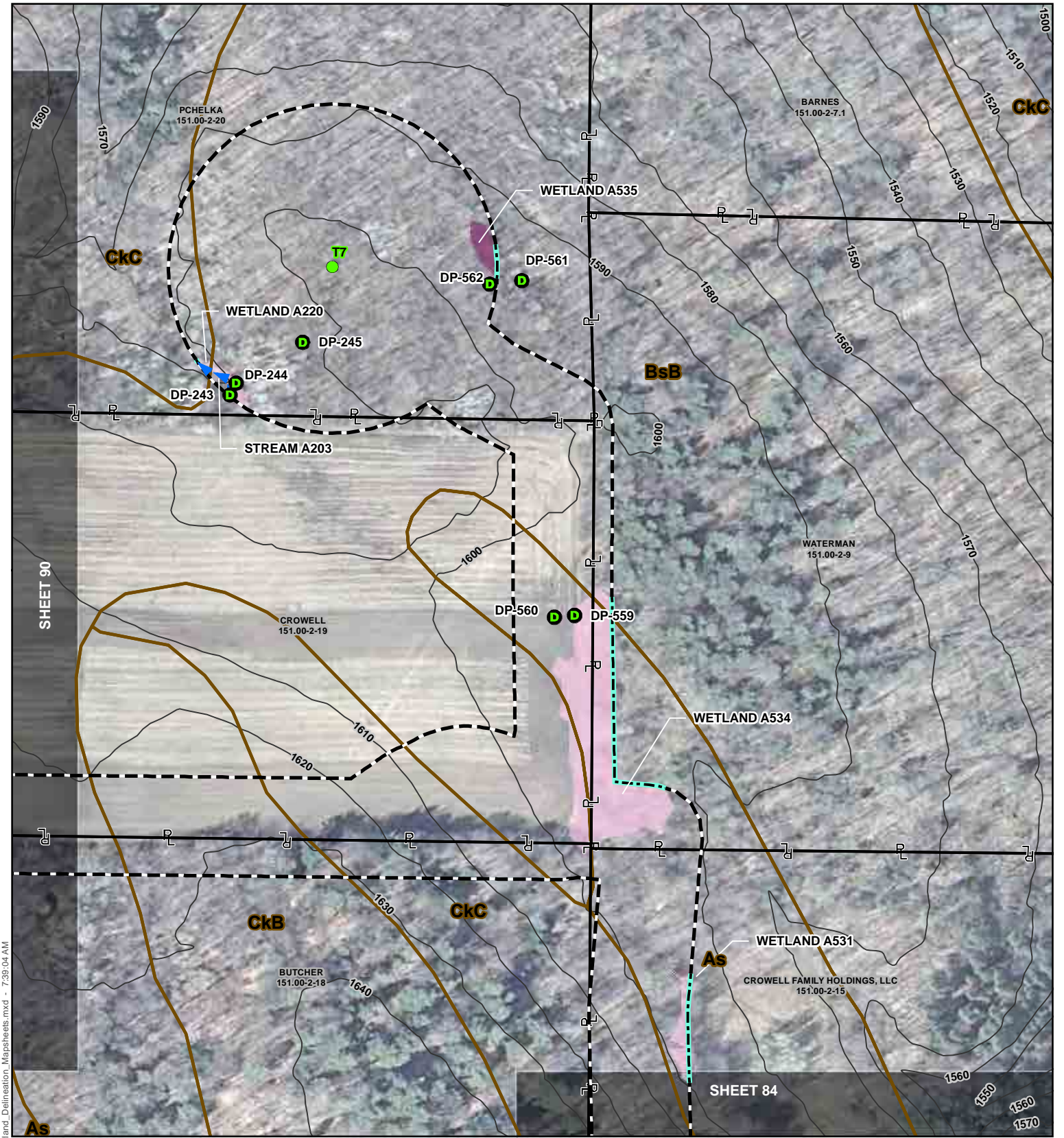


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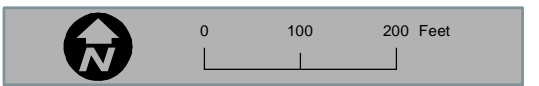
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Revision Date: 10/4/2016



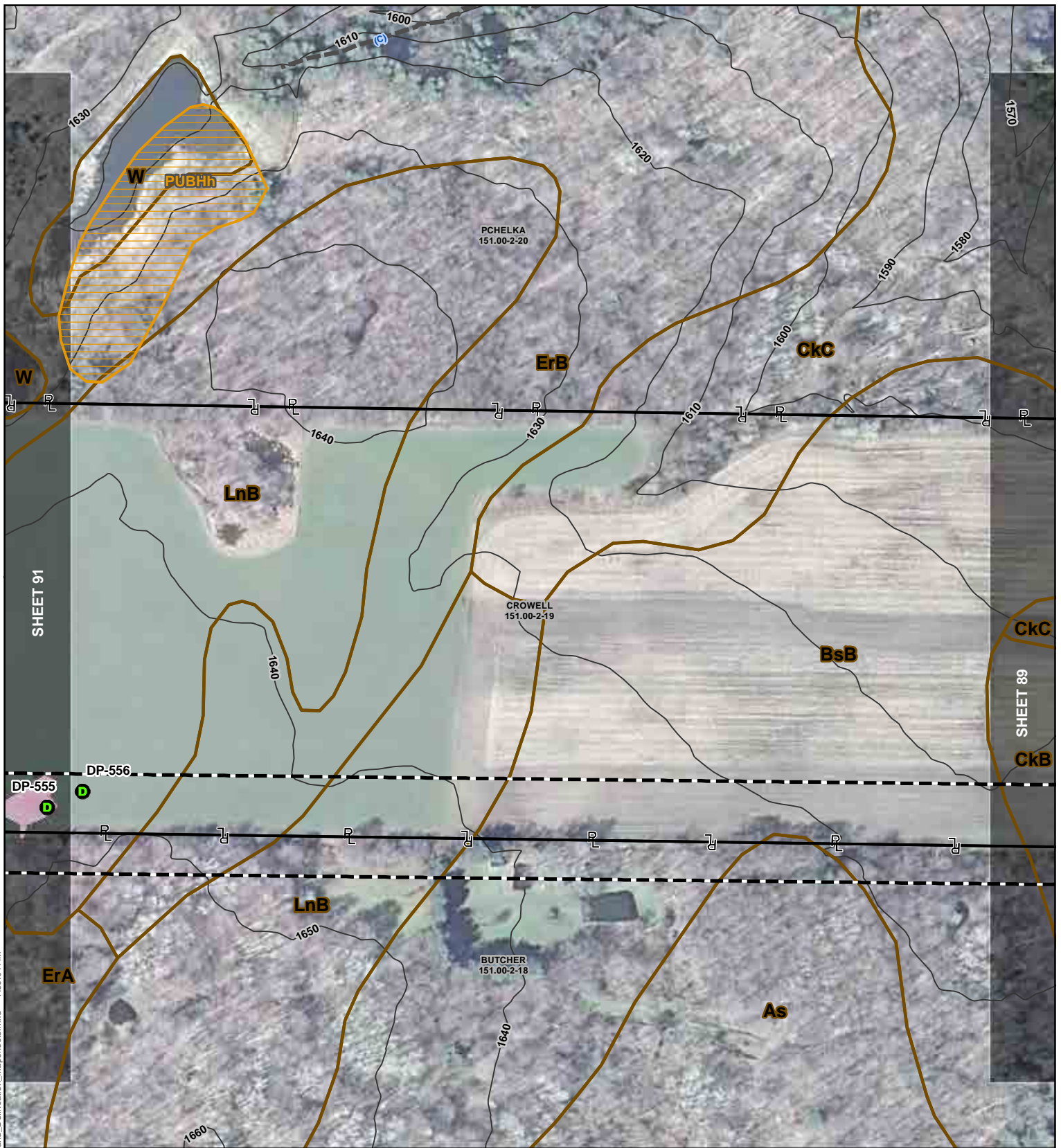
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Data Point	NYSDEC Stream (Standard)	NWI Wetland
Proposed Turbine	Contours (10ft)	NYSDEC Freshwater Wetland
Culvert	Delineated Intermittent Stream	Soil Complex Boundary
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Delineated Ephemeral Stream	Delineated PEM Wetland	Matchline
Delineated Intermittent Stream	Delineated PFO Wetland	
Delineated Perennial Stream	Delineated PSS Wetland	



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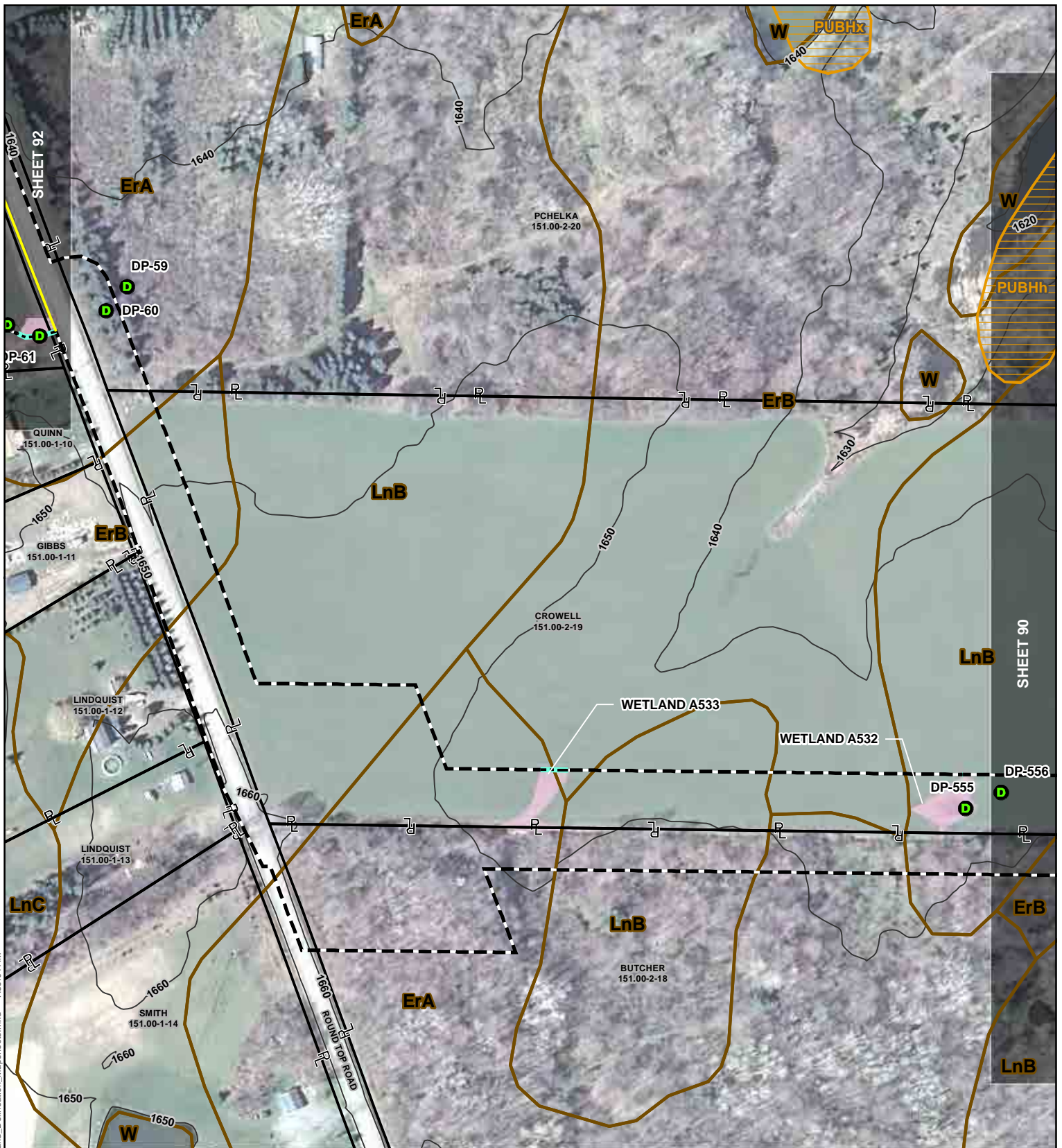
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Author: AK Aerial Date: 3/21/2012 Revision Date: 10/4/2016

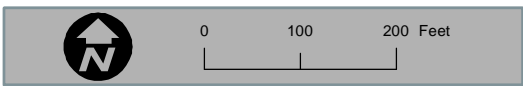
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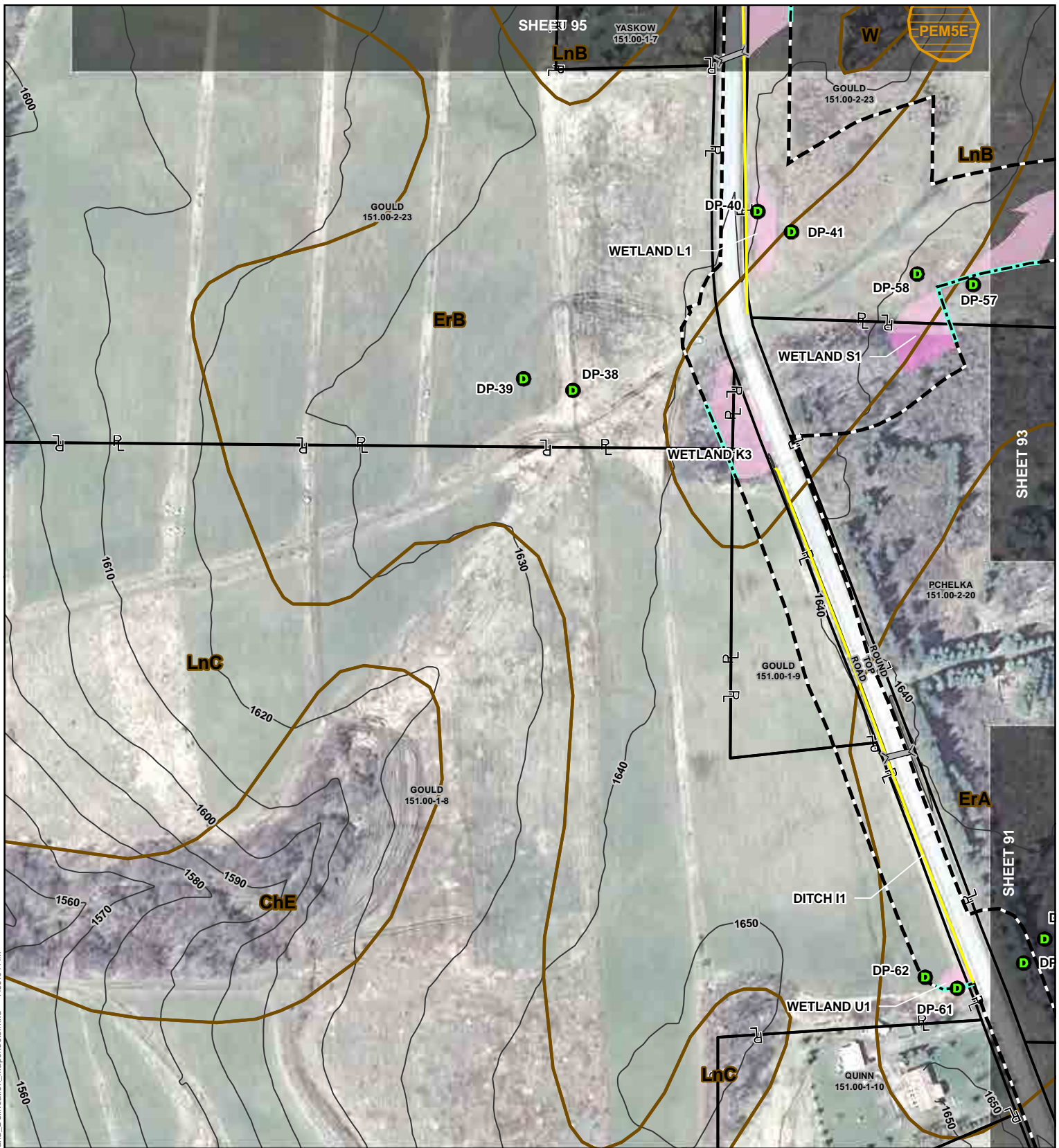
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
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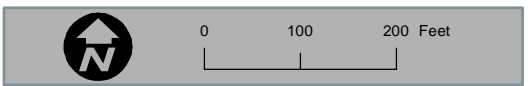
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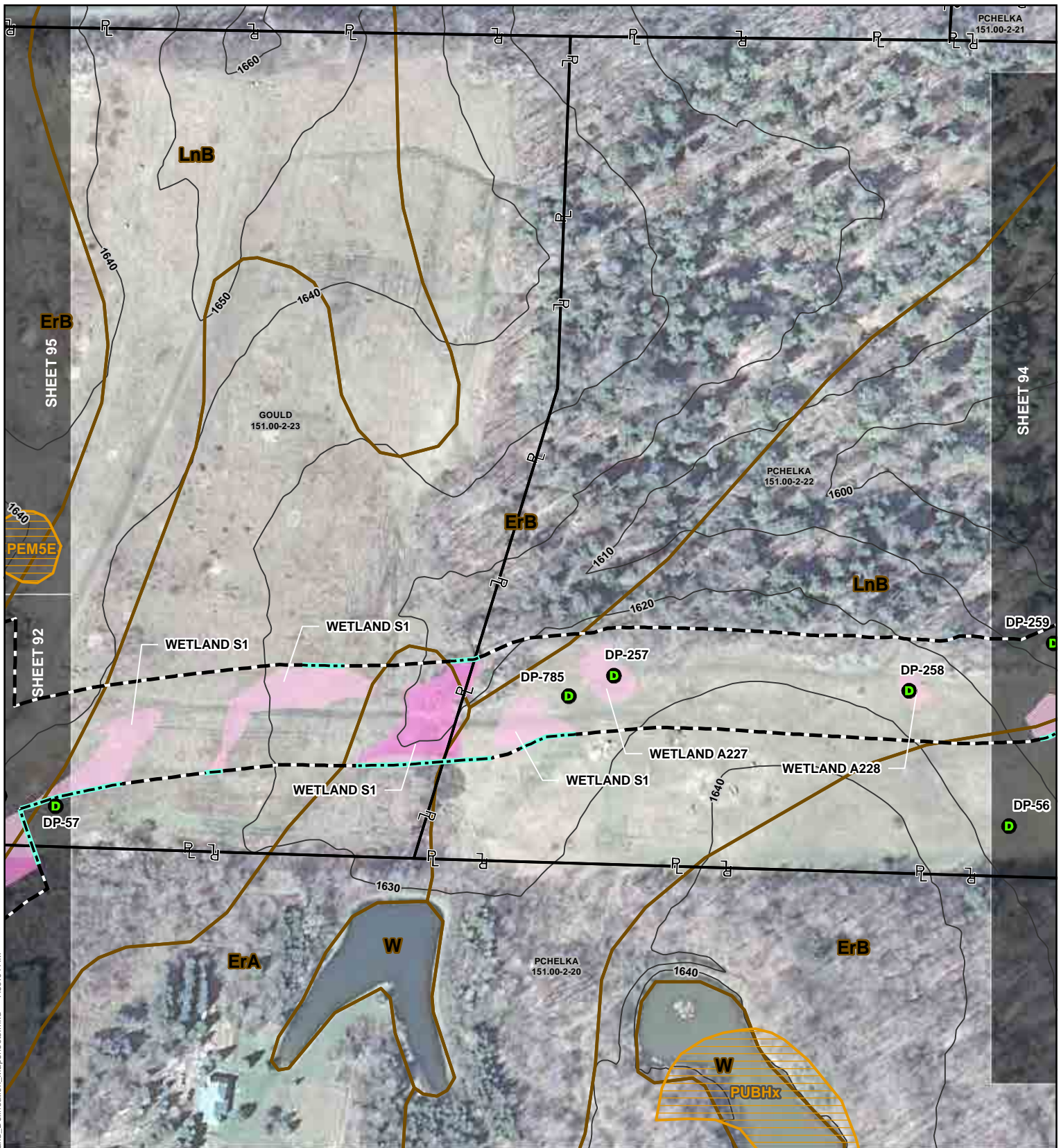
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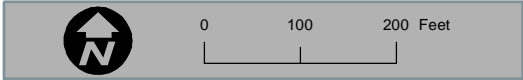
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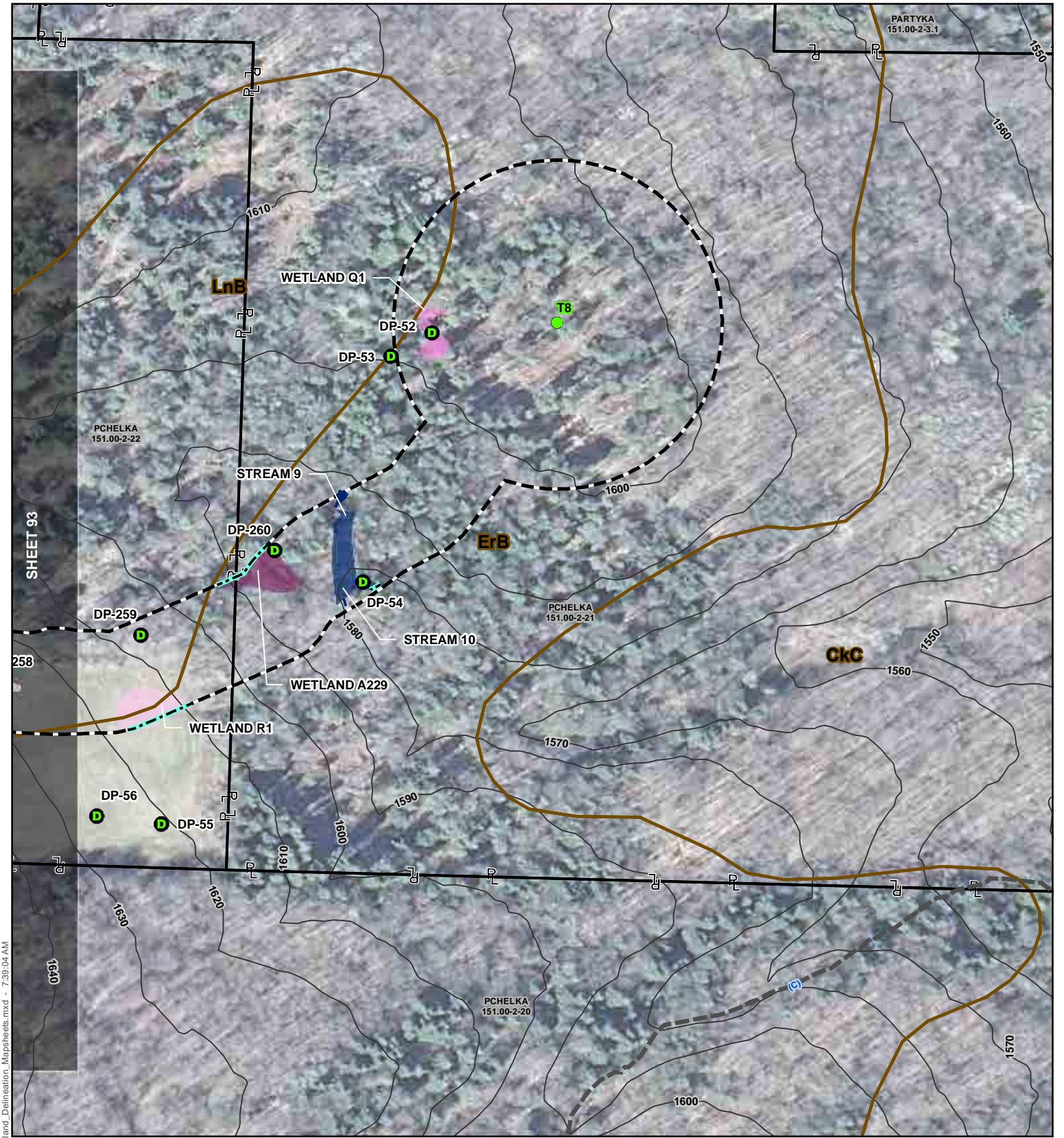
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
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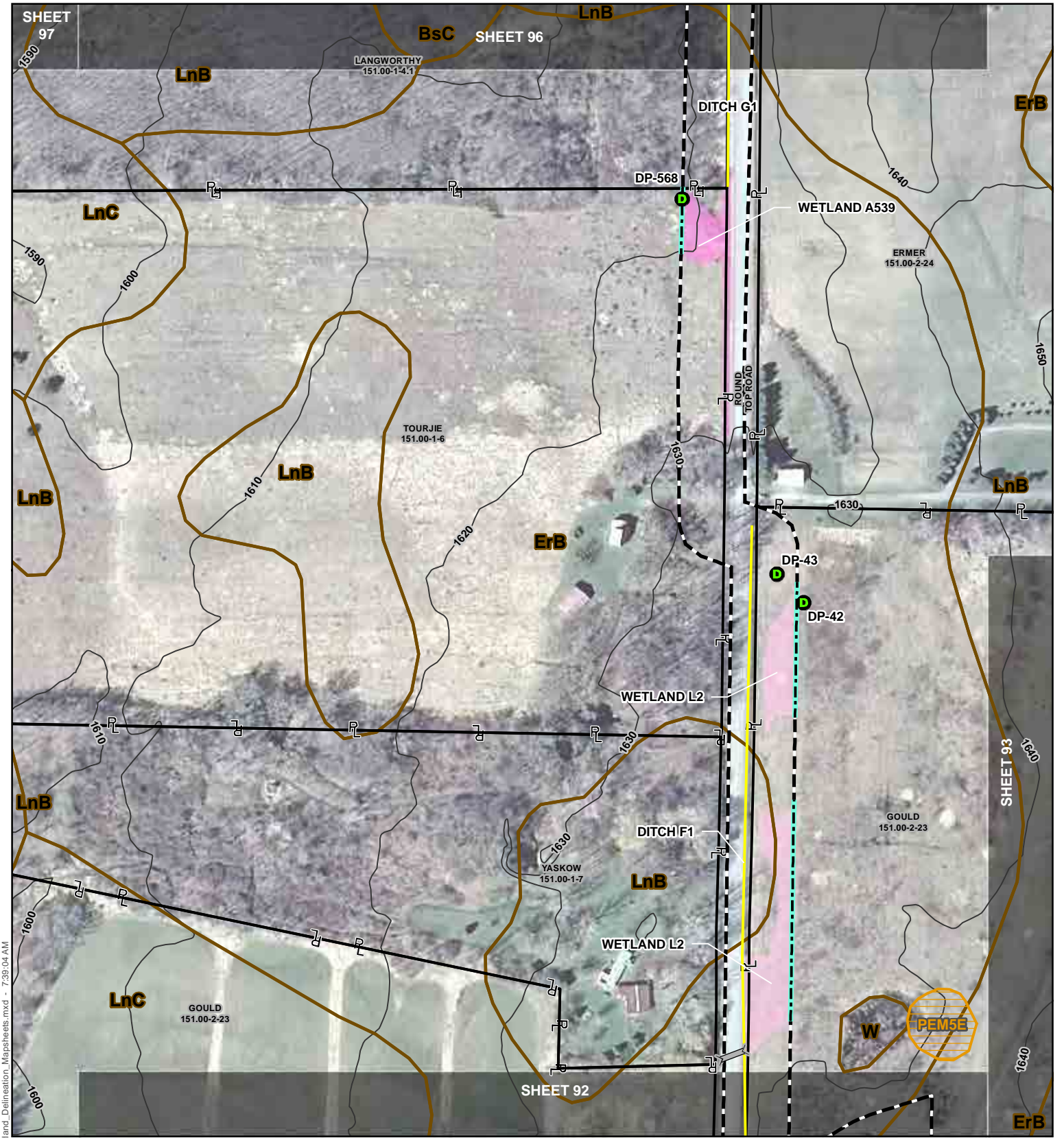
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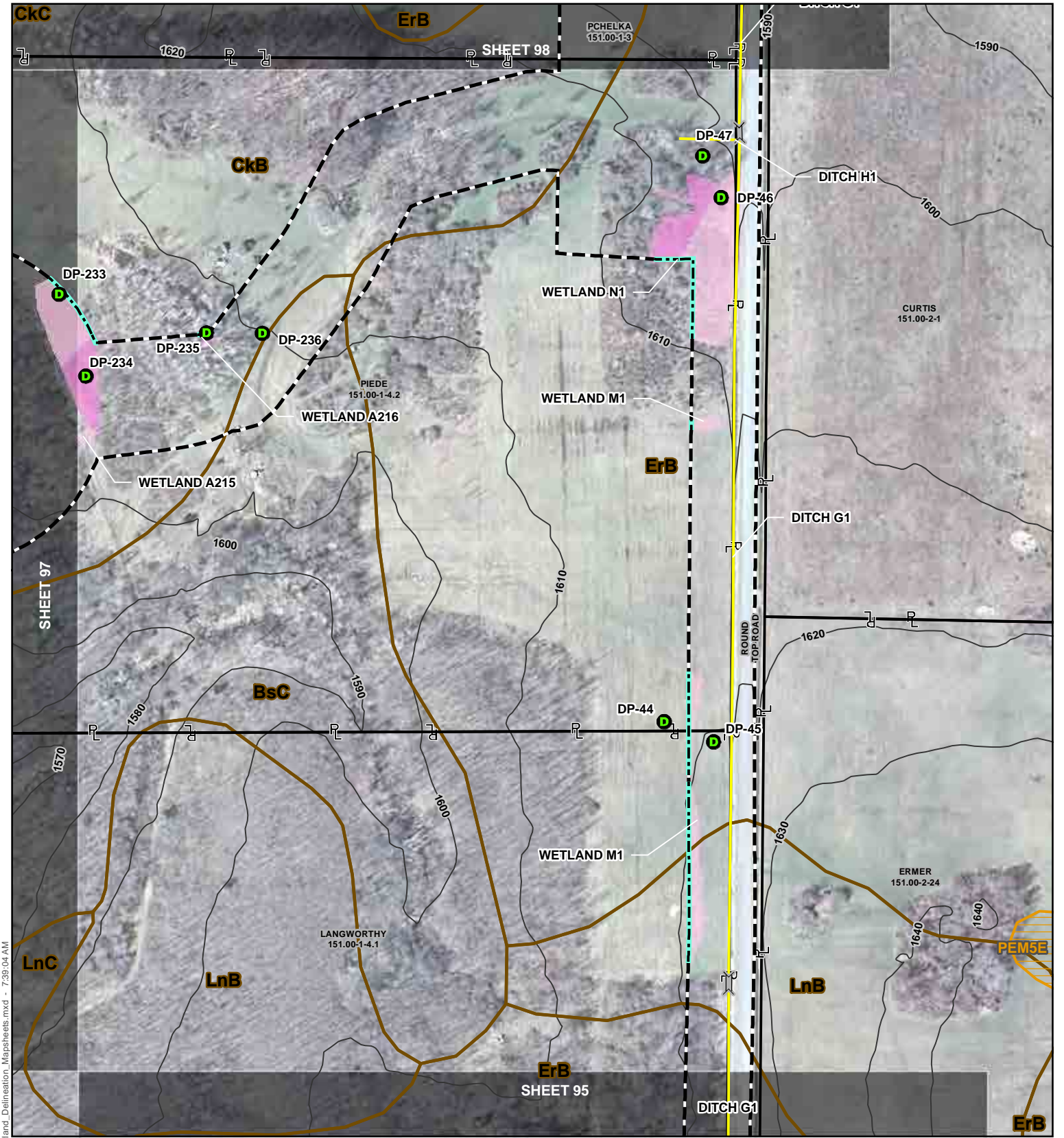
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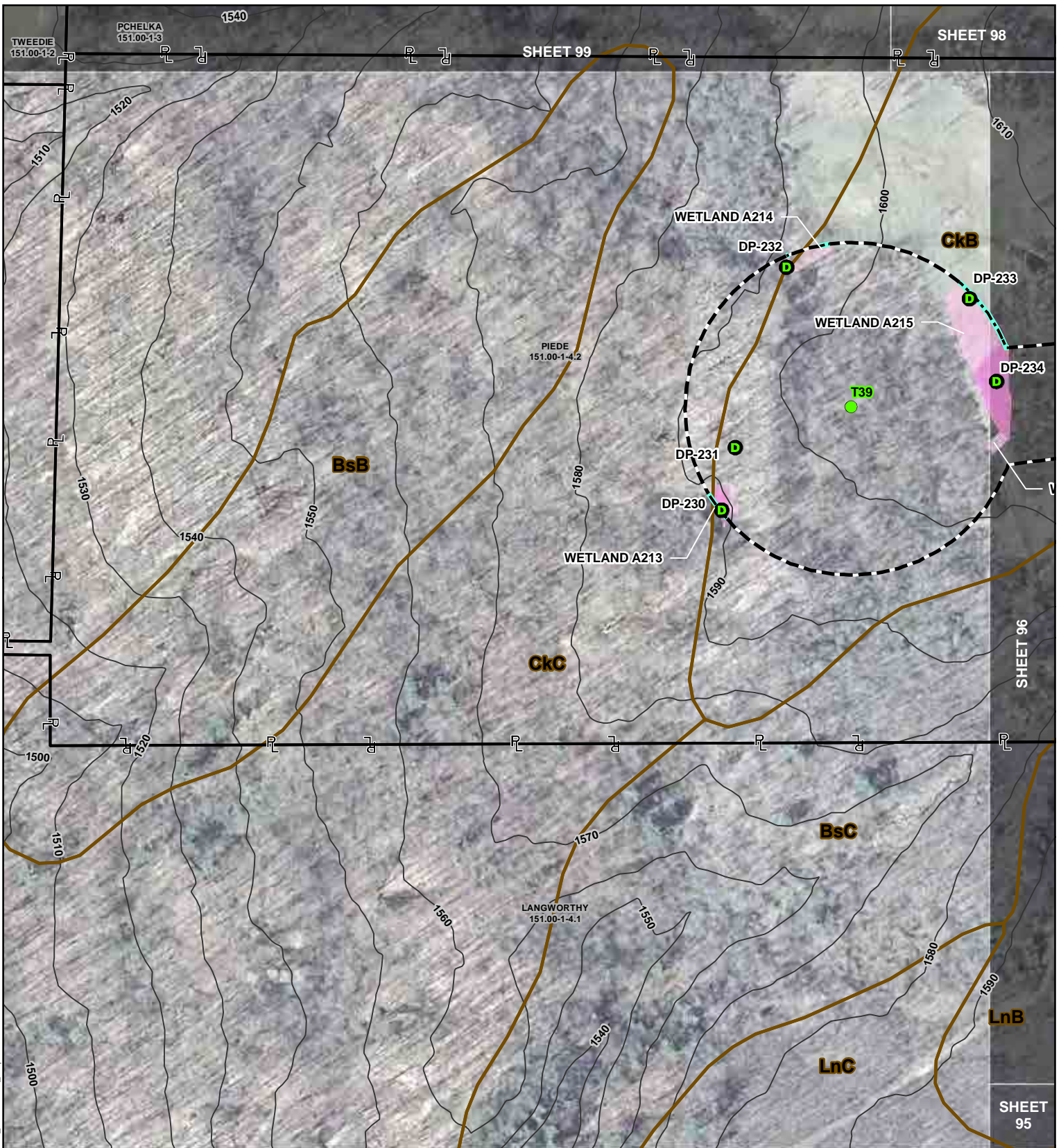
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| Data Point | NYSDEC Stream (Standard) | NWI Wetland |
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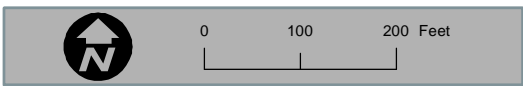



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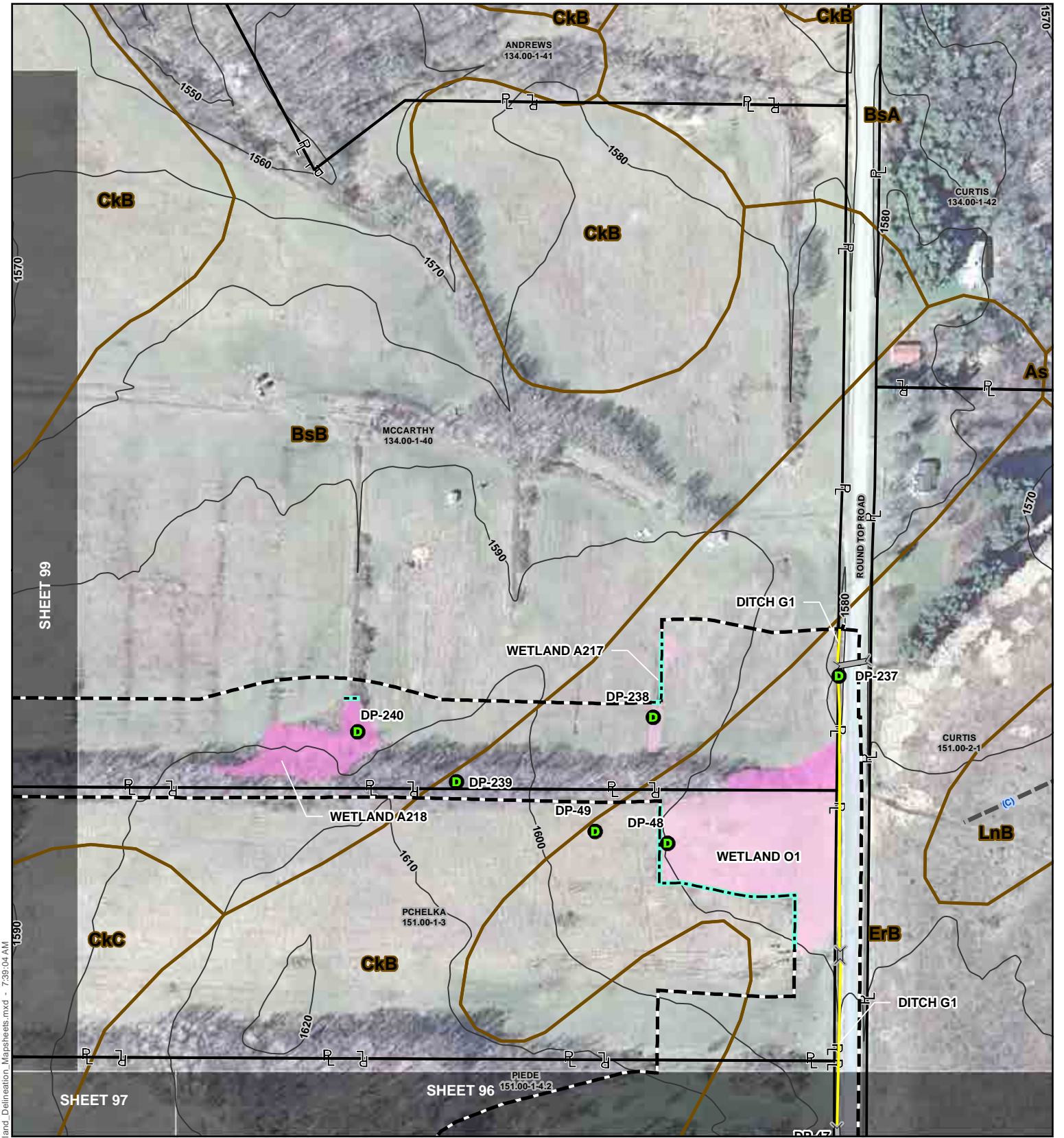
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	Data Point		NYSDEC Stream (Standard)		NW1 Wetland
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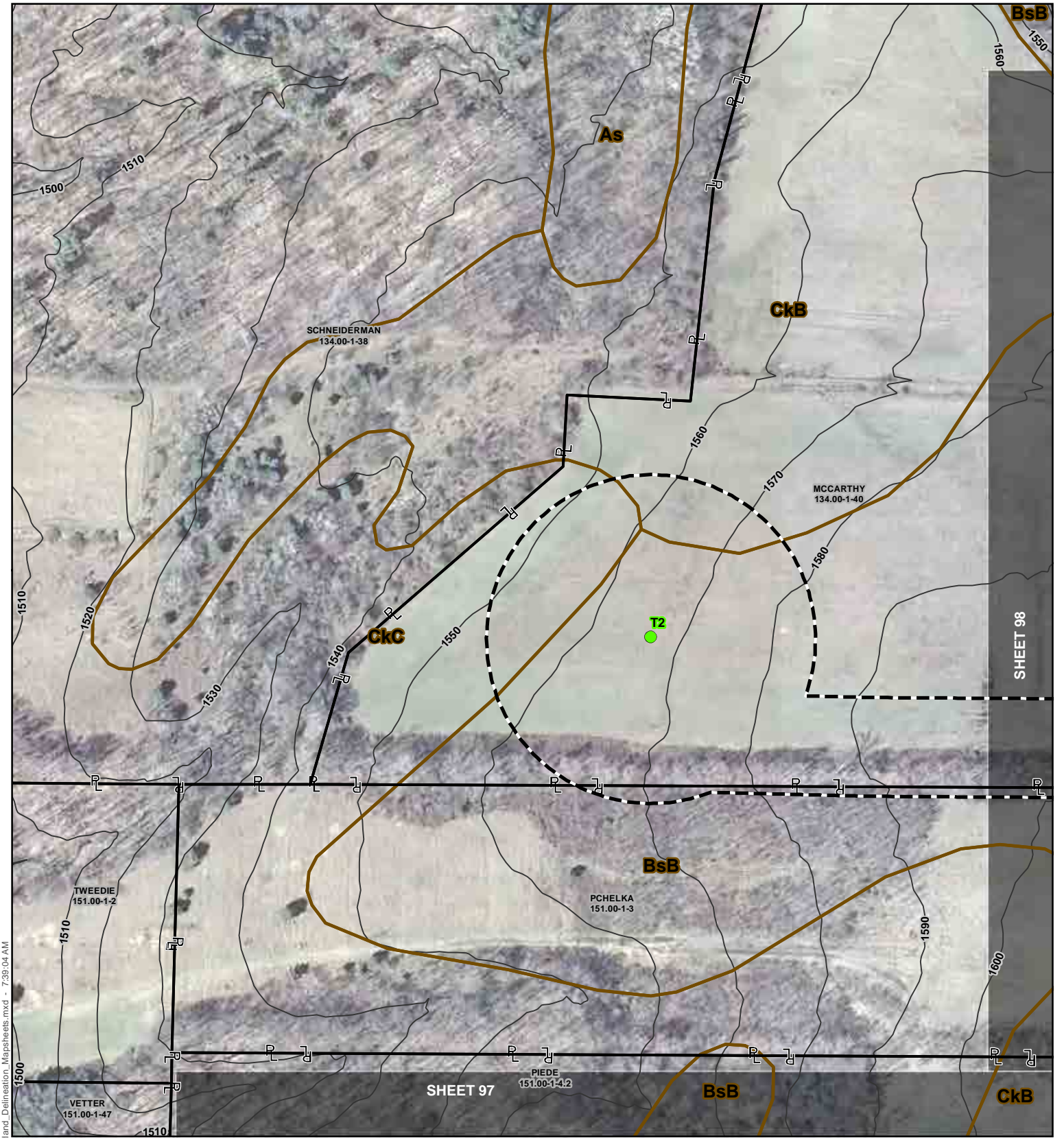
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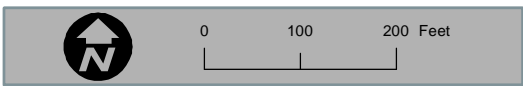
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| Data Point | NYSDEC Stream (Standard) | NW1 Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
| Delineated Jurisdictional Ditch | Delineated Pond | Project Study Limits |
| Delineated Ephemeral Stream | Delineated PEM Wetland | Matchline |
| Delineated Intermittent Stream | Delineated PFO Wetland | |
| Delineated Perennial Stream | Delineated PSS Wetland | |

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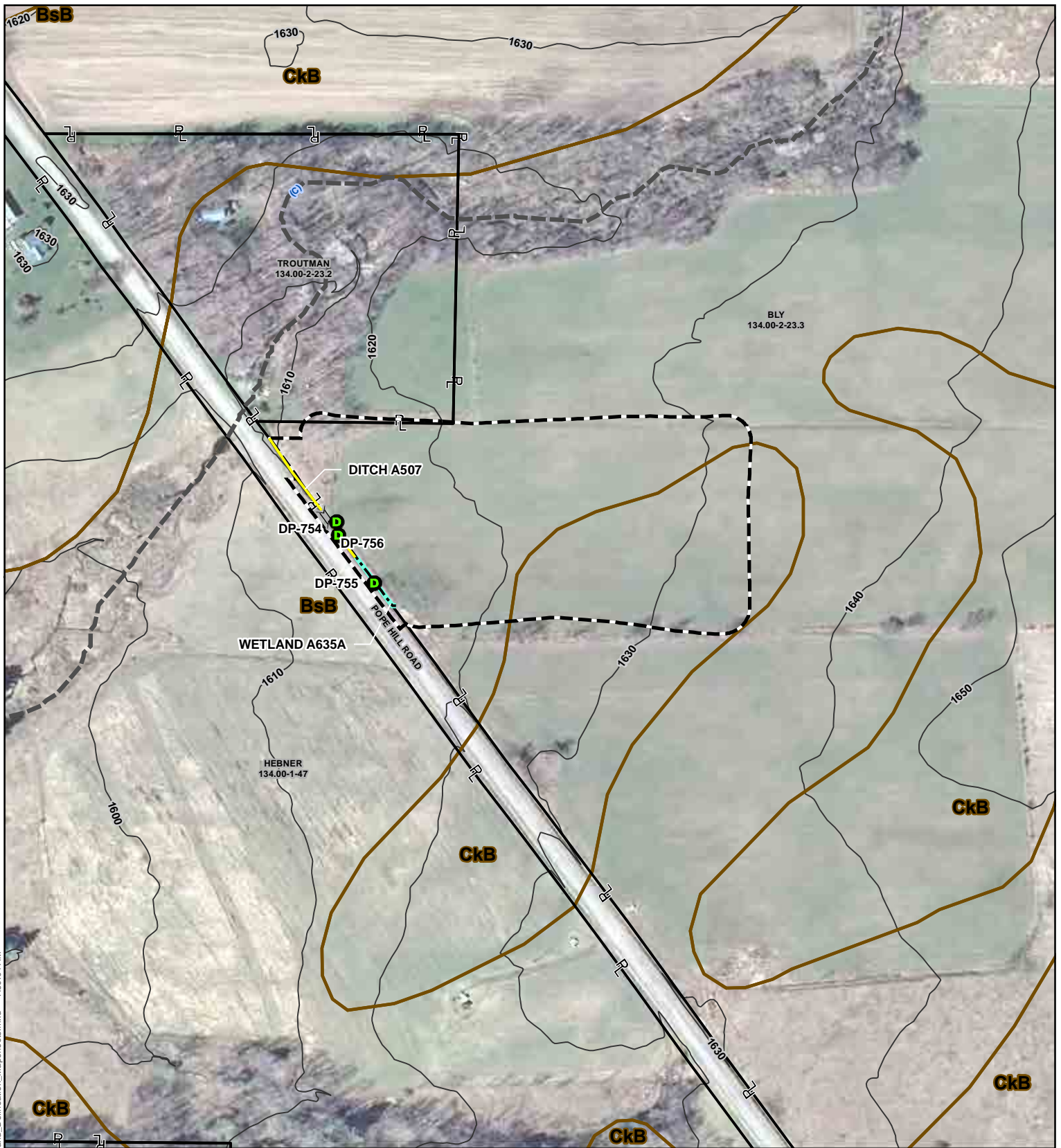
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|---------------------------------|--------------------------------|---------------------------|
| Data Point | NYSDEC Stream (Standard) | NWSI Wetland |
| Proposed Turbine | Contours (10ft) | NYSDEC Freshwater Wetland |
| Culvert | Delineated Intermittent Stream | Soil Complex Boundary |
| Delineation Continuation Line | Delineated Perennial Stream | Parcel |
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| Delineated Perennial Stream | Delineated PSS Wetland | |



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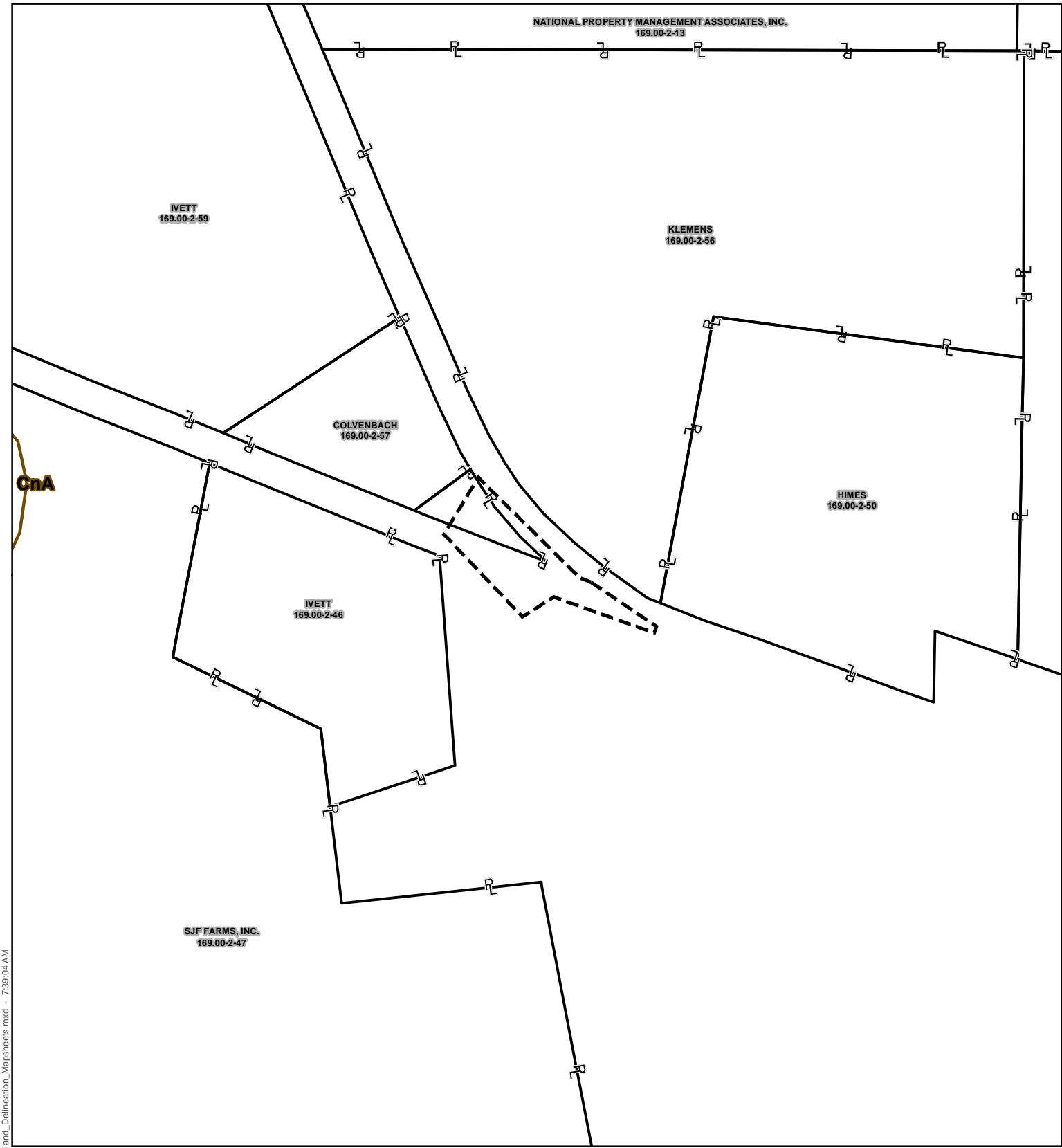


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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		

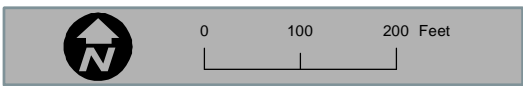



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	Data Point		NYSDEC Stream (Standard)		NWI Wetland
	Proposed Turbine		Contours (10ft)		NYSDEC Freshwater Wetland
	Culvert		Delineated Intermittent Stream		Soil Complex Boundary
	Delineation Continuation Line		Delineated Perennial Stream		Parcel
	Delineated Jurisdictional Ditch		Delineated Pond		Project Study Limits
	Delineated Ephemeral Stream		Delineated PEM Wetland		Matchline
	Delineated Intermittent Stream		Delineated PFO Wetland		
	Delineated Perennial Stream		Delineated PSS Wetland		



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WETLAND DELINEATION REPORT
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TABLES

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A10	22	DP-103, DP-104	PEM	42.440918	-79.128854	9,683	0.22	CkB	0
A200	55 & 56	DP-202, DP-203	PFO	42.411127	-79.128120	11,370	0.26	ErB	5
						189	0.00	LnC	0
		1,786	0.04			As	90		
		2,791	0.06			ErB	5		
		3,060	0.07			ErB	5		
A201	52 & 53	DP-204, DP-205	PEM	42.413515	-79.133826	3,197	0.07	As	90
						6,022	0.14	ErA	4
A202	52	DP-206, DP-207	PEM	42.414739	-79.134125	18,766	0.43	ErB	5
						675	0.02	LnC	0
A203	52	DP-208, DP-207	PEM	42.416748	-79.134416	2,319	0.05	ErA	4
						951	0.02	ErB	5
		4,575	0.11			LnC	0		
		125	0.003			W	0		
		6,233	0.14			LnC	0		
A204	51	DP-213, DP-215	PEM	42.417606	-79.137918	1,113	0.03	W	0
						5,446	0.13	ErB	5
A205	50 & 51	DP-214	PFO	42.418133	-79.13815	19,970	0.46	ErB	5
			PEM	42.418500	-79.137458	9,300	0.21	ErB	5
A206	50 & 54	DP-216	PEM	42.417826	-79.132398	1,820	0.04	ErB	5
A209	50	DP-224, DP-226	PEM	42.420106	-79.135928	1,687	0.04	ErB	5
A210	50	DP-227, DP-226	PEM	42.421705	-79.134646	162	0.004	CkB	0
						1,692	0.04	VaB	0
A211	48	DP-228, DP-226	PEM	42.421931	-79.134200	3,046	0.07	CkB	0
A212	76	DP-229, DP-241	PEM	42.398351	-79.137576	1,190	0.03	LnB	0
A213	97	DP-230, DP-231	PSS	42.407115	-79.169238	853	0.02	CkB	0
						61	0.001	CkC	0
A214	97	DP-232, DP-231	PSS	42.408109	-79.168766	775	0.02	CkB	0
						247	0.01	CkC	0
						6,619	0.15	CkB	0
A215	96 & 97	DP-233, DP-236	PEM	42.407847	-79.167875	5,049	0.12	CkB	0
		DP-234, DP-236	PSS			158	0.004	CkB	0
A216	96	DP-235, DP-236	PSS	42.407778	-79.167046	2,193	0.05	CkB	0
A217	98	DP-238, DP-239	PEM	42.410491	-79.165060	14,317	0.33	BsB	4
A218	98	DP-240, DP-239	PSS	42.410241	-79.167020	618	0.01	LnB	0
A219	74	DP-241, DP-242	PEM	42.398541	-79.134812	1,168	0.03	BsB	4
A220	89	DP-244, DP-245	PEM	42.396616	-79.151465	167	0.004	CkC	0

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Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A221	83	DP-247, DP-250	PEM	42.392611	-79.143068	2,716	0.06	CkC	0
A222	83	DP-248, DP-250	PEM	42.393269	-79.141601	2,608	0.06	Fe	60
A223	83	DP-252	PEM	42.392245	-79.143121	478	0.01	CkC	0
A224	85	DP-253, DP-256	PEM	42.389500	-79.145130	480	0.01	CkB	0
A225	85	DP-254, DP-256	PEM	42.389531	-79.144839	522	0.01	CkB	0
						278	0.01	CkC	0
A226	84	DP-255, DP-256	PEM	42.389819	-79.144863	661	0.02	CkC	0
A227	93	DP-257, DP-259	PEM	42.400254	-79.159601	4,825	0.11	LnB	0
A228	93	DP-258, DP-259	PEM	42.400207	-79.157907	1,519	0.03	LnB	0
A229	94	DP-260, DP-259	PFO	42.400653	-79.156410	4,292	0.10	ErB	5
A230	40	DP-265, DP-267	PEM	42.430979	-79.115781	22	0.001	CkB	0
A231	40	DP-266, DP-267	PEM	42.430838	-79.116550	14	0.0003	BsB	4
A232	34	DP-269, DP-271	PEM	42.451832	-79.108376	436	0.01	CnB	0
						96	0.002	CnC	0
A233	34	DP-270, DP-271	PEM	42.451772	-79.109334	261	0.01	CnC	0
A234	32	DP-273	PEM	42.451933	-79.112032	2,289	0.05	Fe	60
						175	0.004	VcC	0
A235	32	DP-274, DP-279	PEM	42.452240	-79.112389	616	0.01	CkC	0
A236	31 & 32	DP-276, DP-279	PEM	42.452630	-79.115858	1,392	0.03	FmA	5
		DP-277, DP-279	PSS			14,039	0.32	FmA	5
A237	12	DP-289, DP-290	PEM	42.467603	-79.149024	1,478	0.03	ToF	0
A238	12	DP-290, DP-291	PEM	42.468779	-79.149069	7,265	0.17	FmB	5
		DP-292, DP-291	PSS			578	0.01	OrC	5
A239	11	DP-295, DP-297	PEM	42.473531	-79.149425	10,450	0.24	OrC	5
						DP-296, DP-297	PFO	9,007	0.21
		3,620	0.08					FmB	5
		741	0.02			FmA	5		
A3	24	NA	PEM	42.439187	-79.121471	6,111	0.14	FmB	5
						3,162	0.07	Ad	95
A5	24	DP-91, DP-92	PEM	42.439117	-79.121790	51	0.001	BsB	4
						8,228	0.19	Ad	95
A500	73	DP-500, DP-501	PEM	42.403087	-79.134373	2,384	0.05	BsB	4
						5,706	0.13	Fe	60
A501	72 & 73	DP-503	PEM	42.403850	-79.134128	15,641	0.36	ChD	0
						308	0.01	Fe	60
A502	72	DP-505, DP-506	PEM	42.405005	-79.133730	18,249	0.42	ChD	0
A503	72	DP-507, DP-508	PEM	42.405841	-79.131680	3,717	0.09	ErB	5

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Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A504	58 & 59	DP-509, DP-510	PEM	42.406129	-79.121084	710	0.02	CkB	0
						4,512	0.10	CkC	0
A505	59	DP-511	PEM	42.405372	-79.119716	933	0.02	CkB	0
A506	59	DP-512	PEM	42.405643	-79.119775	301	0.01	BsB	4
						468	0.01	CkB	0
A508	60	DP-514, DP-515	PEM	42.407723	-79.111375	1,777	0.04	FmA	5
						1,803	0.04	FmB	5
A511	66	DP-521	PEM	42.397186	-79.110999	2,488	0.06	DaA	4
A512	82	DP-523, DP-524	PEM	42.395707	-79.140792	8,778	0.20	CkB	0
A514	83	NA	PEM	42.393088	-79.141586	540	0.01	Fe	60
A515	83	DP-528, DP-529	PEM	42.392690	-79.142534	1,660	0.04	CkC	0
A517	66	DP-533, DP-534	PFO	42.395587	-79.108558	4,717	0.11	DaA	4
A518	67	DP-535, DP-536	PEM	42.396569	-79.104573	327	0.01	FmA	5
						5,320	0.12	FmC	5
A519	67	DP-537, DP-538	PEM	42.395673	-79.101456	8,858	0.20	FmB	5
A520	67	NA	PEM	42.396366	-79.102028	1,709	0.04	FmB	5
A524	85	DP-545, DP-546	PEM	42.387291	-79.144729	10,103	0.23	BsB	4
A526	84	DP-549, DP-551	PFO	42.390096	-79.145581	525	0.01	CkB	0
						610	0.01	CkC	0
A527	84	DP-550, DP-551	PFO	42.390725	-79.145203	34	0.001	CkC	0
A531	84 & 89	DP-557, DP-558	PEM	42.393957	-79.148914	2,768	0.06	As	90
A532	91	DP-555, DP-556	PEM	42.394884	-79.157658	4,191	0.10	LnB	0
A533	91	NA	PEM	42.394871	-79.159947	3,177	0.07	ErA	4
						276	0.01	ErB	5
						4	0.00	LnB	0
A534	89	DP-559, DP-560	PEM	42.395193	-79.149367	26,430	0.61	As	90
						5,195	0.12	BsB	4
A535	89	DP-561, DP-562	PFO	42.397207	-79.150054	2,229	0.05	BsB	4
A539	95	DP-568	PSS	42.403940	-79.164162	9,522	0.22	ErB	5
A540	30	DP-569, DP-570	PEM	42.445770	-79.119774	929	0.02	VcC	0
A541	27 & 30	DP-571	PEM	42.445546	-79.120997	358	0.01	VcC	0
A542	30	DP-572	PEM	42.445973	-79.121003	3,442	0.08	VcC	0
A543	31	DP-575, DP-576	PEM	42.453115	-79.118254	9,595	0.22	FmA	5
						149	0.003	OrB	5
A544	31	DP-577, DP-578	PEM	42.452342	-79.119055	2,371	0.05	FmB	5
						17,100	0.39	OrB	5
A545	31	NA	PEM	42.451800	-79.119529	11,578	0.27	FmB	5

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A546	30 & 31	DP-579, DP-580	PEM	42.450085	-79.119719	8,804	0.20	BsB	4
						1,551	0.04	VcC	0
A547	30	DP-581, DP-582	PFO	42.448612	-79.119598	2,054	0.05	VcC	0
A548	29	DP-583, DP-584	PFO	42.447405	-79.123198	4,639	0.11	As	90
						3,320	0.08	BsB	4
A549	27 & 30	DP-585, DP-586	PEM	42.445723	-79.121620	3,044	0.07	VcC	0
			PFO			847	0.02	VcC	0
A550	27	NA	PEM	42.444925	-79.121706	381	0.01	VcC	0
A551	27	NA	PEM	42.444951	-79.121314	27	0.00	VcC	0
A552	27	DP-595, DP-596	PSS	42.442824	-79.121339	17,120	0.39	BsB	4
						4,947	0.11	CkB	0
A557	24	DP-601, DP-602	PEM	42.440762	-79.120012	7,259	0.17	BsB	4
						3,870	0.09	CkB	0
A558	27	NA	PEM	42.442325	-79.121654	6,900	0.16	BsB	4
A559	27	DP-597, DP-598	PEM	42.441582	-79.121480	2,335	0.05	VaB	0
A560	24	DP-599, DP-600	PEM	42.440877	-79.121367	4,727	0.11	BsB	4
A561	24	DP-603	PEM	42.440808	-79.118293	2,201	0.05	CkB	0
A562	25	DP-604, DP-605	PEM	42.441032	-79.116830	5,470	0.13	BsA	6
						6,333	0.15	CkB	0
A563	25	NA	PFO	42.440920	-79.115289	1,679	0.04	BsA	6
						3,107	0.07	CkB	0
A564	25	DP-606, DP-607	PEM	42.439995	-79.114437	12,407	0.28	BsA	6
A565	25	DP-610, DP-611	PEM	42.437583	-79.114014	8,343	0.19	BsB	4
A566	39	NA	PEM	42.435711	-79.113677	5,652	0.13	CkC	0
						729	0.02	CoB	0
A567	39	DP-613, DP-614	PSS	42.435330	-79.112336	5,666	0.13	CoB	0
A569	40	NA	PEM	42.431196	-79.114392	1,468	0.03	CkB	0
A570	40	DP-617, DP-618	PEM	42.432942	-79.112888	5,673	0.13	CkC	0
A571	22	NA	PEM	42.441586	-79.128631	468	0.01	BsB	4
						465	0.01	CkB	0
A572	22	NA	PEM	42.441502	-79.127787	723	0.02	BsB	4
A576	22	NA	PEM	42.442020	-79.128865	917	0.02	As	90
						5,230	0.12	CkC	0
A577	21 & 22 & 28	NA	PEM	42.442850	-79.128237	6,109	0.14	As	90
						1	0.00002	BsB	4
						221	0.01	CkC	0

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A578	21 & 22	DP-622, DP-623	PFO	42.442364	-79.129099	6,075	0.14	As	90
						484	0.01	BsB	4
						3,146	0.07	CkC	0
			PSS			8,797	0.20	As	90
						5,417	0.12	BsB	4
						2,145	0.05	CkC	0
A580	21	DP-626, DP-627	PEM	42.445153	-79.128690	10,563	0.24	BsB	4
A581	21	DP-625, DP-627, DP-628, DP-629	PEM	42.445420	-79.129021	3,597	0.08	CkB	0
			PSS			16,587	0.38	BsB	4
						5,064	0.12	CkB	0
A582	19 & 20 & 21	DP-630, DP-631	PFO	42.447440	-79.131856	32,071	0.74	BsB	4
						10,690	0.25	CkB	0
						227	0.01	FmB	5
A583	19	DP-632, DP-633, DP-634, DP-635	PEM	42.449519	-79.134858	9,960	0.23	FmB	5
			PFO			8,091	0.19	FmB	5
			PSS			16,371	0.38	FmA	5
						12,708	0.29	FmB	5
A584	19	N/A	PSS	42.449725	-79.134371	1,005	0.02	FmB	5
A585	18	DP-636, DP-637	PFO	42.451892	-79.134838	2,123	0.05	Ad	95
						5,924	0.14	BsB	4
						17,103	0.39	OrA	5
A586	18	DP-638, DP-639	PFO	42.453277	-79.134717	4,740	0.11	Ad	95
						29,543	0.68	BsB	4
						1,089	0.02	CkB	0
A587	17 & 18	DP-640, DP-641	PFO	42.454214	-79.137108	41,567	0.95	Ad	95
						33,110	0.76	As	90
						17,791	0.41	BsB	4
						11,730	0.27	CkB	0
			PSS			8,533	0.20	ShB	0
						26,776	0.61	BsB	4
						1,796	0.04	FmA	5
						81,656	1.87	FmB	5
A591	14	DP-648, DP-649	PSS	42.462145	-79.149115	43,830	1.01	FmA	5
						948	0.02	FmB	5
						8,283	0.19	OrB	5
A592	15	DP-650, DP-651	PEM	42.457476	-79.147747	17,189	0.39	FmA	5
			PFO			47,393	1.09	FmA	5
A593	3	DP-652, DP-653	PFO	42.507042	-79.154842	1,524	0.03	Cb	96
						101,566	2.33	NgA	4

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Wetland Delineation Summary**

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				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A594	3 & 4	DP-653, DP-654	PFO	42.505457	-79.152718	42,242	0.97	Cb	96
						21,945	0.50	NgA	4
A595	45	DP-659, DP-660	PEM	42.429065	-79.126053	6,505	0.15	BsB	4
						3,294	0.08	VaD	0
A596	69	DP-661, DP-662	PFO	42.399097	-79.103512	141	0.003	FmA	5
A597	60	DP-663, DP-664	PSS	42.407857	-79.114228	2,131	0.05	ErB	5
						8,827	0.20	FmA	5
A598	60 & 61	DP-668, DP-669	PEM	42.409029	-79.110778	607	0.01	FmB	5
			PFO			13,732	0.32	FmB	5
A599	60	DP-670, DP-671	PFO	42.409507	-79.110809	1,955	0.04	FmB	5
A6	23 & 24	DP-93, DP-94	PEM	42.440659	-79.122537	9,729	0.22	BsB	4
A600	59	DP-672, DP-673	PEM	42.406497	-79.119078	15,716	0.36	BsB	4
A601	59	DP-674	PSS	42.406093	-79.119635	2,384	0.05	BsB	4
A602	47	DP-675, DP-676	PEM	42.427944	-79.135196	2,114	0.05	BsA	6
A603	46	DP-677, DP-678	PEM	42.426385	-79.133849	956	0.02	BsA	6
A604	48	NA	PEM	42.424700	-79.133701	3,891	0.09	BsB	4
A605	44	DP-680, DP-681, DP-682	PEM	42.431173	-79.133990	152	0.003	As	90
			PSS			1,426	0.03	BsB	4
						10,218	0.23	As	90
						379	0.01	BsB	4
A606	44	DP-683, DP-684	PEM	42.432201	-79.134074	262	0.01	BsA	6
			PSS			1,143	0.03	CkB	0
						23	0.001	BsA	6
						60	0.001	BsB	4
						29,051	0.67	CkB	0
A607	44	NA	PEM	42.432665	-79.134324	251	0.01	BsA	6
A608	44	DP-687, DP-688	PEM	42.433968	-79.130846	1,323	0.03	CkB	0
						281	0.01	VaB	0
A609	43	DP-689, DP-690	PFO	42.434421	-79.130624	1,078	0.02	CkB	0
A610	43	DP-691, DP-692	PEM	42.434963	-79.131394	1,880	0.04	CkB	0
						203	0.00	VcC	0
A611	42	DP-693 & DP-694	PEM	42.439939	-79.134273	1,603	0.04	CkB	0
			PFO			5,194	0.12	CkB	0
A612	42	NA	PEM	42.439451	-79.134948	488	0.01	CkB	0
A613	42	DP-695, DP-696	PEM	42.438896	-79.134627	1,509	0.03	VcC	0
A614	43	DP-697, DP-698	PFO	42.437284	-79.134328	504	0.01	BsB	4
						2,721	0.06	VcC	0

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A615	43	DP-699, DP-700, DP-703	PEM	42.436307	-79.132704	980	0.02	BsB	4
						530	0.01	CkB	0
						6,785	0.16	VcC	0
			PFO			3,209	0.07	BsB	4
						2,234	0.05	CkB	0
						5,590	0.13	VcC	0
						27,262	0.63	BsB	4
PSS	287	0.01	VcC	0					
	359	0.01	CkB	0					
A616	43	DP-701, DP-702	PEM	42.435984	-79.132442	6,807	0.16	VcC	0
A617	22 & 42	DP-716, DP-717	PEM	42.439336	-79.132824	1,769	0.04	CkB	0
						PFO	5,453	0.13	BsB
			1,192				0.03	CkB	0
			PSS				4,062	0.09	BsB
						6,394	0.15	CkB	0
A618	37	DP-704, DP-705, DP-706	PEM	42.447070	-79.102435	7,292	0.17	CkC	0
						0.16	0.000004	VaB	0
			PFO			10,201	0.23	CkC	0
A619	36	DP-708, DP-709	PEM	42.452123	-79.103289	2,881	0.07	CnB	0
						1,080	0.02	CnC	0
						14,862	0.34	CsB	5
A620	35 & 36	DP-710, DP-711, DP-714, DP-715	PEM	42.457594	-79.104984	151	0.003	CsC	5
						37,604	0.86	FmB	5
						404	0.01	NgB	4
						547	0.01	UnC	0
						487	0.01	BsB	4
A622	22	DP-718	PEM	42.439851	-79.132097	2,731	0.06	BsB	4
						PFO	2,086	0.05	BsB
A623	22	NA	PEM	42.439753	-79.130789	5,741	0.13	BsB	4
						PFO	6,940	0.16	BsB
A624	22	DP-721, DP-722, DP-723	PEM	42.439737	-79.129808	11,733	0.27	BsB	4
						PSS	1,073	0.02	BsA
A625	25	DP-724, DP-725	PEM	42.440946	-79.113749	1,418	0.03	CkB	0
						4,479	0.10	CkB	0
A626	25 & 26	DP-726, DP-727	PEM	42.440590	-79.111829				

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A627	26	DP-728, DP-729	PFO	42.440590	-79.111829	5,162	0.12	VcC	0
			PEM			6,038	0.14	VcC	0
A628	21	DP-730, DP-731	PEM	42.444086	-79.128142	3,277	0.08	BsB	4
A629	19 & 20	DP-732, DP-733	PFO	42.449238	-79.132400	11,843	0.27	FmB	5
A630	19 & 20	DP-733, DP-734	PEM	42.449654	-79.132414	2,908	0.07	FmB	5
A631	21	NA	PSS	42.444777	-79.129129	3,583	0.08	BsB	4
A633	16	DP-738, DP-739	PSS	42.454462	-79.142324	17,838	0.41	FmA	5
A634	16	DP-740, DP-741	PEM	42.455294	-79.145110	4,900	0.11	FmB	5
			PFO			1,888	0.04	FmB	5
A635	16	DP-742, DP-743	PSS	42.455831	-79.145639	72	0.00	As	90
						20,397	0.47	FmA	5
						16,000	0.37	FmB	5
A635A	100	DP-755, DP-756	PEM	42.419251	-79.152058	987	0.02	BsB	4
A635B	24	DP-748, DP-749	PEM	42.438193	-79.120932	5,822	0.13	As	90
						1,656	0.04	CkC	0
A636	27 & 28	DP-751, DP-752	PEM	42.444704	-79.122092	2,704	0.06	VcC	0
A638	11	DP-758, DP-759	PFO	42.474730	-79.149398	36,250	0.83	FmA	5
						5,409	0.12	FmB	5
A639	9 & 10	DP-763, DP-764	PFO	42.479641	-79.149309	4,931	0.11	ToF	0
A640	8	DP-768, DP-769	PEM	42.484643	-79.149706	223	0.01	HrB	5
A641	7 & 8	DP-773, DP-774, DP-775	PEM	42.490148	-79.150912	29,923	0.69	BrB	3
						51,470	1.18	NgA	4
						4,904	0.11	Po	0
			63			0.001	Rh	5	
			9,830			0.23	BrB	3	
A642	7	NA	PSS	42.490707	-79.152676	10,549	0.24	HrD	5
						16,016	0.37	NgA	4
A643	4 & 5 & 6	DP-777, DP-778	PEM	42.497489	-79.153496	3,013	0.07	Po	0
						8,017	0.18	Rh	5
						7,114	0.16	Cb	96
			59,258			1.36	NgA	4	
			3,294			0.08	Sw	8	
			80			0.002	W	0	
			6,890			0.16	Cb	96	
			67,974			1.56	NgA	4	
			83,299			1.91	Cb	96	
PSS	153,937	3.53	NgA	4					
	3,103	0.07	Sw	8					
	981	0.02	W	0					

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
A644	4	DP-779, DP-780	PEM	42.503483	-79.152810	17,609	0.40	NgA	4
						49,955	1.15	NgA	4
A645	29	DP-783, DP-784	PEM	42.448430	-79.124129	2,493	0.06	FmB	5
A8	22	DP-100	PEM	42.440717	-79.129155	309	0.01	BsB	4
						9,592	0.22	CkB	0
A9	22	DP-101,DP-102	PEM	42.441266	-79.127960	1	0.00002	BsB	4
C1	56	DP-13, DP-14	PEM	42.410643	-79.127863	47,411	1.09	As	90
						17,155	0.39	ErB	5
						89	0.00	LnB	0
D1	55 & 56	DP-15, DP-16	PEM	42.412100	-79.128839	9,518	0.22	ErB	5
F1	49	DP-19, DP-20	PEM	42.422137	-79.141785	6,464	0.15	As	90
						19,528	0.45	CkB	0
G1	49	DP-21	PEM	42.421842	-79.138120	3,804	0.09	As	90
						9,590	0.22	CkB	0
H1	48 & 49	DP-22, DP-23, DP-226	PEM	42.422016	-79.137329	436	0.01	As	90
I1	48	DP-24, DP-23	PEM	42.422036	-79.135157	2,546	0.06	VaB	0
I2	48	DP-24, DP-23	PEM	42.422420	-79.135127	815	0.02	VaB	0
J1	78	DP-26, DP-27	PEM	42.405382	-79.144330	35,194	0.81	BsB	4
						20,469	0.47	LnC	0
J2	80 & 81	DP-28, DP-29	PEM	42.406558	-79.146200	26,038	0.60	BsB	4
						26,589	0.61	CkC	0
J3	81	DP-30, DP-31, DP-263	PEM	42.408448	-79.149541	13,368	0.31	CkB	0
						24,460	0.56	CkC	0
J4	79	DP-32, DP-33	PEM	42.407140	-79.140616	3,174	0.07	CkC	0
						5,055	0.12	ErB	5
						11,848	0.27	LnB	0
K3	92	DP-38, DP-39	PEM	42.399097	-79.163962	9,411	0.22	LnB	0
L1	92	DP-40, DP-41	PEM	42.399949	-79.163840	3,277	0.08	ErB	5
						823	0.02	LnB	0
L2	95	DP-42, DP-43	PEM	42.401466	-79.163784	23,113	0.53	ErB	5
						1,924	0.04	LnB	0
M1	96	DP-44, DP-45	PEM	42.406045	-79.164288	3,284	0.08	ErB	5
						2,883	0.07	LnB	0
N1	96	DP-46, DP-47	PEM	42.408103	-79.164184	14,837	0.34	ErB	5
			PSS			6,079	0.14	ErB	5
O1	98	DP-48, DP-49	PEM	42.409821	-79.164499	46,216	1.06	ErB	5
			PSS			7,599	0.17	ErB	5

**Table 1
Wetland Delineation Summary**

Wetland ID	Map Sheet #	Associated Data Sheet #	Cowardin Classification	Coordinates		Wetland Area within Study Limits		Soils	
				Latitude	Longitude	Square Feet	Acres	Soil Symbol	Hydric Component Percentage
Q1	94	DP-52, DP-53	PSS	42.401654	-79.155496	2,312	0.05	ErB	5
						54	0.001	LnB	0
R1	94	DP-55, DP-56	PEM	42.400072	-79.157045	2,151	0.05	ErB	5
						2,579	0.06	LnB	0
S1	92 & 93	DP-57, DP-58	PEM	42.400061	-79.161755	1,854	0.04	ErA	4
						22,374	0.51	ErB	5
						9,518	0.22	LnB	0
			PSS			10,481	0.24	ErA	4
						3,638	0.08	ErB	5
						1,944	0.04	LnB	0
U1	92	DP-61, DP-62	PEM	42.396823	-79.162740	1,270	0.03	ErA	4
V1	45	DP-64, DP-65	PEM	42.428442	-79.125650	26,939	0.62	BsB	4
V3	45	DP-74, DP-75	PEM	42.428901	-79.128368	3,080	0.07	CkC	0
						1,444	0.03	VaD	0
			PSS			21	0.0005	CkC	0
						462	0.01	VaD	0
V4	46 & 47	DP-79, DP-80	PEM	42.428268	-79.134938	7,670	0.18	BsA	6
						7,787	0.18	BsB	4
W1	44	DP-77, DP-78	PFO	42.433652	-79.133958	6,368	0.15	As	90
X1	44	DP-81, DP-82	PEM	42.432777	-79.133093	2,808	0.06	BsA	6
						8,352	0.19	CkB	0
Y2	44	DP-86, DP-87	PFO	42.433159	-79.130826	1,524	0.03	VaB	0

**Table 2
Stream Delineation Summary**

Stream ID	Map Sheet #	Associated Data Sheet #	Stream Name	Tributary of	Flow Regime	NYSDEC Classification Designation*	NYSDEC Standard Designation	Latitude	Longitude	Stream Width (Top of Bank Average, Ft.)	Stream Reach Length (Within Study Limits, Linear Ft.)
9	94	NA	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.400963	-79.156009	NA	27
10	94	DP-54	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.400719	-79.155975	25	198
11	45	DP-63	Unnamed Tributary	Silver Creek	Perennial	C	ND	42.428269	-79.125540	4	104
13	44	DP-69	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.433280	-79.131510	10	180
14	45	DP-72	Unnamed Tributary	Silver Creek	Perennial	C	ND	42.428879	-79.126781	1	293
15	45	DP-73	Unnamed Tributary	Silver Creek	Perennial	C	ND	42.428755	-79.128560	3.5	202
18	24	DP-90	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.439180	-79.121816	5.5	163
19	23	DP-95	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.440794	-79.123432	5	107
A200	50	DP-210	Unnamed Tributary	West Branch Conewango Creek	Ephemeral	C	ND	42.417709	-79.136189	7.5	57
A200	50, 51, 52	DP-211	Unnamed Tributary	West Branch Conewango Creek	Intermittent	C	ND	42.417713	-79.136708	7.5	460
A202	50	DP-222	Unnamed Tributary	West Branch Conewango Creek	Intermittent	C	ND	42.419999	-79.135831	2.5	101
A203	89	DP-243	Unnamed Tributary	West Branch Conewango Creek	Intermittent	D	ND	42.396661	-79.151540	5	80
A204	83	DP-249	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.388427	-79.145817	9	93
A204A	85	DP-261	Unnamed Tributary	West Branch Conewango Creek	Intermittent	D	ND	42.393313	-79.141510	3.5	59
A205	32	DP-272	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.452019	-79.112011	16	159
A206	32	DP-275	Unnamed Tributary	Silver Creek	Ephemeral	D	ND	42.452370	-79.114058	2.5	42
A207	31, 32	DP-278	Unnamed Tributary	Silver Creek	Intermittent	A	ND	42.452586	-79.115894	3	181
A208	12, 13	DP-286	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.467190	-79.149160	5	154
A209	13	DP-285	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.467322	-79.149027	2.5	31
A210	12	DP-287	Unnamed Tributary	Walnut Creek	Intermittent	C	ND	42.467758	-79.149356	20.5	238
A211	12, 13	DP-288	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.467140	-79.149415	5	377
A212	12	DP-293	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.469638	-79.149417	6	181
A213	12	DP-294	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.469319	-79.149683	3	85
A500	73	DP-502	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.403413	-79.134287	13	121
A501	72, 73	DP-504	Unnamed Tributary	West Branch Conewango Creek	Intermittent	D	ND	42.405746	-79.133563	4	524
A502	62	DP-520	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.402294	-79.119785	10	159
A503	73	DP-522	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.401297	-79.134854	13	24
A504	83	DP-525	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.393194	-79.141418	20	32
A505	83	DP-526	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.392879	-79.141994	4	207
A506	83	DP-527	Unnamed Tributary	West Branch Conewango Creek	Intermittent	D	ND	42.393005	-79.141658	3	14
A508	66	DP-508	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.395480	-79.108522	5.5	187
A509	85	DP-547	Unnamed Tributary	West Branch Conewango Creek	Perennial	C	ND	42.388535	-79.145737	11	119
A511	27	DP-573	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.445188	-79.121435	7	204
A512	27, 28	DP-574	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.444741	-79.122113	6.5	164
A514	27	DP-587	Unnamed Tributary	Silver Creek	Intermittent	D	ND	42.445253	-79.121440	9	59
A515	27	NA	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.442868	-79.121396	7	177
A518	24	DP-603	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.440890	-79.118159	5.5	213
A519	25	DP-608	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.437947	-79.114137	3.5	101
A520	25	DP-609	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.437476	-79.114061	7	139
A521	39	DP-612	Unnamed Tributary	Silver Creek	Perennial	C	ND	42.435189	-79.112201	10	115
A522	39	DP-619	Unnamed Tributary	Silver Creek	Intermittent	D	ND	42.433581	-79.112798	7	198
A523	21	DP-624	Tupper Creek	Walnut Creek	Perennial	C	ND	42.444370	-79.129051	3	677
A526	1	DP-636	Unnamed Tributary	Silver Creek	Perennial	C	ND	42.512009	-79.158757	17.5	215
A527	7	DP-657	Unnamed Tributary	Walnut Creek	Perennial	C	ND	42.490870	-79.152964	23	272
A528	7	DP-658	Unnamed Tributary	Walnut Creek	Perennial	C	ND	42.490534	-79.152266	9	394
A529	60	DP-666	Unnamed Tributary	North Branch Conewango Creek	Perennial	C	ND	42.407681	-79.114543	10	148
A530	60, 61	DP-667	Unnamed Tributary	North Branch Conewango Creek	Perennial	C	ND	42.408973	-79.110108	8	440
A531	44	DP-685	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.433926	-79.130665	12	188
A532	44	DP-686	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.434053	-79.130961	8	107
A533	36	DP-707	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.451960	-79.102959	23	136
A534	35	DP-712	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.456535	-79.104583	9	129
A535	22	DP-719	Unnamed Tributary	Tupper Creek	Perennial	C	ND	42.439724	-79.130724	4	102
A537	24	DP-747	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.438045	-79.121148	4	207

**Table 2
Stream Delineation Summary**

Stream ID	Map Sheet #	Associated Data Sheet #	Stream Name	Tributary of	Flow Regime	NYSDEC Classification Designation*	NYSDEC Standard Designation	Latitude	Longitude	Stream Width (Top of Bank Average, Ft.)	Stream Reach Length (Within Study Limits, Linear Ft.)
A538	29	DP-750	Unnamed Tributary	Silver Creek	Perennial	A	ND	42.447298	-79.122798	9	203
A539	10	DP-761	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.478860	-79.149354	3	212
A540	10	DP-762	Unnamed Tributary	Walnut Creek	Perennial	C	ND	42.479524	-79.149391	20	287
A541	9	DP-765	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.481243	-79.149358	7	278
A542	9	DP-766	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.482592	-79.149403	5	312
A543	8, 9	DP-767	Unnamed Tributary	Walnut Creek	Intermittent	D	ND	42.483895	-79.149338	6	252
A544	8	DP-770	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.484671	-79.149599	2	56
A545	8	DP-771	Unnamed Tributary	Walnut Creek	Ephemeral	D	ND	42.485904	-79.149486	4	175
A546	8	DP-772	Unnamed Tributary	Walnut Creek	Intermittent	D	ND	42.487419	-79.149456	5	281
A547	2	DP-781	Unnamed Tributary	Silver Creek	Intermittent	C	ND	42.508736	-79.158319	11	247

Notes:

NYSDEC Classification Designations:

- AA or A: waters used as a source of drinking water
- B: waters with best usage for swimming and other contact recreation, but not for drinking water
- C: waters supporting are subject to the stream protection provisions of the New York State Protection of Waters regulations.
- D: other waters, the lowest classification standard

NYSDEC Standard Designations:

- ND: no assigned designation
- T: may support a trout population
- TS: may support trout spawning

Waters with classifications of A, B, and C may, but will not always have an associated Standard Designation relative to trout use.

Streams with a classification of AA, A, B, or with a classification of C with a standard of "T" or "TS" are referred to a "Protected Streams" and are subject to the stream protection provisions of the New York State Protection of Waters regulations.

*Streams that do not appear on the NYSDEC mapping are assigned to Class D, with the exception of any "continuous flowing natural stream" which is assigned the same classification as the water to which it is a tributary. Due to errors in the available electronic mapping, Fisher recommends coordination with NYSDEC to verify stream designations of any streams that may be impacted by the Project.

**Table 3
Ditch Delineation Summary**

Ditch ID	Map Sheet #	Associated Data Sheet #	Jurisdictional or Non-Jurisdictional*	Latitude	Longitude	Ditch Width (Top of Bank Average, Ft.)	Ditch Reach Length (Within Project Study Limits, Linear Ft.)
A200	50	DP-223	Jurisdictional	42.420263	-79.135835	3	222
A201	32	DP-280	Jurisdictional	42.452181	-79.112637	1.5	18
A201A	83	DP-251	Jurisdictional	42.393048	-79.141867	2.25	256
A203	14	DP-282	Jurisdictional	42.460303	-79.148758	3.4	232
A204	14	DP-283	Jurisdictional	42.460448	-79.148784	3.5	232
A205	13	DP-284	Jurisdictional	42.463756	-79.149309	4.5	218
A501	60	DP-665	Jurisdictional	42.407715	-79.113856	9	178
A504	22	DP-720	Jurisdictional	42.439848	-79.129335	2	68
A507	100	DP-754	Jurisdictional	42.419686	-79.152518	2	201
A509	10, 11	DP-760	Jurisdictional	42.475424	-79.149576	3	612
A510	7	DP-776	Jurisdictional	42.490378	-79.151209	2	267
A511	2	DP-782	Jurisdictional	42.508356	-79.157319	9	295
B1	56	NA	Jurisdictional	42.410968	-79.127812	NA	123
C1	56	NA	Jurisdictional	42.411426	-79.128459	NA	724
D1	54	NA	Jurisdictional	42.417940	-79.131995	NA	144
E1	79	DP-264	Jurisdictional	42.407655	-79.140498	28	132
F1	95	NA	Jurisdictional	42.401701	-79.163952	NA	1,193
G1	96	DP-237	Jurisdictional	42.406874	-79.164070	9	2,307
H1	96	NA	Jurisdictional	42.408615	-79.164221	NA	92
I1	92	NA	Jurisdictional	42.397870	-79.163197	NA	831

Notes:

*Jurisdiction classifications provided represent the professional opinion of Fisher Associates. For approval of these classifications, a request for Jurisdictional Determination should be made to the US Army Corps of Engineers. Classification as a jurisdictional ditch herein is based on the presence of a defined bed and bank, an ordinary high water mark (OHWM), a direct or indirect connection to a traditional navigable water (TNW), and at least one of the following supplementing attributes:

- a) Presence of relatively permanent flowing or standing water;
- b) A natural stream that has been altered;
- c) Excavated in a jurisdictional waters of the US (WOTUS);
- d) Connects two or more jurisdictional WOTUS; or
- e) Drains natural water bodies (including wetlands) into a tributary system of a TNW.

Ditches are not regulated by the New York State Department of Environmental Conservation unless they are determined to be altered natural tributaries possessing a state-regulated classification and/or standard designation.

APPENDIX A
WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/27/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-12
 Investigator(s): DTL, VJM Section, Township, Range: Villgrova
 Landform (hillslope, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 2-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.12771 Long: 42.410771 Datum: NAD 83
 Soil Map Unit Name: Achville silt loam (A2) NWI classification: 1EM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>C2</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 13

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

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)

0 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

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 = _____

0 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Eleocharis sp.</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>
2. <u>Scirpus atrovirens</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>
3. <u>Panicum capillare</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
4. <u>Juncus canadensis</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

85 = Total Cover

42.5
17

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/27/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-14
 Investigator(s): DJE, VJM Section, Township, Range: Villescau
 Landform (hillside, terrace, etc.): Till Plain Local relief (concave, convex, none): convex Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.127187 Long: 42.410757 Datum: NAD 83
 Soil Map Unit Name: Fill silt loam (G18) NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C5) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>No wetland hydrology indicators present</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-14

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
Sapling/Shrub Stratum (Plot size: <u>15'</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 = _____
1 _____				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Solidago altissima</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
2 <u>Plantago lanceolata</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
3 <u>Dactylis glomerata</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
4 <u>Priscilla Capillare</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>	
5 <u>Plantago major</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1 _____				
2 _____				
3 _____				
4 _____				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: (include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/27/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-15
 Investigator(s): DJL, VJM Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 42.128182 Long: -74.41681 Datum: NAD 83
 Soil Map Unit Name: Eclic Silt loam (ECL) NW classification: FAA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-D7</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C5) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4 1/2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringes)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-15

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)																
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u>																
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="border:none;">Total % Cover of _____</td> <td style="border:none;">Multiply by:</td> </tr> <tr> <td style="border:none;">OBL species _____</td> <td style="border:none;">x 1 = _____</td> </tr> <tr> <td style="border:none;">FACW species _____</td> <td style="border:none;">x 2 = _____</td> </tr> <tr> <td style="border:none;">FAC species _____</td> <td style="border:none;">x 3 = _____</td> </tr> <tr> <td style="border:none;">FACU species _____</td> <td style="border:none;">x 4 = _____</td> </tr> <tr> <td style="border:none;">UPL species _____</td> <td style="border:none;">x 5 = _____</td> </tr> <tr> <td style="border:none;">Column Totals: _____ (A)</td> <td style="border:none;">_____ (B)</td> </tr> <tr> <td colspan="2" style="border:none; text-align:center;">Prevalence Index = B/A = _____</td> </tr> </table>	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 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 = _____																				
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>0</u> = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation* (Explain) <small>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>0</u> = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Juncus effusus</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>																	
2. <u>Carex sp.</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>																	
3. <u>Sagittaria arifolia</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>																	
4. <u>Juncus canadensis</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>110</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. _____	_____	_____	<u>55</u>																	
2. _____	_____	_____	<u>22</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
<u>0</u> = Total Cover																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/27/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-16
 Investigator(s): DJL, VJM Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Till plain Local relief (concave, convex, none): Convex Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.128281 Long: 42.411499 Datum: NAD 83
 Soil Map Unit Name: Eric Silt loam (E13) NW classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-16

Tree Stratum (Plot size: <u>30'</u>)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status		
1				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)	
2				Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
4					
5					
6					
7					
<p>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</p> <p><u>0</u> = Total Cover</p>				<p>Prevalence Index worksheet:</p> <p>Total % Cover of: _____ Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p>Prevalence Index = B/A = _____</p>	
<p>Herb Stratum (Plot size: <u>5'</u>)</p> <p><u>0</u> = Total Cover</p>				<p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> 2 - Dominance Test is >50%</p> <p><input type="checkbox"/> 3 - Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>	
1	<u>60</u>	<u>Yes</u>	<u>FACU</u>	<p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p>	
2	<u>10</u>	<u>Yes</u>	<u>FACU</u>		
3	<u>10</u>	<u>Yes</u>	<u>FACU</u>		
4	<u>10</u>	<u>Yes</u>	<u>FACU</u>		
5	<u>5</u>	<u>No</u>	<u>FACU</u>		
6	<u>5</u>	<u>No</u>	<u>FACU</u>		
7	<u>5</u>	<u>No</u>	<u>FACU</u>		
8					
9					
10					
11					
12					
<p>Woody Vine Stratum (Plot size: <u>30'</u>)</p> <p><u>105</u> = Total Cover <u>5</u> = <u>5</u> / <u>11</u></p>				<p>Hydrophytic Vegetation Present? Yes _____ No <u>X</u></p>	
1					
2					
3					
4					
<p><u>0</u> = Total Cover</p>					
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/28/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-19
 Investigator(s): D.L. V. Jm Section, Township, Range: Vikona
 Landform (hill/slope, terrace, etc.): Depressions Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR-R Lat: 79.141774 Long: 42.422162 Datum: NAD 83
 Soil Map Unit Name: Ashville Silt loam (As) NWI classification: P6M
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> if yes, optional Wetland Site ID: <u>WL-12</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>< 1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 19

Tree Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1	<u>Ulmus americana</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
2	<u>Acer rubrum</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	
3	<u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
4					
5					
6					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		_____ = Total Cover <u>15</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 = _____
1	<u>Coccoloba angustifolia</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
2	<u>Viburnum dentatum</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	
3					
4					
5					
6					
Herb Stratum (Plot size: <u>5'</u>)		_____ = Total Cover <u>20</u>		_____	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	<u>Viola sp</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>	
2	<u>Solidago altissima</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>	
3	<u>Dracopis scaberrimus</u>	<u>15</u>	<u>NO</u>	<u>FACW</u>	
4	<u>Equisetum sp</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>	
5					
6					
Woody Vine Stratum (Plot size: <u>30'</u>)		_____ = Total Cover <u>100</u>		_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1					
2					
3					
4					
_____ = Total Cover <u>0</u>					
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/28/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-20
 Investigator(s): DSL, USM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Till plain Local relief (concave, convex, none): Concave Slope (%): 2-8
 Subregion (LRR or MLRA): LRR-R Lat: _____ Long: _____ Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam (P&B) NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/29/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-21
 Investigator(s): DIL, VJM Section, Township, Range: Villiers
 Landform (hillslope, terrace, etc.): Depressions Local relief (concave, convex, none): Concave Slope (%): 2-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.185324 Long: 42.421954 Datum: NAD 83
 Soil Map Unit Name: Ashtville silt loam (sl) NVM classification: PCM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-0-3</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C5) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-21

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Juncus oleraceus</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Carex trinervis</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	
3. <u>Carex sp</u>	<u>20</u>	<u>NO</u>	<u>FACU</u>	
4. <u>Lycopodium obscurum</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>	
5. <u>Thymus sp</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>100</u> = Total Cover <u>50</u> <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remark: (Include photo numbers here or on a separate sheet.) _____ _____ _____				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/29/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-22
 Investigator(s): D.L.B., V.J.M. Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.13776 Long: 42.422204 Datum: NAD 83
 Soil Map Unit Name: Ashville Silt loam (As) NWM classification: PER1

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>HL-113</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Muck Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-22

Tree Stratum (Plot size: <u>30'</u>)	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1				
2				
3				
4				
5				
6				
Sapling/Shrub Stratum (Plot size: <u>15'</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 = _____
1	<u>30</u>	<u>YK</u>	<u>ENW</u>	
2				
3				
4				
5				
6				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ² ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	<u>80</u>	<u>YK</u>	<u>OBL</u>	
2	<u>10</u>	<u>NO</u>	<u>ENW</u>	
3				
4				
5				
6				
7				
8				
9				
10				
11				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				
Total Cover: <u>0</u>				Hydrophytic Vegetation Present? Yes <u>1</u> No _____
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-23

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

Depth (Inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	<u>10YR 2/1</u>	<u>100</u>					<u>Mucky loam</u>	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils⁴:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A18) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/27/2005
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-23
 Investigator(s): DIL VSM Section, Township, Range: VILKONA
 Landform (hillslope, terrace, etc.): Rolling Local relief (concave, convex, none): Convex Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.135864 Long: 42.421974 Datum: NAD 83
 Soil Map Unit Name: Valley gravelly silt loam (usd) NWM classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP- 23

Tree Stratum (Plot size: 30')			Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1						
2						
3						
4						
5						
6						
Sapling/Shrub Stratum (Plot size: 15')			0 = 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 = _____	
1						
2						
3						
4						
5						
6						
Herb Stratum (Plot size: 5')			0 = Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\geq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1	<i>Pectylo glauca</i>	40	YES	FACU		
2	<i>Ritalina patens</i>	20	YES	FACU		
3	<i>Plantago lanceolata</i>	20	YES	FACU		
4	<i>Calluna sp.</i>	10	NO	FACU		
5	<i>Quercus coccinea</i>	10	NO	FACU		
6						
7						
8						
9						
10						
11						
12						
Woody Vine Stratum (Plot size: 30')			100 = Total Cover		Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
1						
2						
3						
4						
			50 20			
Remarks: (Include photo numbers here or on a separate sheet.)			0 = Total Cover		Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	

SOIL

Sampling Point: DP-33

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-1/8	10YR 2/4	100	—	—	—	—	Silt/Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: 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) (LRR R, MLRA 149B)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/20/20
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-54
 Investigator(s): DTL, VSM Section, Township, Range: Villanova
 Landform (hillside, terrace, etc.): Till Plains Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.135136 Long: 42.421977 Datum: NAD 83
 Soil Map Unit Name: East Siltloam (B.P.) NWM classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-11 & WL-12</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C8) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks): <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-29

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2				
3				
4				
5				
6				
7				
Sapling/Shrub Stratum (Plot size: <u>15'</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 = _____
1				
2				
3				
4				
5				
6				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0* ___ 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation* (Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	<u>20</u>	<u>Yes</u>	<u>Tree</u>	
2	<u>20</u>	<u>Yes</u>	<u>Tree</u>	
3	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
4				
5				
6				
7				
8				
9				
10				
11				
12				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

SOIL

Sampling Point: DP-24

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
<u>0-10</u>	<u>10YR 3/1</u>	<u>90</u>	<u>7.5YR 7/6</u>	<u>10</u>	<u>C</u>	<u>M</u>	<u>Clay loam</u>		

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <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) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A15) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F10) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <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.

Restrictive Layer (if observed):

Type: _____
 Depth (inches) _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/30/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-06
 Investigator(s): DJG, VSM Section, Township, Range: Villestown
 Landform (hillside, terrace, etc.): Fall Plain Local relief (concave, convex, none): Concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.144193 Long: 42.405132 Datum: NAD 83
 Soil Map Unit Name: Rocky Silt loam (B1K) NW classification: PER

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WA-11</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>10</u> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>4</u> Depth (inches): _____ (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 26

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) 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 _____				
6 _____				
7 _____				
Sapling/Shrub Stratum (Plot size: <u>15'</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 = _____ L/PL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 _____				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ³ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u><i>Scirpus americanus</i></u>	<u>25</u>	<u>YES</u>	<u>OBL</u>	
2 <u><i>Phalaris amabilis</i></u>	<u>25</u>	<u>YES</u>	<u>FACW</u>	
3 <u><i>Taraxacum officinale</i></u>	<u>15</u>	<u>NO</u>	<u>FACU</u>	
4 <u><i>Taraxacum officinale</i></u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
5 <u><i>Solidago altissima</i></u>	<u>10</u>	<u>NO</u>	<u>FACU</u>	
6 <u><i>Erigeron annuus</i></u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1 _____				
2 _____				
3 _____				
4 _____				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-26

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-9	10YR 3/1	95	7.5YR 5/5	5	C	M	Silt loam	
9-19	10YR 7/2	00	7.5YR 5/0	20	I	M	Clay loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	
<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____
 Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/30/2014
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-27
 Investigator(s): TJSL, VJM Section, Township, Range: Villerova
 Landform (hillslope, terrace, etc.): Till Plains Local relief (concave, convex, none): Convex Slope (%): 2-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.1438 Long: 42.40529 Datum: NAD 83
 Soil Map Unit Name: Busti Silt Loam (RnE) NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <u>No wetland hydrology indicators present</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-27

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>0</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Solidago canadensis</u>	<u>40</u>	<u>YES</u>	<u>Eqm</u>	
2. <u>Urtica dioica</u>	<u>20</u>	<u>YES</u>	<u>Fru</u>	
3. <u>Lolium temulentum</u>	<u>20</u>	<u>NO</u>	<u>Fru</u>	
4. <u>Tragopogon virginicus</u>	<u>10</u>	<u>NO</u>	<u>Fru</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-7

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

Depth (Inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-4	10YR 5/2	100	—	—	—	Silt/Loam	
7-19	10YR 3/4	100	—	—	—	Silt/Loam	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ² :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A10) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<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) (LRR R, MLRA 149B)			

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 11/02/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-20
 Investigator(s): DTC KTM Section, Township, Range: Vilkesboro
 Landform (hillslope, terrace, etc.): Till plain Local relief (concave, convex, none): concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 42.176669 Long: 72.407603 Datum: NAD 83
 Soil Map Unit Name: Montauque silt loam (CtB) NW classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-J2</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C5) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-4

Tree Stratum (Plot size: <u>30'</u>)	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1				
2				
3				
4				
5				
6				
Sapling/Shrub Stratum (Plot size: <u>15'</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 = _____
1				
2				
3				
4				
5				
6				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	<u>70</u>	<u>YES</u>	<u>OBL</u>	
2	<u>20</u>	<u>YES</u>	<u>FACW</u>	
3	<u>10</u>	<u>NO</u>	<u>FAC</u>	
4	<u>5</u>	<u>NO</u>	<u>FACU</u>	
5	<u>5</u>	<u>NO</u>	<u>UPL</u>	
6				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1				
2				
3				
4				
5				
6				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point DP-33

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-10	G1 4/10 ³	90	2.5YR 7/1	10	C	M	shy clay loam		
10-20	G2 4/10 ³	95	2.5YR 7/6	5	C	M	shy clay loam		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: 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) (LRR R, MLRA 149B)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A18) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/20/20
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-09
 Investigator(s): D.S.L. VTM Section, Township, Range: Villenova
 Landform (hillside, terrace, etc.): Till Plain Local relief (concave, convex, none): Convex Slope (%): 8-15
 Subregion (LRR or MLRA): LRR-R Lat: 79.146449 Long: 42.407621 Datum: NAD 83
 Soil Map Unit Name: Photaugua silt loam (CkC) NW classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation IVD Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report)	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-29

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)				
1.	<u>70</u>	<u>YES</u>	<u>FACU</u>	
2.	<u>60</u>	<u>YES</u>	<u>FACU</u>	
3.	<u>15</u>	<u>NO</u>	<u>FACU</u>	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>145</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>15'</u>)				
1.				
2.				
3.				
4.				
	<u>0</u>	= Total Cover		
Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)				
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"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 11/20/2015
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-70
 Investigator(s): DTL, VSM Section, Township, Range: Villerova
 Landform (hillslope, terrace, etc.): Fill Plain Local relief (concave, convex, none): concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 42.149877 Long: 72.407902 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam (CkR) NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-13</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply):</u></p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks.) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<p><u>Secondary Indicators (minimum of two required):</u></p> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u><1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-30

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Juncus obtusifolius</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	
2 <u>Agrostis stolonifera</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
3 <u>Phalaris amurensis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
4 <u>Lolium complanatum</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>	
5 <u>Festuca gracillima</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
6 <u>Galidago sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
7 <u>Epilobium sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>125</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/02/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-31
 Investigator(s): DJL, KJM Section, Township, Range: Villanova
 Landform (hilllope, terrace, etc.): Till Plains Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.49483 Long: 42.40798 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam (Lkb) NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP- 31

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Bidens frondosa</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
2 <u>Cotula coronopifolia</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
3 <u>Solidago altissima</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>	
4 <u>Taraxacum officinale</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>	
5 <u>Plantago lanceolata</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>	
6 <u>Archielea millefolium</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
7 <u>Rotentilla pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>65</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.) 				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-9	10YR 3/2	100	—	—	—	—	Silt loam	
9-18	10YR 4/3	100	—	—	—	—	Silt loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils¹:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<input type="checkbox"/> Other (Explain in Remarks)

¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/02/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-32
 Investigator(s): Dick Vism Section, Township, Range: Village, ADA
 Landform (hillside, terrace, etc.): Till plain Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.140529 Long: 42.402599 Datum: NAD 83
 Soil Map Unit Name: Eric, H loam (K1p) NWM classification: PCM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-34</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <u>col</u> <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>21</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-32

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Mentha piperita</u>	<u>60</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Aster sp</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>	
3 <u>Leersia oryzoides</u>	<u>30</u>	<u>YES</u>	<u>OBL</u>	
4 <u>Typha latifolia</u>	<u>20</u>	<u>NO</u>	<u>FACW</u>	
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>110</u> = Total Cover <u>70</u> <u>28</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point DP- 32

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-9	10YR5/1	95	7.5YR 4/2	5	C	M	Silt/clay	
9-18	10YR 5/1	90	7.5YR 5/8	10	C	M	Silt/clay	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils¹:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Rod Parent Material (F21)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No


Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/2/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-33
 Investigator(s): DSL, VSM Section, Township, Range: Villeman
 Landforms (hilllope, terrace, etc.): Till Plains Local relief (concave, convex, none): Convex Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.140899 Long: 42.407567 Datum: NAD 83
 Soil Map Unit Name: Langford Silt loam (Lob) NWM classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="text-align: center; margin-top: 20px;">  </div>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C5) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks): ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No wetland hydrology indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: DP-33

Tree Stratum (Plot size: <u>3x1</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
5				
6				
7				
				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
5				
6				
7				
				Prevalence Index worksheet: Total % Cover of: <u>0</u> = Total Cover 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: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
5				
6				
7				
				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1	<u>50</u>	<u>Yes</u>	<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2	<u>5</u>	<u>No</u>	<u>FACU</u>	
3	<u>5</u>	<u>No</u>	<u>FACU</u>	
4				
5				
6				
7				
8				
9				
10				
11				
12				
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
				Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-33

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-9	1YR 3/2	100					Silt loam	
9-18	10YR 5/3	75	7.5YR 5/2	5			Silt loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA8) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Balf Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/2015
 Applicant/Owner: Balf Hill Wind Energy, LLC State: NY Sampling Point: DP-29
 Investigator(s): DSC, JSM Section, Township, Range: Village
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Rolling Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 42.164587 Long: 73.399245 Datum: NAD 83
 Soil Map Unit Name: Eric silt loam (E1B) NMI classification: P4M

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W-7</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 3A

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
<u>0</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus amomum</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Viburnum dentatum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			
<u>10</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Aster sp</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
<u>120</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
<u>0</u> = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

SOIL

Sampling Point: DP-5

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-9	10YR 3/1	90	2.5YR 7/0	5	C	M	Silt loam	
9-18	10YR 3/2	90	2.5YR 7/0	10	C	M	Silt loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A10) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA8) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/02/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-57
 Investigator(s): DJL, VJM Section, Township, Range: V. 11, T. 15, R. 15
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Convex Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.165763 Long: 42.399271 Datum: NAD 83
 Soil Map Unit Name: Fine Silty loam (E1B) NMI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	if yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
<u>Primary Indicators (minimum of one is required, check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u>		
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.			
Remarks: <u>No wetland hydrology indicators present</u>			

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 33

Tree Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		<u>0</u> = Total Cover		
1.				
2.				
3.				
4.				
5.				
6.				
7.				
Herb Stratum (Plot size: <u>5'</u>)		<u>0</u> = Total Cover		
1.	<u><i>Alnus incana</i></u>	<u>30</u>	<u>YES</u>	<u>FACU</u>
2.	<u><i>Quercus glauca</i></u>	<u>30</u>	<u>YES</u>	<u>FACU</u>
3.	<u><i>Galium mollugo</i></u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
4.	<u><i>Plantago lanceolata</i></u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
5.	<u><i>Tribulus terrestris</i></u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
6.	<u><i>Achillea millefolium</i></u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
7.				
8.				
9.				
10.				
11.				
12.				
Woody Vine Stratum (Plot size: <u>30'</u>)		<u>100</u> = Total Cover		<u>50</u> <u>20</u>
1.				
2.				
3.				
4.				
		<u>0</u> = 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)

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:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: DP-37

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2	100	—	—	—	—	Silt-loam	Topsoil
9-18	10YR 4/3	95	7.5R 5/4	5	C	M	Silt-loam	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A18) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (F21)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<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) (LRR R, MLRA 149B)			

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-40
 Investigator(s): DSL, VJA Section, Township, Range: Villenova
 Landform (hilllope, terrace, etc.): Till Plain Local relief (concave, convex, none): concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.163868 Long: 42.399989 Datum: NAD 83
 Soil Map Unit Name: Eric Silt loam (E.B) NWI classification: PUM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-L7</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-46

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2 _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3 _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____	_____	_____	_____	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 = _____
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Juncus effusus</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>	
2 <u>Mentha dipocarpa</u>	<u>30</u>	<u>YES</u>	<u>OBL</u>	
3 <u>Epilobium sp.</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>	
4 <u>Agrostis stolonifera</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
11 _____	_____	_____	_____	
12 _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-40

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/1	90	7.5YR 5/4	10	C	no	Silt loam	
9-18	10YR 5/1	90	7.5YR 5/4	10	C	no	Silt loam	

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

- | | | |
|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/23/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-41
 Investigator(s): DJL, USMA Section, Township, Range: Villenora
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Convex Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.163678 Long: 42.399925 Datum: NAD 83
 Soil Map Unit Name: Eric A1f loam (E1B) NWM classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> if yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <u>No wetland hydrology indicators present</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 1/1

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Viburnum dentatum</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Solidago missouriensis</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Alopecurus pratensis</u>	<u>50</u>	<u>YES</u>	<u>FACU</u>	
3. <u>Pectylos glauca</u>	<u>30</u>	<u>NO</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>140</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet)				

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: DP-41

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/4	100	—	—	—	—	Silt loam	
9-18	10YR 4/4	100	—	—	—	—	Silt loam	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/23/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-42
 Investigator(s): DSL, VJM Section, Township, Range: Villersova
 Landform (hilllope, terrace, etc.): Till Plain Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.163634 Long: 42.402515 Datum: NAD 83
 Soil Map Unit Name: Eric silt loam (E1B) NWM classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-42</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> 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)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Slanted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <u>6</u> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <u>0</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-42

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2 _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____	_____	_____	_____	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 = _____
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Scirpus luparinus</u>	<u>15</u>	<u>YES</u>	<u>OBL</u>	
2 <u>Juncus tenuis</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
3 <u>Danthonia racemosa</u>	<u>1</u>	<u>NO</u>	<u>UPL</u>	
4 <u>Muhlenbergia peruviana</u>	<u>1</u>	<u>NO</u>	<u>FACU</u>	
5 <u>Epilobium sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
6 <u>Dracopis sensibilis</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>	
7 <u>Hesperis sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
8 <u>Valeriana distachya</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
9 <u>Aster sp.</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
10 <u>Agrostis stolonata</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
11 <u>Carex lupulina</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>	
12 _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
Total Cover: <u>102</u> = Total Cover <u>51</u> 201				
Remarks: (Include photo numbers here or on a separate sheet.)				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				

SOIL

Sampling Point: DP-42

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-15	10YR3/1	95	1.5YR3/4	5	C	M	SH	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-42
 Investigator(s): DJL, VSM Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): convex Slope (%): 5-6
 Subregion (LRR or MLRA): LRR-R Lat: 79.163785 Long: 42.402635 Datum: NAD 83
 Soil Map Unit Name: Fine Silt Loam (E1B) NW classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 43

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet:
_____ = Total Cover				Total % Cover of _____ Multiply by:
1. _____	_____	_____	_____	DBL species _____ x 1 = _____
2. _____	_____	_____	_____	FACW species _____ x 2 = _____
3. _____	_____	_____	_____	FAC species _____ x 3 = _____
4. _____	_____	_____	_____	FACU species _____ x 4 = _____
5. _____	_____	_____	_____	UPL species _____ x 5 = _____
6. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators:
_____ = Total Cover				<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
1. <u>Vaccinium glaucum</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	<input type="checkbox"/> 2 - Dominance Test is >50%
2. <u>Aster sp</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
3. <u>Solidago altissima</u>	<u>20</u>	<u>NO</u>	<u>FACU</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Aster sp</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Viburnum acerifolium</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata:
_____ = Total Cover 60 34				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. _____	_____	_____	_____	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
2. _____	_____	_____	_____	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
3. _____	_____	_____	_____	Woody vines – All woody vines greater than 3.28 ft in height.
4. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-43

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/3	100	—	—	—	—	Silt loam	
9-18	10YR 5/2	95	2.5YR 5/6	5	C	M	Silt loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	
<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	
<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)	

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/2015
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-44
 Investigator(s): DJL, VJM Section, Township, Range: V11E10N
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.164454 Long: 42.406188 Datum: NAD 83
 Soil Map Unit Name: Enc Silt loam (Ft. G) NW classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-M1</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C5) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C6) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquifer (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-44

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	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 = _____	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
Herb Stratum (Plot size: <u>5'</u>)					
1. <u>Juncus effusus</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ³ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Scirpus americanus</u>	<u>30</u>	<u>YES</u>	<u>OBL</u>		
3. <u>Lotus corniculatus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>		
4. <u>Hesperis sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
5. <u>Plantago arifolia</u>	<u>20</u>	<u>NO</u>	<u>FACW</u>		
6. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: DP-111

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-9	10YR 5/1	90	7.5YR 5/4	10	C	M	Silt loam	
9-15	10YR 5/2	90	7.5YR 5/6	10	C	M	Silt loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-45
 Investigator(s): DJL, VJM Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Convex Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.164174 Long: 42.406104 Datum: NAD 83
 Soil Map Unit Name: fine silt loam (PcL) NMI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point DP-15

Tree Stratum (Plot size: 30')				Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B) 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"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1							
2							
3							
4							
5							
6							
Sapling/Shrub Stratum (Plot size: 15')				<u>0</u>	= Total Cover		
1							
2							
3							
4							
5							
6							
7							
Herb Stratum (Plot size: 5')				<u>0</u>	= Total Cover		
1	<i>Hesperis sp.</i>	10	NO	FACU			
2	<i>Plantago lanceolata</i>	5	NO	FACU			
3	<i>Trifolium pratense</i>	10	NO	FACU			
4	<i>Lotus corniculatus</i>	10	NO	FACU			
5	<i>Trifolium virginiana</i>	5	NO	FACU			
6							
7	<i>Panicum polyanthum</i>	60	YES	FACW			
8	<i>Oxyria plantaginifolia</i>	30	YES	FACU			
9							
10							
11							
12							
				<u>130</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)							
1							
2							
3							
4							
					= Total Cover		
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>							
Remarks: (Include photo numbers here or on a separate sheet.)							

SOIL

Sampling Point: DP-45

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-9	12R 4/3	100	—	—	—	—	SL/CLay	
9-12	10R 4/3	92	2.5-5R 4/2	10	C	A	Silt/CLay	

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

- Hydric Soil Indicators:**
- ___ Histosol (A1)
 - ___ Histic Epipedon (A2)
 - ___ Black Histic (A3)
 - ___ Hydrogen Sulfide (A4)
 - ___ Stratified Layers (A5)
 - ___ Depleted Below Dark Surface (A11)
 - ___ Thick Dark Surface (A12)
 - ___ Sandy Mucky Mineral (S1)
 - ___ Sandy Gleyed Matrix (S4)
 - ___ Sandy Redox (S5)
 - ___ Stripped Matrix (S8)
 - ___ Dark Surface (S7) (LRR R, MLRA 149B)
 - ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - ___ Loamy Mucky Mineral (F1) (LRR K, L)
 - ___ Loamy Gleyed Matrix (F2)
 - ___ Depleted Matrix (F3)
 - ___ Redox Dark Surface (F6)
 - ___ Depleted Dark Surface (F7)
 - ___ Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - ___ Coast Prairie Redox (A16) (LRR K, L, R)
 - ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - ___ Dark Surface (S7) (LRR K, L, M)
 - ___ Polyvalue Below Surface (S8) (LRR K, L)
 - ___ Thin Dark Surface (S9) (LRR K, L)
 - ___ Iron-Manganese Masses (F12) (LRR K, L, R)
 - ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
 - ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - ___ Red Parent Material (F21)
 - ___ Very Shallow Dark Surface (TF12)
 - ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/23/2012
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-46
 Investigator(s): DTC USM Section, Township, Range: VILLANOVA
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): CONCAVE Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.164153 Long: 42.408373 Datum: NAD 83
 Soil Map Unit Name: Silt Sh (om) (F16) NWM classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-NI</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply):</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required):</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>5</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-46

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Salix sp.</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)	
2. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	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 = _____	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>15</u> = Total Cover <u>7.5</u>					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					
1. <u>Corylus americana</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>		
2. <u>Salix sp.</u>	<u>15</u>	<u>YES</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>35</u> = Total Cover <u>17.5</u>					
Herb Stratum (Plot size: <u>5'</u>)					
1. <u>Trifolium hybridum</u>	<u>30</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is <3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Solidago canadensis</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>		
3. <u>Forsythia sp.</u>	<u>2.5</u>	<u>YES</u>	<u>FAC</u>		
4. <u>Asclepias sp.</u>	<u>2.0</u>	<u>NO</u>	<u>FAC</u>		
5. <u>Agrostis alba</u>	<u>1.5</u>	<u>NO</u>	<u>FACW</u>		
6. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>120</u> = Total Cover <u>60</u>					
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/2005
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-47
 Investigator(s): DEL, KTM Section, Township, Range: Villeona
 Landform (hill/slope, terrace, etc.): Till Plain Local relief (concave, convex, none): convex Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.164256 Long: 42.408546 Datum: NAD 83
 Soil Map Unit Name: Kqs Silt loam (E1B) NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 47

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>Populus nigra</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
2. <u>Populus sp.</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. _____	_____	_____	_____	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. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Solidago canadensis</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≥3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Aster sp. (rain)</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____ _____				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2010
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-4B
 Investigator(s): DJL, VSM Section, Township, Range: Villepoux
 Landform (hillslope, terrace, etc.): Till Plains Local relief (concave, convex, none): concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.165017 Long: 42.409849 Datum: NAD 83
 Soil Map Unit Name: Eric Till (silt) (LRR) NWM classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-01</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C8) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautaugua County Sampling Date: 11/04/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-47
 Investigator(s): DJP, VJM Section, Township, Range: Villiers
 Landform (hilllope, terrace, etc.): Till plain Local relief (concave, convex, none): convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 42.65124 Long: 73.409897 Datum: NAD 83
 Soil Map Unit Name: Chautaugua silt loam (CkA) NWM classification: —

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> 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)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>81</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>50</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 49

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: 3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
4. _____	_____	_____	_____	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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: 15')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: 5')				
1. <i>Rosa multiflora</i>	30	Y	FACU	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is $\leq 3.0^1$ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Lotus corniculatus</i>	50	Y	FACU	
3. <i>Achillea</i> sp.	20	Y	FAC	
4. <i>Solidago altissima</i>	20	N	FACU	
5. <i>Helianthus</i> sp.	5	N	FACU	
6. <i>Fragaria virginiana</i>	5	N	FACU	
7. <i>Verbena officinalis</i>	5	N	FACU	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
11% = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0 = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County State: NY Sampling Date: 11/04/2014
 Applicant/Owner: Ball Hill Wind Energy, LLC Section, Township, Range: V. 11, Lenox Sampling Point: DP-512
 Investigator(s): DJL, VJM Local relief (concave, convex, none): concave Slope (%): 3-8
 Landform (hillside, terrace, etc.): fill plain Datum: NAD 83
 Subregion (LRR or MLRA): LRR-R Lat: 79.155498 Long: 42.70663 NW classification: PSS
 Soil Map Unit Name: Ellis Silt loam (E1A)
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Yes No
 Are Vegetation Nh, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Remarks: (Explain alternative procedures here or in a separate report.)	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> if yes, optional Wetland Site ID: <u>W1-01</u>
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HYDROLOGY

- Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is 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 (minimum of two 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 (D1)
 - Geomorphic Position (D2)
 - Shallow Aquitard (D3)
 - Microtopographic Relief (D4)
 - FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>4</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>	

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: DP-52

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Taxus canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2 _____			
3 _____			
4 _____			
5 _____			
6 _____			
7 _____			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 84% (A/B)

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Salix sp.</u>	<u>45</u>	<u>Yes</u>	<u>FAC</u>
2 <u>Panicum pensylvanicum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
3 _____			
4 _____			
5 _____			
6 _____			
7 _____			

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')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Asp. sp.</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
2 <u>Poa sp.</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
3 <u>Salidana alba</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
4 _____			
5 _____			
6 _____			
7 _____			
8 _____			
9 _____			
10 _____			
11 _____			
12 _____			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is $\leq 3.0^1$
 - 4 - Morphological Adaptations² (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation³ (Explain): _____
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1 _____			
2 _____			
3 _____			
4 _____			

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-53
 Investigator(s): DJL, VJM Section, Township, Range: Villenova
 Landform (hillside, terrace, etc.): Till Plain Local relief (concave, convex, none): concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.155726 Long: 42.401561 Datum: NAD 83
 Soil Map Unit Name: Eric silt loam (E1B) NWM classification: —
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) _____ _____	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-53

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Tsuga canadensis</i>	45	YES	FACU	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>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17%</u> (A/B)
2. <i>Betula alleghaniensis</i>	10	NO	FAC	
3. <i>Acer saccharum</i>	20	YES	FACU	
4.				
5.				
6.				
7.				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet: Total % Cover of: <u>75</u> = Total Cover <u>375</u> 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. <i>Betula alleghaniensis</i>	10	YES	FAC	
2. <i>Tsuga canadensis</i>	10	YES	FACU	
3. <i>Fagus grandifolia</i>	10	YES	FACU	
4.				
5.				
6.				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Aster alleghaniensis</i>	30	YES	FACU	
2. <i>Dryopteris</i>	10	NO	FAC	
3.				
4.				
5.				
6.				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1.				
2.				
3.				
4.				
5.				
6.				
0 = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point DP-55

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-2	10YR 2/2	100	—	—	—	—	—	Loam	
2-4	10YR 2/1	100	—	—	—	—	—	Loam	
4-10	10YR 2/1	100	—	—	—	—	—	5.25 mm	
10-20	10YR 4/3	95	7.5Y 4/6	5	C	M		Silt/Loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2010
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-55
 Investigator(s): DTL, LSM Section, Township, Range: Villeras
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.157 Long: 42.399607 Datum: NAD 83
 Soil Map Unit Name: Fine Silty Loam (FCL) NWM classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-X-E</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary indicators (minimum of two required) ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> 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 (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>9</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-53

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>15%</u> (A/B)
4. _____	_____	_____	_____	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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>) <u>0</u> = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5'</u>) <u>0</u> = Total Cover				
1. <u>Agrostis alba</u>	<u>60</u>	<u>46%</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is <3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Phleum pratense</u>	<u>20</u>	<u>46%</u>	<u>FACW</u>	
3. <u>Galium sp.</u>	<u>20</u>	<u>46%</u>	<u>FACU</u>	
4. <u>Juncus effusus</u>	<u>20</u>	<u>46%</u>	<u>FACW</u>	
5. <u>Syntherisma sp.</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>	
6. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u>) <u>120</u> = Total Cover <u>65</u> / <u>30</u>				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-52

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-9	10YR 3/2	90	7.5YR 3/4	10		L	27	Silt/clay	
9-18	10YR 4/2	90	7.5YR 5/6	10		C	27	Silt/clay	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F5)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA8) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2005
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-56
 Investigator(s): DJG, VJM Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.157362 Long: 42.399638 Datum: NAD 83
 Soil Map Unit Name: ESP Silt loam (R1B) NMI classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-56

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1	<u>30</u>	<u>YES</u>	<u>FALSE</u>	
2	<u>20</u>	<u>YES</u>	<u>FALSE</u>	
3	<u>20</u>	<u>YES</u>	<u>FALSE</u>	
4	<u>20</u>	<u>NO</u>	<u>FALSE</u>	
5	<u>10</u>	<u>NO</u>	<u>FALSE</u>	
6	<u>10</u>	<u>NO</u>	<u>FALSE</u>	
7	<u>10</u>	<u>NO</u>	<u>FALSE</u>	
8	<u>10</u>	<u>NO</u>	<u>FALSE</u>	
9	<u>5</u>	<u>NO</u>	<u>FALSE</u>	
10				
11				
12				
<u>135</u> = Total Cover				<u>0.75</u> <u>77</u>
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1				
2				
3				
4				
<u>0</u> = 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

LFL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: DP-56

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 2/3	95	7.5YR 3/4	5	C	M	Silt loam	
3-18	10YR 4/4	100			C	M	Silt loam	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils¹:

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

¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks: No hydric soil indicators present

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2017
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-52
 Investigator(s): DTL VSP Section, Township, Range: Villenova
 Landform (hilllope, terrace, etc.): Roll Plain Local relief (concave, convex, none): Concave Slope (%): 2-6
 Subregion (LRR or MLRA): LRR-R Lat: 42.162664 Long: -76.399693 Datum: NAD 83
 Soil Map Unit Name: fine silt loam NWI classification: PKm
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NI, Soil NO, or Hydrology AE significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NI, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>42-52</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparingly Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u>		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: 		

VEGETATION – Use scientific names of plants.

Sampling Point: DP-57

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____				Prevalence Index worksheet: Total % Cover of _____ Multiplied 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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Agrostis stolonifera</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>	
2 <u>Juncus effusus</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	
3 <u>Scirpus americanus</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>	
4 <u>Aster sp.</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
5 <u>Galium mollugo</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>	
6 <u>Solidago canadensis</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	
7 <u>Phlox pilularis</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
8 <u>Fraxinus virginiana</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
9 <u>Hieracis</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
10 <u>Lolium conjugatum</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
11 _____				
12 _____				
<u>60</u> = Total Cover <u>60</u> <u>24</u>				
Woody Vine Stratum (Plot size: <u>20'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes 1 No _____

SOIL

Sampling Point: DP-57

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10YR 3/1	95	7.5YR 3/4	5	C	M	Silt loam	
10-18	10YR 5/2	90	7.5YR 5/4	10	C	M	Silt loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-59
 Investigator(s): DJL USM Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Till plain Local relief (concave, convex, none): Concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR-R Lat: 79.162977 Long: 42.399735 Datum: NAD 83
 Soil Map Unit Name: Yps Silty loam (R1P) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-5B

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
6			
7			
<u>0</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)			
1			
2			
3			
4			
5			
6			
7			
<u>0</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)			
1 <u>Solidago canadensis</u>	<u>60</u>	<u>YES</u>	<u>FACU</u>
2 <u>Vicia americana</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
3 <u>Milium pratense</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
4 <u>Taraxacum officinale</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
5 <u>Alopecurus</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
6 <u>Asarum virginiana</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>
7			
8			
9			
10			
11			
12			
<u>105</u> = Total Cover <u>62.5</u> <u>31'</u>			
Woody Vine Stratum (Plot size: <u>30'</u>)			
1			
2			
3			
4			
<u>0</u> = 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)

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is >3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2005
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-61
 Investigator(s): DTL, USM Section, Township, Range: W11C10VA
 Landform (hillside, terrace, etc.): Tall plain Local relief (concave, convex, none): concave Slope (%): 0.7
 Subregion (LRR or MLRA): LRR-R Lat: 79.162728 Long: 42.396787 Datum: NAD 83
 Soil Map Unit Name: fine silt loam (SdA) NW classification: PKm
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WK-43</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> High Water Table (A2) <u>X</u> 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)	<u>Secondary indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) ___ Moss Trim Lines (B18) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquifer (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>10</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>5</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 63

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>6' tree</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Melaleuca alternifolia</u>	<u>75</u>	<u>YES</u>	<u>FACW</u>	
2 <u>Aster sp</u>	<u>15</u>	<u>NO</u>	<u>FACU</u>	
3 <u>Sida sp</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
4 _____				
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>95</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>6' tree</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>	
2 _____				
3 _____				
4 _____				
<u>10</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤ 3.0
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/2017
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-62
 Investigator(s): DJL, USM Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till Plains Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.162906 Long: 42.24833 Datum: NAD 83
 Soil Map Unit Name: Elie Silt (Gm) (E1A) NW classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply): <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: - No water table present within 20" - No saturation present within 20" - Soil moist but no wetland hydrology indicators observed	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 62

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
4. _____	_____	_____	_____	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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'</u>)				Definitions of Vegetation Strata:
1. <u>Phlox pilularis</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
2. <u>Dactyloctenium aegyptium</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
3. <u>Hesperis sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
4. <u>Tribulus terrestris</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>	Woody vines – All woody vines greater than 3.28 ft in height.
5. <u>Taraxacum officinale</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
6. <u>Plantago lanceolata</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
7. <u>Phalaris carolinensis</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP- 62

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

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-10	10YR 3/1	90	7.5YR 3/4	10	C	M	5 silt/clay		
10-20	10YR 5/2	90	7.5YR 5/4	10	C	M	5 silt/clay		

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

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/05/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-64
 Investigator(s): DJR, USM Section, Township, Range: VILLERONA
 Landform (hillslope, terrace, etc.): Till Point Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.12453 Long: 42.428515 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam (Bst) NW classification: P1m
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-67

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1 _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
<u>0</u> = Total Cover				Prevalence Index worksheet:	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Total % Cover of _____ Multiply by:	
1 <u>Salix sp</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	OBL species _____ x 1 = _____	
2 _____	_____	_____	_____	FACW species _____ x 2 = _____	
3 _____	_____	_____	_____	FAC species _____ x 3 = _____	
4 _____	_____	_____	_____	FACU species _____ x 4 = _____	
5 _____	_____	_____	_____	UPL species _____ x 5 = _____	
6 _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
7 _____	_____	_____	_____	Prevalence Index = B/A = _____	
<u>10</u> = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot size: <u>5'</u>)				1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)	
1 <u>Sium sp</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2 <u>Carex lasiocarpa</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>		
3 <u>Juncus effusus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>		
4 <u>Panicum capta</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>		
5 <u>Polygon sp</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
6 <u>Hieracium</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
7 <u>Fragaria virginiana</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>		
8 <u>Carex sp</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
9 _____	_____	_____	_____		
10 _____	_____	_____	_____		
11 _____	_____	_____	_____		
12 _____	_____	_____	_____		
<u>110</u> = Total Cover <u>56</u> <u>87</u>				Definitions of Vegetation Strata:	
Woody Vine Stratum (Plot size: <u>30'</u>)				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
1 _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
2 _____	_____	_____	_____		
3 _____	_____	_____	_____		
4 _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point DP- 64

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 5/2	90	7.5YR 3/4 10		C	M	Silt/clay	
8-18	10YR 5/2	80	7.5YR 5/6 20		C	M	Silt/clay	

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

²Location: PL=Porc 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 (S8)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F16) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/05/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-65
 Investigator(s): DJL, VSM Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till Point Local relief (concave, convex, none): Convex Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.124179 Long: 42.428681 Datum: NAD 83
 Soil Map Unit Name: Busti Soil Comp. (BqL) NVM classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) _____ _____	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-65

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u><i>Populus tremuloides</i></u>	<u>70</u>	<u>YES</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>70</u> = Total Cover				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Total % Cover of: _____ Multiply by:
1. <u><i>Carpinus caroliniana</i></u>	<u>60</u>	<u>YES</u>	<u>FAC</u>	OBL species _____ x 1 = _____
2. <u><i>Malus</i> sp.</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	FACW species _____ x 2 = _____
3. <u><i>Amelanchier</i> sp.</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	FAC species _____ x 3 = _____
4. <u><i>Sorbus pinnatifida</i></u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	FACW species _____ x 4 = _____
5. <u><i>Crataegus</i> sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	UPL species _____ x 5 = _____
6. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = _____
<u>95</u> = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: <u>5'</u>)				<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
1. _____	_____	_____	_____	<input type="checkbox"/> 2 - Dominance Test is >50%
2. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
3. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	_____	_____	Definitions of Vegetation Strata:
7. _____	_____	_____	_____	Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. _____	_____	_____	_____	Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. _____	_____	_____	_____	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10. _____	_____	_____	_____	Woody vines - All woody vines greater than 3.28 ft in height.
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-65

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

Depth (Inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6	10YR 3/1	100	-	-	-	-	Silt/Clay	
6-18	10YR 5/3	90	7.5YR 5/0	10	C	M	Silt/Clay	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/06/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-74
 Investigator(s): DSL, VSM Section, Township, Range: Villerova
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.127372 Long: 42.429137 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam (CkC) NWI classification: PKm
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-US</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-74

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>15</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Sapling</u>	<u>30</u>	<u>YAC</u>	<u>YAC</u>	
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>30</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Salidaga gigantea</u>	<u>20</u>	<u>YAC</u>	<u>YAC</u>	
2 <u>Leersia orizoides</u>	<u>5</u>	<u>YAC</u>	<u>YAC</u>	
3 <u>Arundo donax</u>	<u>5</u>	<u>YAC</u>	<u>YAC</u>	
4 _____				
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>35</u> = Total Cover / <u>17.5</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____ _____				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/26/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-75
 Investigator(s): DSC, WJM Section, Township, Range: Villeray
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.127418 Long: 42.429202 Datum: NAD 83
 Soil Map Unit Name: Ponti Silty loam (B&B) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-75

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pinus serotina</u>	<u>30</u>	<u>Yes</u>	<u>Tree</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. <u>Acer saccharum</u>	<u>10</u>	<u>No</u>	<u>Tree</u>	
3. <u>Malus sp.</u>	<u>20</u>	<u>Yes</u>	<u>Tree</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>60</u> = Total Cover <u>30</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Pinus serotina</u>	<u>30</u>	<u>Yes</u>	<u>Tree</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>30</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤ 3.0 ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Salida sp. retusissima</u>	<u>30.0</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus cuneifolius</u>	<u>10</u>	<u>Yes</u>	<u>Tree</u>	
3. <u>Asterina agillana</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
4. <u>Sagittaria virginiana</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
5. <u>Phlox pilularis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>70</u> = Total Cover				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>20'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP- 75

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 7/4	100	—	—	—	—	Silt loam	
5-18	10YR 4/4	100	—	—	—	—	Silt loam	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA0) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/16/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 77
 Investigator(s): DSC Section, Township, Range: Village
 Landform (hillslope, terrace, etc.): Depressions Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.133863 Long: 42.483703 Datum: NAD 83
 Soil Map Unit Name: Ashville silt loam (AS) NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W1-W2</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-7

Tree Stratum (Plot size: <u>3x3</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Fraxinus pennsylvanica</i></u>	<u>5</u>	<u>Y/C</u>	<u>TRM</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. <u><i>Petalostemum album</i></u>	<u>5</u>	<u>Y/C</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15'</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 = _____
1. <u><i>Ulmus americana</i></u>	<u>10</u>	<u>Y/C</u>	<u>TRM</u>	
2. <u><i>Petalostemum album</i></u>	<u>10</u>	<u>Y/C</u>	<u>TRM</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u><i>Urtica dioica</i></u>	<u>30</u>	<u>Y/C</u>	<u>TRM</u>	
2. <u><i>Urtica sp.</i></u>	<u>30</u>	<u>Y/C</u>	<u>FAC</u>	
3. <u><i>Sphagnum sp.</i></u>	<u>10</u>	<u>N/D</u>	<u>TRM</u>	
4. <u><i>Carex sp.</i></u>	<u>5</u>	<u>N/D</u>	<u>FAC</u>	
5. <u><i>Carex sp.</i></u>	<u>5</u>	<u>N/D</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. <u>Y</u>	_____	_____	_____	
11. <u>Y</u>	_____	_____	_____	
12. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover <u>50</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-77

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	10YR 2/6	100	-	-	-	-	Silt/loam	
2-14	10YR 2/6	100	7.5YR 5/6	5	2	M	Clay loam	Very Dark

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

- Hydric Soil Indicators:**
- | | | |
|---|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/10/05
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-23
 Investigator(s): [Signature] Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): convex Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.133805 Long: 42.433552 Datum: NAD 83
 Soil Map Unit Name: [Signature] NWI classification: CBsA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 79

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u><i>Pinus strobus</i></u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)	
2. <u><i>Prunella serotina</i></u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		
3. <u><i>Ulmus americana</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4. <u><i>Populus nigra</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
5. <u><i>Salix nigra</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6. _____	_____	_____	_____	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 = _____	
7. _____	_____	_____	_____		
<u>36</u> = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Herb Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>Y</u>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: DP-7

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10YR 5/6	100%					Silt loam	
10-20	10YR 5/6	100%					Silt loam	

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

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/11/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-79
 Investigator(s): DJL Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till Plains Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 79. Long: 42. Datum: NAD 83
 Soil Map Unit Name: Basty Silty loam (B3A) NWI classification: PKM

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-V6</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<p><u>Secondary Indicators (minimum of two required)</u></p> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-79

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>475</u>	<u>FACW</u>	
2. <u>Juncus effusus</u>	<u>5</u>	<u>160</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>95</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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:

___ 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

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

SOIL

Sampling Point: DP-77

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10YR 4/1	95	7.5YR 3/4	5	C	M	Silt/clay	

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

- | | | |
|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils²: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

²Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/11/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- B0
 Investigator(s): DJL Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Till plain Local relief (concave, convex, none): convex Slope (%): 12-23
 Subregion (LRR or MLRA): LRR-R Lat: 79. Long: 42. Datum: NAD 83
 Soil Map Unit Name: Busti silt loam (BcA) NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4 _____				
5 _____				
6 _____				
7 _____				
<p>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</p> <p><u>0</u> = Total Cover</p>				<p>Prevalence Index worksheet:</p> <p>Total % Cover of: _____ Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p>Prevalence Index = B/A = _____</p>
<p>Herb Stratum (Plot size: <u>5'</u>)</p> <p><u>0</u> = Total Cover</p>				<p>Hydrophytic Vegetation Indicators:</p> <p>1 - Rapid Test for Hydrophytic Vegetation</p> <p>2 - Dominance Test is >50%</p> <p>3 - Prevalence Index is ≤3.0¹</p> <p>4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p>Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>
1 <u>Plantago lanceolata</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	<p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p>
2 <u>Cotula reticulata</u>	<u>312</u>	<u>Y</u>	<u>FACU</u>	
3 <u>Erigeron phillyria</u>	<u>20</u>	<u>N</u>	<u>FACU</u>	
4 <u>Plantago lanceolata</u>	<u>12</u>	<u>N</u>	<u>FACU</u>	
5 <u>Stachys sp.</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<p>Woody Vine Stratum (Plot size: <u>30'</u>)</p> <p><u>0</u> = Total Cover</p>				<p>Hydrophytic Vegetation Present? Yes _____ No <u>X</u></p>
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>				

SOIL

Sampling Point: DP-10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 7/4	100	-	-	-	-	SH/loam	
9-12	10YR 7/4	100	-	-	-	-	SH/loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Redox (S5)			
<input type="checkbox"/> Stripped Matrix (S6)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)			

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

Restrictive Layer (if observed):		Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: <u>Rock/Gravel</u>	Depth (inches): <u>12"</u>	

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/11/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-31
 Investigator(s): DJL Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Till plain Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.133101 Long: 42.432769 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silty Loam (C1B) NWM classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-X2</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (Inches): <u>18+</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (Inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (Inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <u>Former ag ponds flat drain to wetland associated with stream ST-15</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-81

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2 _____																		
3 _____																		
4 _____																		
5 _____																		
6 _____																		
7 _____																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	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) _____
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) _____																	
Seedling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:														
1 _____				<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2 _____																		
3 _____																		
4 _____																		
5 _____																		
6 _____																		
7 _____																		
<u>0</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?														
1 <u>Lycopodium obscurus</u>	<u>30</u>	<u>41%</u>	<u>OBL</u>	Yes <input checked="" type="checkbox"/> No _____														
2 <u>Sparganium angustifolium</u>	<u>20</u>	<u>40%</u>	<u>OBL</u>															
3 <u>Typha sp.</u>	<u>20</u>	<u>40%</u>	<u>OBL</u>															
4 <u>Sagittaria sp.</u>	<u>10</u>	<u>20%</u>	<u>OBL</u>															
5 <u>Potamogeton sp.</u>	<u>5</u>	<u>10%</u>	<u>UPL</u>															
6 _____																		
7 _____																		
8 _____																		
9 _____																		
10 _____																		
11 _____																		
12 _____																		
<u>65</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Remarks: (Include photo numbers here or on a separate sheet.)														
1 _____																		
2 _____																		
3 _____																		
4 _____																		
<u>0</u> = Total Cover																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 8/10/2011
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- #2
 Investigator(s): DTL Section, Township, Range: Village
 Landform (hilllope, terrace, etc.): Roll Plain Local relief (concave, convex, none): convex Slope (%): 1-2
 Subregion (LRR or MLRA): LRR-R Lat: 79.1334 Long: 42.432916 Datum: NAD 83
 Soil Map Unit Name: Monticue Silty loam (120) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-82

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>50'</u>)				
1. <u>Live oak</u>	<u>60</u>	<u>Yes</u>	<u>W</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. <u>Live oak</u>	<u>30</u>	<u>Yes</u>	<u>W</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. _____	<u>30</u>	<u>Yes</u>	<u>W</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>Live oak</u>	<u>10</u>	<u>Yes</u>	<u>W</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
Herb Stratum (Plot size: <u>5'</u>)				
1. _____				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is <3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
Woody Vine Stratum (Plot size: <u>5'</u>)				
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
_____ = Total Cover _____ = Total Cover _____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No _____

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/12/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-36
 Investigator(s): M. Berger D. Lockwood Section, Township, Range: Villerova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.128943 Long: 42.433243 Datum: NAD 83
 Soil Map Unit Name: _____ NW classification: upland

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-42</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0-5"</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 210

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>TSUGA canadensis</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alughaniensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>100</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>TSUGA canadensis</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alughaniensis</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>70</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Osmunda cinnamomea</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
<u>5</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NOT APPLICABLE</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
<u>0</u> = Total Cover			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>130</u>	x 4 = <u>520</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>175</u> (A)	<u>650</u> (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≥ 3.0

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

species have adapted to wet conditions through morphological adaptations – fluted trunks and shallow roots.

- Eastern Hemlock

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/12/13
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-87
 Investigator(s): M. ROBERG D. LOCKWOOD Section, Township, Range: V. Ilionova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 35
 Subregion (LRR or MLRA): LRR-R Lat: 79.128876 Long: 42.433416 Datum: NAD 83
 Soil Map Unit Name: _____ NW classification: upland

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C5) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 87

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Tsuga canadensis</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Tsuga canadensis</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Dryopteris cristata</u>	<u>5</u>	<u>Y</u>	<u>ABL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NOT APPLICABLE</u>			
2. _____			
3. _____			
4. _____			
	<u>0</u>		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (WB)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by:
 OBL species 5 x 1 = 5
 FACW species 0 x 2 = 0
 FAC species 20 x 3 = 60
 FACU species 100 x 4 = 400
 UPL species 0 x 5 = 0
 Column Totals: 125 (A) 465 (B)
 Prevalence Index = B/A = 3.72

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain): _____
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: DP- 87

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

Depth (inches)	Matrix		Redox Features			Loc ^d	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ^c			
2								leaf litter
0-1	2.5Y 2.6/1	100						
1-2	2.5Y 4/1	100						
2-12	2.5Y 4/4	80	2.5Y 4/1	5	D	m	SIL	
			10YR 4/6	5	C	m	SIL	
			2.5Y 7/3	10	C	m	SIL	
12-20	2.5Y 5/6	80	2.5Y 7/3	10	C	m	SIL	
			10YR 4/6	10	C	m	SIL	

^cType: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

^dLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils¹:

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

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

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F10) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: DP-9

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
6			
7			
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
_____ = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)			
1	<u>70</u>	<u>Yes</u>	<u>100</u>
2	<u>30</u>	<u>NO</u>	<u>Low</u>
3	<u>100</u>	<u>NO</u>	<u>500</u>
4	<u>10</u>	<u>NO</u>	<u>000</u>
5	<u>10</u>	<u>NO</u>	<u>000</u>
6			
7			
8			
9			
10			
11			
12			
_____ = Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u>)			
1			
2			
3			
4			
_____ = Total Cover			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (AB)

Prevalence Index worksheet:

Total % Cover of:	Multipity 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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≥ 3.0

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

_____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/12/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 92
 Investigator(s): DJL, MHP Section, Township, Range: Villkross
 Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): Concave Slope (%): 2-10
 Subregion (LRR or MLRA): LRR-R Lat: 79.121797 Long: 42.439597 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt Loam (CkH) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-92

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4 _____	_____	_____	_____	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 = _____
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Spartina sp.</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Trifolium repens</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	
3 <u>Plantago lanceolata</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
4 <u>Taraxacum officinale</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
11 _____	_____	_____	_____	
12 _____	_____	_____	_____	
<u>100</u> = Total Cover <u>50</u> <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
<u>0</u> = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <div style="text-align: center; height: 100px;"> </div>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/13/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-73
 Investigator(s): DTL, MAE Section, Township, Range: Villenova
 Landform (hill/slope, terrace, etc.): Fill Area Local relief (concave, convex, none): convex Slope (%): 3.9
 Subregion (LRR or MLRA): LRR-R Lat: 42.122045 Long: 72.942547 Datum: NAD 83
 Soil Map Unit Name: Prattville Filler (Bx1) NW classification: CEA1

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>2015-16</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 93

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)				
1.	<u>40</u>	<u>YES</u>	<u>FACW</u>	
2.	<u>30</u>	<u>YES</u>	<u>OBL</u>	
3.	<u>20</u>	<u>NO</u>	<u>FACW</u>	
4.	<u>10</u>	<u>NO</u>	<u>FACW</u>	
5.	<u>5</u>	<u>NO</u>	<u>FULL</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>105</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				
1.				
2.				
3.				
4.				
	<u>0</u>	= 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)

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/12/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-94
 Investigator(s): D. J. [unclear] Section, Township, Range: V 11 R 10 N
 Landform (hilllope, terrace, etc.): fill plain Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 79.122055 Long: 42.440708 Datum: NAD 83
 Soil Map Unit Name: Pusa Glt loam NWM classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP- 94

Tree Stratum (Plot size: 20')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (AB)
4				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 = _____
5				
6				
7				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: 15')				
1				
2				
3				
4				
5				
6				
7				
_____ = Total Cover				
Herb Stratum (Plot size: 5')				
1	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
2	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
3	<u>20</u>	<u>No</u>	<u>FACU</u>	
4	<u>10</u>	<u>No</u>	<u>FACU</u>	
5	<u>10</u>	<u>No</u>	<u>FACU</u>	
6				
7				
8				
9				
10				
11				
12				
_____ = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1				
2				
3				
4				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) 				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				

SOIL

Sampling Point: DP-150

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-8	10YR 2/6	60					Silt/clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Black Layer
 Depth (inches): 15

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/2/07
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-103
 Investigator(s): J. K. P. A. B. Section, Township, Range: Villanova
 Landform (hill slope, terrace, etc.): Till Plain Local relief (concave, convex, none): convex Slope (%): 3-4
 Subregion (LRR or MLRA): LRR-R Lat: 79.129245 Long: 42.941146 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam (fine) NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-100

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Rhus copallina</u>	<u>40</u>	<u>Yes</u>	<u>Fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 <u>Rubus pseudoacacia</u>	<u>50</u>	<u>Yes</u>	<u>Fac</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4				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 = _____
5				
6				
7				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Rhus copallina</u>	<u>20</u>	<u>Yes</u>	<u>Fac</u>	
2				
3				
4				
5				
6				
7				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Rosa carolina</u>	<u>10</u>	<u>Yes</u>	<u>Fac</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\geq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.5 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
2 <u>Lonicera canadensis</u>	<u>5</u>	<u>Yes</u>	<u>Fac</u>	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				
2				
3				
4				
15 = Total Cover				
3 = Total Cover				
1 = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (include photo numbers here or on a separate sheet.) <u>Photos 131</u>				

SOIL

Sampling Point DP-100

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 7/2	100	—	—	—	—	Silt/Clay	
2-12	10YR 7/2	100	—	—	—	—	Silt/Clay	

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

- | | | |
|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils¹: |
| <input type="checkbox"/> Histic (A1) | <input type="checkbox"/> Polyvalue Below Surface (S5) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A18) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mosaic Spodic (TA5) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: Stone/gravel
 Depth (Inches): 12"

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 11/13/2015
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-101
 Investigator(s): D. J. ... Section, Township, Range: V. ...
 Landform (hillside, terrace, etc.): F. H. ... Local relief (concave, convex, none): convex Slope (%): 22
 Subregion (LRR or MLRA): LRR-R Lat: 79.12813 Long: 42.441178 Datum: NAD 83
 Soil Map Unit Name: ... (R...) NWM classification: ...
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation ... Soil ... or Hydrology ... significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation ... Soil ... or Hydrology ... naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>AL-17</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-101

Tree Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1 _____				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 = _____
6 _____				UPL species _____ x 5 = _____
7 _____				Column Totals: _____ (A) _____ (B)
<u>10</u> = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1 <u>Phalaris arundinacea</u>	<u>100</u>	<u>YES</u>	<u>FACW</u>	1 - Rapid Test for Hydrophytic Vegetation
2 <u>Juncus effusus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3 <u>Scirpus atrovirens</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	3 - Prevalence Index is ≤3.0 ¹
4 _____				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5 _____				Problematic Hydrophytic Vegetation ¹ (Explain)
6 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>20</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
1 _____				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 or equal to 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.
<u>18</u> = Total Cover				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks: (Include photo numbers here or on a separate sheet.)				
<u>Photo 12</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 11/13/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-102
 Investigator(s): DJL, MAB Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Tilt Plain Local relief (concave, convex, none): concave Slope (%): 3-4
 Subregion (LRR or MLRA): LRR-R Lat: 79.128876 Long: 42.44094 Datum: NAD 83
 Soil Map Unit Name: Chautauque silt loam (Gib) NMI classification: RG1
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NR Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NR Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A10</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>41</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-1118

Tree Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1						
2						
3						
4						
5						
6						
7						
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				<u>0</u> = Total Cover		
1						
2						
3						
4						
5						
6						
7						
Herb Stratum (Plot size: <u>5'</u>)				<u>0</u> = Total Cover		
1	<u>Syringa alba</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>		
2	<u>Epilobium sp.</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
3	<u>Scirpus atrovirens</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>		
4	<u>Poa sp.</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>		
5	<u>Galium sp.</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>		
6						
7						
8						
9						
10						
11						
12						
Woody Vine Stratum (Plot size: <u>30'</u>)				<u>95</u> = Total Cover		<u>4.5</u> <u>19</u>
1						
2						
3						
4						
				<u>0</u> = 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)

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

Photo 134

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/13/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-104
 Investigator(s): DTL, MAB Section, Township, Range: Villerova
 Landform (hilllope, terrace, etc.): Fill/Fluv Local relief (concave, convex, none): Convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.128676 Long: 42.440764 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Siltstone T16A NWM classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation L2 Soil L2 or Hydrology L2 significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation L2 Soil L2 or Hydrology L2 naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Drainage Patterns (B10)
_____ High Water Tables (A2)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C6)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Shallow Aquifer (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)	_____ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>No wetland hydrology indicators present</u>	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-104

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1				
2				
3				
4				
5				
6				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet: Total % Cover of: <u>0</u> = Total Cover 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				
2				
3				
4				
5				
6				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>1</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0' ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	<u>20</u>	<u>YES</u>	<u>FacU</u>	
2	<u>20</u>	<u>YES</u>	<u>FacU</u>	
3	<u>20</u>	<u>YES</u>	<u>FacU</u>	
4	<u>10</u>	<u>NO</u>	<u>FacU</u>	
5	<u>10</u>	<u>NO</u>	<u>FacU</u>	
6	<u>5</u>	<u>NO</u>	<u>FacU</u>	
7	<u>5</u>	<u>NO</u>	<u>FacU</u>	
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				
Total Cover: <u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: (Include photo numbers here or on a separate sheet.) <p style="text-align: center;"><u>Photo 135</u></p>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-200
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): N/A
 Subregion (LRR or MLRA): LRR R Lat: 42.41111 Long: -79.128109 Datum: NAD 83
 Soil Map Unit Name: As - Ashville silt loam NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A200(NFM)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sample point represents the PEM wetland community of A200. The wetland is a vegetated ditch located within an active hayfield. Ditch appears to have been excavated several years ago to provide drainage. Normal circumstances are present.</i>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1'</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Three primary & one secondary hydrologic indicators were met. Hydrology appears primarily precipitation driven with possible groundwater influence.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 350

Tree Stratum (Plot size: <u>30' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = 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: <u>30' x 10'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>Phragmites australis</u>	<u>58%</u>		<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) 90% hydrophytic vegetation regime met via the rapid test Vegetation plot was adjusted to account for the presence of a representative PEM component				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-201
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.411387 Long: -79.128414 Datum: NAD 83
 Soil Map Unit Name: FrB - Fine silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-A200(P55)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sample point represents the P55 wetland community of WL-A200. The wetland is a vegetated ditch located within an active hayfield. Ditch appears to have been excavated several years ago to provide drainage. Normal circumstances are present.</i>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-201

Tree Stratum (Plot size: <u>20' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
_____ = 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: <u>20' x 10'</u>)				
1. <u>Salix herbina</u>	<u>70%</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Populus deltoides</u>	<u>5%</u>	<u>N</u>	<u>FAC</u>	
3.				
4.				
5.				
<u>75</u> = Total Cover				
Herb Stratum (Plot size: <u>20' x 10'</u>)				
1. <u>Ilyssa latifolia</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Agrostis arvensis</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>10</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>20' x 10'</u>)				
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the dominance test. Vegetation plot was adjusted to account for the boundaries (representative) of the PSS component.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-202
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42 411661 Long: -79 128717 Datum: NAD 83
 Soil Map Unit Name: ErB-Erie silt loam 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A200 (PFO)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sampling point represents the PFO community of WL-A200. Wetland is a vegetated ditch excavated to provide drainage for agricultural purposes. Disturbed is not new & normal circumstances are present.</i>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two 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 (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1 - 3'</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>Three primary and two secondary hydrologic indicators were met. Hydrology is precipitation driven with some groundwater influence.</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 002

Tree Stratum (Plot size: <u>20' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Dalix nigra</i></u>	<u>60%</u>	<u>Y</u>	<u>OBL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) 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. <u><i>Populus deltoides</i></u>	<u>30%</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>90</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>20' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ = Total Cover					
Herb Stratum (Plot size: <u>20' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Cyperus arvensis</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u><i>Typha latifolia</i></u>	<u>20%</u>	<u>Y</u>	<u>OBL</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>40</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>20' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>N/A</u>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requires to meet via dominance test</u> <u>Vegetation plot was adjusted to account for the boundary</u> <u>(representative) of the wetland. ~ 60% open, standing water,</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5-19-2016
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-203
 Investigator(s): Zsiros, Jaime Section, Township, Range: NH
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): None Slope (%): 8
 Subregion (LRR or MLRA): LRR R Lat: 42.413148 Long: -79.130055 Datum: NAD 83
 Soil Map Unit Name: Lnc - longford silt loam, s to 15% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point represents the upland community surrounding WL# A200. The sampling point is located within an active hay field under agriculture for several years. Normal circumstances are present.

HYDROLOGY

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

Field Observations:	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

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

Remarks:
No hydrology indicators present at sample point.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 203

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>5'</u>)					
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	_____ = 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: <u>5'</u>)					
1. <u>Not Applicable</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
	_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)					
1. <u>Trifolium pratense</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Soraxacum officinale</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Phleum pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
5. <u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
6. <u>arctium minus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
7. <u>Dactylis glomerata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
8. <u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
9. _____					
10. _____					
11. _____					
12. _____					
	<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>5'</u>)					
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	_____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>					
Remarks: (Include photo numbers here or on a separate sheet.) <u>Sampling point located within an island Hydrophytic vegetation regrowth mat, etc.</u>					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-204
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR R Lat: 42 413473 Long: -79.134058 Datum: NAD 83
 Soil Map Unit Name: EB-Clie silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A201</u>
Remarks: (Explain alternative procedures here or in a separate report.) This sample point represents the PEM wetland community of WLA-201. The system represents a mosaic system with approximately 2.5% upland inclusion exhibiting pits and mound topography in locations. Chapter 5 of the NCNE (Problematic vegetation) was utilized.	

HYDROLOGY

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

Remarks:
 One primary and four secondary hydrologic indicators were met. Hydrology is unique & may be resulting from agricultural tiles located on an adjacent property. Location of tiles was not observed. Other alterations may be contributing. Hydrology is likely precipitation influenced. Water level is precipitation amounts are lower than normal.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 204

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Salicago mucoso</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Symphoricarpon premothoides</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Veratrum viride</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Impatiens capensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Rubus idaeus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. <u>Onoclea sensibilis</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
7. <u>Pachera aurea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				<u>104</u> = Total Cover
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
				_____ = Total Cover

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

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:

___ 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

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

Hydrophytic vegetation requirements were met via the dominance test. Vegetation was analyzed via a mosaic as outlined in Chapter 5. adjacent upland mounds & subsequent tree coverage were analyzed separately.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-205
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): mound Local relief (concave, convex, none): Concave Slope (%): 8
 Subregion (LRR or MLRA): LRR R Lat: 42.413406 Long: -79.133800 Datum: NAD 83
 Soil Map Unit Name: EB-Brice silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">This sample point represents the 25% upland mounds located within WL-A02, a mosaic wetland community.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <p style="font-size: 1.2em; font-family: cursive;">No hydrologic indicators were met.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-005

Tree Stratum (Plot size: <u>10' x 7'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Thuja canadensis</i></u>	<u>70%</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u><i>Acer saccharum</i></u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>		
3. <u><i>Fraxinus americana</i></u>	<u>10%</u>	<u>N</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>100</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>10' x 7'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>N/A</u>	_____	_____	_____		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Herb Stratum (Plot size: <u>10' x 7'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Mnium canadense</i></u>	<u>30%</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u><i>Caulophyllum thalictroides</i></u>	<u>10%</u>	<u>Y</u>	<u>UPL</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>30</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>10' x 7'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>N/A</u>	_____	_____	_____	Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements were not met. Vegetation plot was adjusted to the boundaries of a representative mound. Absolute cover represents cover of mound & exclude adjacent PEM wetland.</u>	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-206
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Soe slope hillslope Local Relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR or MLRA): LRR R Lat: 42 414842 Long: -79 134159 Datum: NAD 83
 Soil Map Unit Name: FA - Fine silt loam, 0 to 3% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A202</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>This sample point represents the PEM wetland community of A202. Wetland is located adjacent to an active agricultural field. Area may have undergone disturbances in the past, but normal circumstances prevail.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No ___ Depth (inches): <u>1"</u> Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? Yes ___ No <u>X</u> Depth (inches): (Includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p><i>One primary & one secondary hydrologic indicators met. Precipitation levels are below average and normal climatic conditions are not present.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-206

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = 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: <u>5' r</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover					
Herb Stratum (Plot size: <u>5' r</u>)					
1. <u>Juncus effusus</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Carex flacca</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>		
3. <u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>100</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
_____ = Total Cover					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetative requirements met via the rapid test. Vegetative plot adjusted to a 5' r in all stratum to account for the wetland boundaries within the delineation area. * Carex species was estimated & based on conditions was determined to be wetland. No sporelets or perigynia to identify.					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 207
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 8-15%
 Subregion (LRR or MLRA): LRR R Lat: 42.415477 Long: -79.134268 Datum: NAD 83
 Soil Map Unit Name: ErB - Cric silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-family: cursive;">This sample point represents the upland community surrounding WL's A-202 & A-203. Area is located in a hay field. Normal circumstances are present.</p>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-207

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = 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: <u>15'</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5'</u>)					
1. <u>Dactylis glomerata</u>	<u>60</u>	<u>Y</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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Solidago canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Phleum pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4. <u>Jragaria vesca</u>	<u>5</u>	<u>N</u>	<u>UPL</u>		
5. <u>Jaraxum officinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
6. <u>Diocus canad</u>	<u>3</u>	<u>N</u>	<u>UPL</u>		
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>107</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements not met. Sampling point is in an upland</u>					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-208
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 8-15
 Subregion (LRR or MLRA): LRR R Lat: 42 416260 Long: -79,134420 Datum: NAD 83
 Soil Map Unit Name: LNC - Longford silt loam, 8-15% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A203(PEM)</u>
Remarks: (Explain alternative procedures here or in a separate report.) This sample point represents the PEM component of WL-A203. The system transitions into a PUBcaPSS. The PUB is NWI mapped.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No ___ Depth (inches): <u>1'</u> Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No ___ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Three primary and two secondary hydrologic indicators were met. Hydrology appears to stem from a drain tile as evidenced by flowing water at the edge of an agricultural field. Precipitation levels are below average for the year.	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-208

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
				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: <u>5' r</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)	
_____ = Total Cover					
Herb Stratum (Plot size: <u>5' r</u>)					
1. <u>Phalaris arundinacea</u>	<u>90%</u>	<u>Y</u>	<u>FACW</u>		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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Syncha latifolia</u>	<u>5%</u>	<u>N</u>	<u>OBL</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
<u>95</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
				Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements met via the rapid test. Sampling plot was modified to a 5' radius to account for the wetland boundaries and exclude adjacent uplands.</u>	
_____ = Total Cover					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-209
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 8
 Subregion (LRR or MLRA): LRR R Lat: 42.416689 Long: -79.134347 Datum: NAD 83
 Soil Map Unit Name: Lnc - Longford silt loam, 5 to 15% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A203(PSS)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sampling point represents the PSS component of WL-A203. The wetland connects with a mapped PUBL (NWI) & WL-A203PEN.</i>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No ___ Depth (inches): <u>1-4"</u> Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No ___ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>Three primary and two secondary hydrologic indicators met. Hydrology appears to stem from both precipitation & groundwater. Precipitation levels are below average.</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-209

Tree Stratum (Plot size: <u>20 x 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = 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: <u>20 x 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Bolus bellicana</u>	<u>20%</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Alnus incana</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>20' x 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cupatorium perfoliatum</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Impatiens capensis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Symphoricarpos racemosa</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>20' x 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Hydric vegetation requires a wet site. Sampling plot was modified to account for a representative boundary of the wetland and its adjacent uplands.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 212
 Investigator(s): Zsiros, Jaime Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 3-5
 Subregion (LRR or MLRA): LRR R Lat: 42.417370 Long: -79.137143 Datum: NAD 83
 Soil Map Unit Name: ErB - Fine silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)
This sample point was taken within the flood plain of ST-A700 INT. The area exhibited some hydrophytic vegetation, but did not exhibit hydrology (natural or problematic) or hydric soils (natural or problematic) as outlined in Chapter 5 of the NCEM Regional Manual.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	---

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

Remarks:
No hydrologic indicators were met.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-2/2

Tree Stratum (Plot size: <u>5' ()</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Sapling/Shrub Stratum (Plot size: <u>5' ()</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rubus idaeus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>2</u>	x 2 = <u>4</u>
FAC species <u>2</u>	x 3 = <u>6</u>
FACU species <u>2</u>	x 4 = <u>8</u>
UPL species <u>1</u>	x 5 = <u>5</u>
Column Totals: <u>7</u> (A)	<u>23</u> (B)

Prevalence Index = B/A = 3.28

Herb Stratum (Plot size: <u>5' ()</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Symphoricarpos racemosa</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2. <u>Impatiens capensis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
3. <u>Arctium minus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
4. <u>Demissaedtia punctilobula</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
5. <u>Achillea millefolium</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
6. <u>Onoclea sensibilis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>5' ()</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

Hydrophytic vegetation requirements was not achieved

Identified vegetation is frequently found growing in both wetland & upland conditions etc. the absence of hydric soils & hydrology are not reliable indication of a wetland.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-213
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR R Lat: 42.417422 Long: -79.137526 Datum: NAD 83

Soil Map Unit Name: ErB - Fine silt loam, 3 to 8% slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: <u>WL-A204</u>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)
This sample point represents the PE m wetland community of WL-A204. The wetland is along an existing access road and includes large pockets of standing water. Normal circumstances are present.

HYDROLOGY

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

Field Observations:
 Surface Water Present? Yes No Depth (inches): 1-6"
 Water Table Present? Yes No Depth (inches):
 Saturation Present? Yes No Depth (inches):
 (includes capillary fringe) Wetland Hydrology Present? Yes No

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

Remarks:
Two primary and one secondary hydrologic indicators met. Hydrology is precipitation driven.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-213

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>20' x 10'</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = 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: <u>20' x 10'</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>20' x 10'</u>)					
1. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
3. <u>Carex flacca</u>	<u>15</u>	<u>I</u>	<u>OBL</u>		
4. <u>Pectanthera graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
5. <u>Salicaria rugosa</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6. <u>Poa compressa</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>40</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
Woody Vine Stratum (Plot size: <u>20' x 10'</u>)					
1. _____					
2. _____					
3. _____					
4. _____					
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test Large component of wetland is standing water with little vegetation. Sampling point was adjusted to account for a representative area of the wetland boundary.					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-214
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Indulating Slope (%): 3-5
 Subregion (LRR or MLRA): LRR R Lat: 42.417896 Long: -79.138432 Datum: NAD 83
 Soil Map Unit Name: EB-Crie silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A205</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>This sample point represents the PFO wetland community of WL-A205.</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1 - 3''</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>Two primary and two secondary hydrologic indicators met. Hydrology source is unknown, but may be resulting from agriculture, & is likely precipitation driven. The area has not received significant rainfall and is drier than what would be expected for this system.</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 214

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Betula alleghaniensis</i>	40	Y	FAC	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>66.6%</u> (AB)
2. <i>Fraxinus americana</i>	25	Y	FACU	
3. <i>Thuja canadensis</i>	10	N	FACU	
4. <i>Taxus grandifolia</i>	5	N	FACU	
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 = _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____	80 = Total Cover	_____	_____	
Sapling/Shrub Stratum (Plot size: 15')				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. N/A	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
Herb Stratum (Plot size: 5')				
1. <i>Poa annua</i>	80	Y	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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <i>Imperata racemosa</i>	10	N	FACW	
3. <i>Dennstaedtia punctilobula</i>	2	N	UPL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____	92 = Total Cover	_____	_____	
Woody Vine Stratum (Plot size: 30')				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Betula & Fraxinus roots are buttressed and include moss drum lines. Hydrophytic vegetation regime is met via the dominance test.				

SOIL

Sampling Point: DP- 214

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-7	10YR 3/1	100		100			Sandy loam	
7-11	10YR 5/3	90	10YR 5/8	10	C	M	Silty clay loam	
11+							Clay pan	

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

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Clay Pan

Depth (Inches): 11

Hydric Soil Present? Yes No

Remarks:

Redox concentrations exhibited diffuse to clear boundaries. The soil fell short of meeting F3 by 3 inches due to an encountered restrictive layer. The restrictive layer is serving to percolate the water to be a restrict water percolation. A hydric soil is assumed based on the presence of hydrology & vegetation in accordance with the problematic soil section of Chapter 5 of the NCE Regional Supplement.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-215
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Undulating Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.417904 Long: -79.137690 Datum: NAD 83
 Soil Map Unit Name: Frb-Che silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sample point provides an upland sample point to WL A204 & 205. Sampling area is a Junco / Betula forest.</i>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-013

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u>)					
1. <u>Betula alleghaniensis</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20%</u> (AB)	
2. <u>Thuja canadensis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>100</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					
1. <u>Acer pensylvanicum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
<u>10</u> = Total Cover					
Herb Stratum (Plot size: <u>5'</u>)					
1. <u>Desmodium punctilobus</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Mnium canadense</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>20</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements were not met</u> <u>5 crest ground was primarily unvegetated.</u>					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 216
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR R Lat: 42.417954 Long: -79.131952 Datum: NAD 83
 Soil Map Unit Name: Frb - Fine silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A206</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sample point represents the PEM wetland community of A206. The area is an isolated wetland swale</i>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1''</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>One primary and two secondary hydrologic indicators met. Hydrology appears groundwater fed.</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-016

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>10' x 5'</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = 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: <u>10' x 5'</u>)					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover					
Herb Stratum (Plot size: <u>10' x 5'</u>)					
1. <u>Phalaris arundinacea</u>	<u>95%</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>95</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>10' x 5'</u>)					
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
_____ = Total Cover					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Sampling plot was adjusted to a representative portion of the wetland to also include adjacent upland vegetation.					

SOIL

Sampling Point: DP-216

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-6	2.5Y5/1	90	2.5Y6/8	10	C	M		
6+								Rock refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 6"

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator F3 was met. Rock refusal is serving to restrict water movement. Several attempts were made to profile the soil at depth. Rock refusal was encountered with each attempt.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-224
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): loodplain Local relief (concave, convex, none): undulating Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.420078 Long: -79.135927 Datum: NAD 83
 Soil Map Unit Name: ECB - Fine silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: <u>WL-A209</u>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

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

This sample point represents the PEM wetland community of WL-A209. The wetland abuts DT-A200 and ST-A202. Wetland is located in an active hayfield that has been under conversion for several years. Normal circumstances present.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	

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

Remarks:

Water levels are low and the area has received below average snowfall (winter) & precipitation (spring), resulting in drier than normal conditions.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-234

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</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. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5' r</u>)				
1. <u>Phalaris arundinacea</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Sagittaria palustris</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Ranunculus acris</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. <u>Muhlenbergia schrebii</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. <u>Sagittaria arifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Taraxacum officinale</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				_____ = Total Cover
Woody Vine Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
				_____ = Total Cover
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Tree, shrub, & vine stratum modified to account for boundaries of wetland.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 225
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): 9 hillslope Local relief (concave, convex, none): none Slope (%): 8%
 Subregion (LRR or MLRA): LRR R Lat: 42.421260 Long: -79.135806 Datum: NAD 83
 Soil Map Unit Name: ErB-Cie Silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>This sample point was taken in an active hayfield that exhibits hydrophytic vegetation. The ag field is drained by DT. A200 and likely contains tiles to remove water. area was determined to not meet the ACOE wetland criteria.</i></p>	

HYDROLOGY

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

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

Remarks:
No hydrologic indicators were met. The area has received below normal precipitation. However, the area is not located in a landscape position likely to collect water. Problematic hydrology of Chapter 5 of the NCNE Regional Supplement was used to analyze.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 225

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	_____ = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Quercus effusus</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Carex multinervis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Muhlenbergia schreberi</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
4. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Pontoporeia lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>90</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
	_____ = Total Cover			

Dominance Test worksheet:

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

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

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

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

Hydrophytic vegetation requirements met via the Rapid test.

SOIL

Sampling Point: DP- 225

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-16 16+	10YR 3/1	70	5YR 4/6	30	C	m	Silty clay loam	Rock refusal

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

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (if observed):
 Type: Rock
 Depth (inches): 16

Hydric Soil Present? Yes _____ No X

Remarks:

Redox concentrations exhibited sharp boundaries and are consistent in chroma and value with select hydric soil indicators. Features are not contemporary. Problematic soils of chapter 5 of the NCNE manual were used to assess the area. Hydrology was also absent due to diking or draining of ag field.

Rock refusal layer may be serving to partially restrict water percolation.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-226
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 3-10
 Subregion (LRR or MLRA): LRR R Lat: 42.421650 Long: -79.136511 Datum: NAD 83
 Soil Map Unit Name: VaB-9 Dubois gravelly silt loam, 3 to 8% slopes Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>This sample point represents the upland community surrounding WL-A2098. The sample location is within an active hay field that has been converted for several years. Normal circumstances are present.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____	
Remarks: <p><i>Precipitation is below average for the year. Climatic/hydrologic conditions are not normal. However, sampling area is within an upland had has little effect on hydrology as it applies to wetland indicators.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 256

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
2.					
3.					
4.					
5.					
6.					
7.					
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>55</u> x 3 = <u>165</u> FACU species <u>45</u> x 4 = <u>180</u> UPL species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>345</u> (B) Prevalence Index = B/A = <u>3.45</u>	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					
1. <u>N/A</u>					
2.					
3.					
4.					
5.					
6.					
7.					
_____ = Total Cover					
Herb Stratum (Plot size: <u>5'</u>)					
1. <u>Muhlenbergia schneberi</u>	<u>55</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Dactylis glomerata</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4. <u>Infolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
5. <u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
6.					
7.					
8.					
9.					
10.					
11.					
12.					
<u>100</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)					
1.					
2.					
3.					
4.					
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
<u>Sampling area is within an upland. Hydrophytic vegetational requirements not met.</u>					
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

SOIL

Sampling Point: DP-006

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-7+	10YR 4/4	100						SL	rock refusal @ 7"

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 7"

Hydric Soil Present? Yes No

Remarks:

No hydric soil indicator met
Multiple pits attempted

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 227
 Investigator(s): Zsiros, Jaime Section, Township, Range: N 1A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.421723 Long: -79.134614 Datum: NAD 83
 Soil Map Unit Name: ValB - Valais gravelly silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A210</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>This sample point represents the PEM wetland community of WL-A210. The wetland is an isolated depression within the middle of a hayfield.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? Yes ___ No <u>X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p><i>The area has received below average snowfall (winter) and precipitation (spring) events within the last several months. Hydrologic conditions are not normal, area clearly holds water during normal climatic conditions. Three secondary indicators were met.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-201

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2.					
3.					
4.					
5.					
6.					
7.					
_____ = 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: <u>5' r</u>)					
1. <u>N/A</u>					
2.					
3.					
4.					
5.					
6.					
7.					
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5' r</u>)					
1. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Sagittaria arifolia</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>		
3. <u>Galium boreale</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>		
4. <u>Carex vulpinoidea</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
<u>55</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>					
2.					
3.					
4.					
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements met via the dominance test.</u>					

SOIL

Sampling Point: DP-227

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-5	10YR 3/1	90	5YR 4/6	10	L	M/PL	Silty clay loam		
6-14	10YR 3/1	65	5YR 4/6	30	C	M/PL	Silty clay loam		
14+			7.5YR 5/8	5	C	M		Rock refusal	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 14

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator F6 was met. Redox concentrations exhibited sharp, clear, & diffusel boundaries and were determined to be contemporary features. Rock refusal was noted at 14" with each attempt, appears to be serving as a partially restrictive layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 228
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): N/A
 Subregion (LRR or MLRA): LRR R Lat: 42.421939 Long: -79.134165 Datum: NAD 83
 Soil Map Unit Name: CkC - Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL- A211</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>This sample point represents a POPEM wetland community of A211. The wetland is an isolated depression that extends outside of our search area.</i></p>	

HYDROLOGY

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

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	

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

Remarks:
Precipitation and snowfall (winter) were lower than average over the last several months. Otherwise, inundated systems are uncharacteristically dry. Two secondary hydrologic indicators were met.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-202

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = 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: <u>5' r</u>)					
1. <u>Gaultheria procumbens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5' r</u>)					
1. <u>Typha latifolia</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
3. <u>Galium aparine</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
4. <u>Symphoricarpos racemosa</u>	<u>20</u>	<u>N</u>	<u>FACW</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>110</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
2. _____					
3. _____					
4. _____					
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Tree, shrub, & vine strata were adjusted to account for the wetland boundaries and exclude adjacent upland vegetation.					

SOIL

Sampling Point: DP-228

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-2	10YR 3/2	100						Silty clay loam	
2-9	10YR 3/2	98	7.5YR 5/6	5	C		m	Silty clay loam	
9-14	10YR 3/2	90	7.5YR 5/6	5	C		m	Silty clay loam	
14"			7.5YR 6/8	5	C		m	Mixed Lw gravel Rock refusal	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Rock
 Depth (Inches): 14"

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator F6 was met. Redox concentrations exhibited a majority of diffuse boundaries and were contemporary features. Rock refusal noted at 14" with each attempt. Refusal layer appears to be partially restricting water percolation.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-339
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.398366 Long: -79.137494 Datum: NAD 83
 Soil Map Unit Name: L-3 - Longford silt loam, 3 to 8% slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: <u>WL-A212</u>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)
This sampling point represents the PEM wetland community of WL A12. The wetland is a small isolated depression within an agricultural field. Field has been converted for several years. Normal circumstances are present.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (includes capillary fringe)	

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

Remarks:
The areas has received below average precipitation and the wetland is drier than normal. Based on landscape position the area will hold water following precipitation (normal) events and surface water (at a minimum) would likely be observed. A primary indicator is assessed.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 209

Tree Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = 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: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Juncus effusus</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Galium boreale</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Sampling plot was adjusted to account for wetland vegetation and exclude surrounding uplands.				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-030
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3-8
 Subregion (LRR or MLRA): LRR R Lat: 42.407072 Long: -79.169240 Datum: NAD 83
 Soil Map Unit Name: CkB - Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A213</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>This sample point represents the PSS wetland community of A213. System extends outside of search area and is likely isolated. Opens into a PEM outside of project corridor.</i>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No ___ Depth (inches): <u>1''</u> Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>9''</u> Saturation Present? Yes <u>X</u> No ___ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>area has received below normal precipitation over last several months. Hydrologic conditions are not typical for time of year.</i> <i>I saw primary and one secondary hydrologic indicators met</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-36

Tree Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Fraxinus pennsylvanica</i></u>	<u>1</u>	<u>N</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u><i>Liriodendron tulipifera</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>2</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Cornus amomum</i></u>	<u>30</u>	<u>Y</u>	<u>FACW</u>		Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Alnus incana</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
3. <u><i>Fraxinus pennsylvanica</i></u>	<u>2</u>	<u>N</u>	<u>FACW</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>37</u> = Total Cover					
Herb Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Ludwigia peploides</i></u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. <u><i>Oenothera biennis</i></u>	<u>30</u>	<u>Y</u>	<u>FACW</u>		
3. <u><i>Solidago gigantea</i></u>	<u>15</u>	<u>N</u>	<u>FACW</u>		
4. <u><i>Viola labradorica</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
5. <u><i>Aquaticum perfoliatum</i></u>	<u>3</u>	<u>N</u>	<u>FACW</u>		
6. <u><i>Schoenoplectus holmboeana</i></u>	<u>3</u>	<u>N</u>	<u>OBL</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>86</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>N/A</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Vegetation plot was adjusted to only include wetland boundaries within project corridor					

SOIL

Sampling Point: DP-230

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR3/1	98	10YR4/6	2	C	m	Silt loam	
11-20	10YR3/1	80	10YR5/6	10	C	m	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator F6 was met.
 Redox concentrations were contemporary features generally exhibiting diffuse boundaries.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-231
 Investigator(s): Zsiros, Jaime and Nicole Dutcher Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 15-20?
 Subregion (LRR or MLRA): LRR R Lat: 42.407330 Long: -79.169167 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8 percent NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; margin-left: 20px;">Upland soil pit for wetland WL-A213 about 100' SW, also for N/A 214. Upland forest dominated by Acer saccharum, little herbaceous ground cover</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p style="font-size: 1.2em; margin-left: 20px;">No hydrological indicators met. Not located in landscape position likely to collect water</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-231

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>90</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Prunus pennsylvanica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>20</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u>Parthenocissus quinquefolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Rubus allegheniensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
5. <u>Cornus florida</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
6. <u>Ribes cynosbati</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>37</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Not Applicable</u>					
2. _____					
3. _____					
4. _____					
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) <u>Deciduous hardwood forest, no hydrophytic veg. indicators met.</u>					

SOIL

Sampling Point: DP-231

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-4	10YR 3/5	100				SiCL	
4-10	10YR 4/4	100				SiCL	
16+							root refusal

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

- | | | |
|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):	Hydric Soil Present? Yes _____ No <u>X</u>
Type: _____ Depth (inches): _____	

Remarks:
Root refusal @ 16 inches depth. No hydric soil indicator met.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-232
 Investigator(s): Zsiros, Jaime and Dutcher, Nicole Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): Concave Slope (%): 2-5%
 Subregion (LRR or MLRA): LRR R Lat: 42.408076 Long: -79.168890 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 3 to 8% slope NYI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology Y naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A214</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em;">PEM wetland that is horseshoe shaped and continues beyond the study limits at both ends. Hugs edge of forest and opens up into field.</p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <p style="font-size: 1.1em;">No water table present or saturation, but area has had a dry winter/spring. Wetlands located at base of toe slope and edge of forest where geomorphic position would expect water to drain to. Precipitation levels are below average</p>			

VEGETATION – Use scientific names of plants.

Sampling Point: DP-232

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>10'</u>)				
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>Not Applicable</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.				
3.				
4.				
5.				
6.				
7.				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Oenothera sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Lysimachia nummularia</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Symphoricarpon panicum</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>Agrostis scabra</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
5. <u>Vernonia noveboracensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Vegetative plot sizes adjusted due to site of wetlands and strata limits.</u>				

SOIL

Sampling Point: DP-232

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-8	10YR 3/1	95	7.5Y 4/6	5	C	PL	S:L		
8-16+	10YR 4/1	80	2.5Y 5/4	5	C	M	S:CL	root refusal	
			7.5YR 5/8	15	C	M	S:CL		

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

- Hydric Soil Indicators:**
- Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F24)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 16"

Hydric Soil Present? Yes No

Remarks:

Depleted matrix and redox dark surface indicators met. Root refusal @ 16" deep, multiple pits attempted. Redox concentrations along pore lining diffuse. Roots in soil to about 10" depth.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-233
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.407951 Long: -79.167872 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A215(PEM)</u>
Remarks: (Explain alternative procedures here or in a separate report.) This sample point represents a <u>PEM wetland community</u> of <u>A215</u> . The wetland transitions into a <u>PS5</u> and overall is an isolated system. The wetland is located on relatively flat terrain with a slight concavity.	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? Yes ___ No <u>X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Precipitation in the form of winter snow pack and spring rains is lower than average. All wetland systems within this area are drier than normal. The problematic hydrology section of Chapter 5 of the NCE manual was utilized. This wetland is located within a landscape position likely to collect water & would likely exhibit stronger hydro indicators under normal climatic conditions. The area exhibits hydrophytic vegetation & hydric soil & was considered to be a wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-233

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) 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.				
6.				
7.				
<u>∅</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</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.				
3.				
4.				
5.				
6.				
7.				
<u>∅</u> = Total Cover				
Herb Stratum (Plot size: <u>5' r</u>)				
1. <u>Onoclea sensibilis</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphoricarpos racemosa</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Muhlenbergia schreberii</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Agrostis arvensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
5. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Juncus effusus</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
7. <u>Juncus effusus</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
8. <u>Infalum pratense</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
9.				
10.				
11.				
12.				
<u>99</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>∅</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements met using the dominance test.</u>				

SOIL

Sampling Point: DP-233

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-5	10YR 2/1	100						Silly Clay loam
5-11	10YR 2/1	95	7.5Y 4/6	5	C	m		Silly Clay loam
11-20	2.5Y 5/2	80	10YR 6/6	20	C	m		Sandy Clay loam

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator F6 was met
 Redox concentrations between 5-11" exhibited clear boundaries and concentrations between 11-20" exhibited diffuse boundaries. Features were considered contemporary

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-234
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42 407611 Long: -79 167717 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8% slope NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A215(PSS)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>This sample point represents the PSS community of WL-A215. The system connects with WL-A215(PEM) and is isolated. Wetland is located within relatively flat terrain with slight concavity</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>Precipitation is below average (see comments in PEM section). Chapter 5 (Problematic hydrology) was used. The area exhibits a hydric soil and hydrophytic vegetation. It is located in a landscape position likely to collect water. A primary indicator is assumed under normal climatic conditions.</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 234

Tree Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix discolor</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

2 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Alnus incana</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>
2. <u>Posa multiflora</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

70 = Total Cover

Herb Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Muhlenbergia Schreberi</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>
2. <u>Agrostis arvensis</u>	<u>15</u>	<u>N</u>	<u>FAC</u>
3. <u>Symphoricarpos punctatum</u>	<u>15</u>	<u>N</u>	<u>OBL</u>
4. <u>Cornus amomum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
5. <u>Fraxinus pennsylvanica</u>	<u>3</u>	<u>N</u>	<u>FACW</u>
6. <u>Agrimonia parviflora</u>	<u>3</u>	<u>N</u>	<u>FAC</u>
7. <u>Alnus incana</u>	<u>3</u>	<u>N</u>	<u>FACW</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

94 = Total Cover

Woody Vine Stratum (Plot size: <u>10' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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:**
- ___ 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - ___ 3 - Prevalence Index is ≤3.0¹
 - ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ___ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

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

Hydrophytic vegetation requirements met via the xx test sampling plot was adjusted to account for a representative portion of the wetland.

SOIL

Sampling Point: DP- 234

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-5	10YR 2/1	100					Salty Clay loam	
5-11	10YR 2/1	95	7.5Y 4/6	5	C	m	Salty Clay loam	
11-20	2.5Y 5/2	80	10YR 6/6	20	C	m	Sandy Clay loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator F6 was met

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-235
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): N/A
 Subregion (LRR or MLRA): LRR R Lat: 42.407794 Long: -79.167040 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A216 (PSS)</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point represents the PSS community of WL-A216. The system transitions into a P1M outside of delineation area. System is isolated.	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No ___ Depth (inches): <u>3-4"</u> Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>0</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No ___ Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: The area has received below average precipitation and water levels are lower than expected. Four primary and two secondary hydrologic indicators met.	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-235

Tree Stratum (Plot size: <u>30' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</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 = <u>0</u> Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>Cornus amomum</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Populus tremuloides</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Alnus incana</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
4. <u>Acer rubrum</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
5. <u>Lonicera tatarica</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. <u>Flora multiflora</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
7.				
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>30' x 10'</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Oxycoccus sensibilis</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Carex crinita</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Alnus incana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Cornus amomum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Salix boreale</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
6. <u>Muhlenbergia schreberia</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7.				
8.				
9.				
10.				
11.				
12.				
<u>39</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30' x 10'</u>)				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>get hydrophytic - no relative requirements met via the rapid test</u>				
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-236
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5-10%
 Subregion (LRR or MLRA): LRR R Lat: 42.407795 Long: -79.166725 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <u>Upland soil pit for wetlands A215 & A216.</u> <u>Upland area is an open field with mowed grass about 30' away near cabin.</u> <u>Field being used as path for ATVs, and evidence of being maintained for access to gas/oil storage tank.</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____	
Remarks: <u>No hydrology indicators found. Precipitation levels are below average; however, hydrology would not be expected in this upland sampling area.</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 236

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus tremuloides</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.34%</u> (A/B)
2. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>30</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Rosa multiflora</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. <u>Muhlenbergia schreberi</u>	<u>55</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Equisetum arvense</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Potentilla simplex</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Barbarea vulgaris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Erigeron philadelphicus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
<u>∅</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
<p><i>Not hydrophytic vegetation. Vegetation in open field.</i></p> <p><i>Normal circumstances, field cut every few years to maintain field track and maintained for gas storage tanks to the SE of plot.</i></p>				

SOIL

Sampling Point: DP-236

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-12	10YR 4/2	100%					Silt	mixed w/ rock
12+								Rock refusal

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

- | | | |
|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12 in.

Hydric Soil Present? Yes _____ No

Remarks:

Multicase soil profile, soil mixed with rock, Rock refusal @ 12 inches, but not acting as a restrictive layer, well drained soils, with dense roots.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-238
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.410374 Long: -79.165103 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 3 to 8% slope NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	If yes, optional Wetland Site ID: <u>WL-A217</u>
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point represents the PEM wetland community of A217. The wetland is located within a hayfield and is isolated. Hayfield has been converted for several years. Normal circumstances are present.

HYDROLOGY

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

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

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

Remarks:
The area has received below normal precipitation over the last several months, which is contributing to drier wetland systems. Under normal climatic conditions we would expect this system to hold water. Two secondary hydrologic indicators were met. In accordance with Chapter 5 of the NCEM Supplement, the area was determined to have a positive primary indicator.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 2381

Tree Stratum (Plot size: <u>40' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>∅</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 = _____
Sapling/Shrub Stratum (Plot size: <u>40' x 10'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>∅</u> = Total Cover				
Herb Stratum (Plot size: <u>40' x 10'</u>)				
1. <u>Scirpus cyperinus</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Phalaris arundinacea</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
3. <u>Alnus incana</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
4. <u>Onoclea sensibilis</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>91</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>40' x 10'</u>)				
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>∅</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Sampling plot was adjusted to account for a representative portion of the wetland to exclude adjacent upland vegetation.				

SOIL

Sampling Point: DP-238

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
D-7	10YR 3/3	90	7.5YR 4/4	10	C	m	Silt loam	
7-16	10YR 2/1	90	7.5YR 3/4	7	C	PL	Silty clay loam	
16+				3	C	m		Rock refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 16

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator 1b was met. Redox concentrations exhibited clear boundaries and were considered contemporary features.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-239
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex Slope (%): 15-20?
 Subregion (LRR or MLRA): LRR R Lat: 42.410099 Long: -79.166206 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Upland soil pit to wetland WIA 2178 ²¹⁸ upland in hardwood forest corridor damaged by field on west and east. Western NY has had a dry winter/spring season.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No hydrologic indicators met. Mounded upland area, wetland hydrology not expected.	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-239

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u>Prunus serotina</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>100</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer saccharum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
<u>30</u> = Total Cover					
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Rubus allegheniensis</u>	<u>2</u>	<u>N</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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. <u>Podophyllum peltatum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Carex pensylvanica</u>	<u>5</u>	<u>N</u>	<u>UPL</u>		
4. <u>Erythronium americanum</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>		
5. <u>Fraxinus americana</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>49</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Not Applicable</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
2. _____					
3. _____					
4. _____					
<u>0</u> = Total Cover					

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

Mature hardwood forest with little shrub layer, and little ground cover. About 50% of area is open forest floor. Some dead/fallen trees on ground in forest.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-240
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR R Lat: 42.410305 Long: -79.166763 Datum: NAD 83
 Soil Map Unit Name: BsB - Buxton silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___
Hydric Soil Present? Yes <u>X</u> No ___	If yes, optional Wetland Site ID: <u>WL-A018</u>
Wetland Hydrology Present? Yes <u>X</u> No ___	

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

Sampling point represents the PSS wetland community of A018. The wetland consists of a vegetated primarily linear swale depression in the middle of an active hay field under conversion for several years. Normal circumstances are present.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches):
 Water Table Present? Yes X No ___ Depth (inches): 10
 Saturation Present? Yes X No ___ Depth (inches): 6
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Precipitation is below normal for the year. Water levels & wetland systems are lower than average. Two primary and three secondary hydrologic indicators were met.

SOIL

Sampling Point: DP-240

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

Depth (Inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-9	10YR 2/1	98	5YR 3/4	2	C	M	Clay loam	
9-16	2.5Y 5/2	70	10YR 5/4	30	C	M	Clay loam	used w/ gravel
16"								Gravel refusal

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: 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) (LRR R, MLRA 149B)		<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: Gravel
 Depth (inches): 16

Hydric Soil Present? Yes No

Remarks:
 Hydric soil indicators F3 & F6 were met. Gravel refusal was noted at 16" with each attempt. Gravel is serving as a partially restrictive layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 241
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): gull slope Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.398408 Long: -79.136280 Datum: NAD 83
 Soil Map Unit Name: LAB - Longford silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>Sample point provides an upland compliment to NL-ADP 28 A 19. Sampling location is within an agricultural field. Normal circumstances are present.</i></p>	

HYDROLOGY

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

Remarks:
Precipitation levels are lower than than normal for this time of year. However, sampling location is within an upland and is not subject to wetland hydrologic indicators.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 241

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
ϕ = 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: <u>15'</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
ϕ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Salidago canadensis</u>	<u>95</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Taraxacum officinale</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
3. <u>Croton minus</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>101</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
ϕ = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.) <u>Sampling location is within an upland. Hydrophytic vegetative requirements were not met.</u>				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-242
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.398427 Long: -79.134816 Datum: NAD 83
 Soil Map Unit Name: LsB - Longford silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation N, Soil N, or Hydrology Y naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A219</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">Sample point represents the PEM wetland community of A219. The system is a roadside ditch, that is vegetated with hydrophytic vegetation.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: <p style="font-size: 1.2em; font-family: cursive;">Precipitation levels are below normal. Under normal climatic conditions this portion of the ditch would hold water. Three secondary hydrologic indicators were met.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 243

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>20' x 4'</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
Sapling/Shrub Stratum (Plot size: <u>20' x 4'</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 = _____
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
Herb Stratum (Plot size: <u>20' x 4'</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Typha latifolia</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Syntherisma numeraria</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
Woody Vine Stratum (Plot size: <u>20' x 4'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. <u>Not Applicable</u>				
2. _____				
3. _____				
<u>80</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements met via the rapid test</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-244
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat to Convex Slope (%): 3-8
 Subregion (LRR or MLRA): LRR R Lat: 42.391627 Long: -79.151443 Datum: NAD 83
 Soil Map Unit Name: Bs15 - Bustis silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ___ No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___
Hydric Soil Present? Yes ___ No ___	If yes, optional Wetland Site ID: <u>WL-A220</u>
Wetland Hydrology Present? Yes ___ No ___	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point represents the PFA wetland community of WL-A220. The wetland abuts ST-A203 and maintains a connection with the stream.

HYDROLOGY

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

Field Observations:	
Surface Water Present? Yes ___ No <u>X</u> Depth (inches):	Wetland Hydrology Present? Yes <u>X</u> No ___
Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>14</u>	
Saturation Present? (includes capillary fringe) Yes ___ No <u>X</u> Depth (inches):	

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

Remarks:
Precipitation levels for the area are below normal for the year. Under normal climatic conditions we would expect to see elevated water levels. One primary and two secondary hydrologic indicators were met. Drainage channels leading to the adjacent ST-A203 are present. One primary and two secondary hydrologic indicators were met.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-244

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>10' x 10'</u>)				
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B) 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 checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
Sapling/Shrub Stratum (Plot size: <u>10' x 10'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Herb Stratum (Plot size: <u>10' x 10'</u>)				
1. <u>Impatiens capensis</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Symphoricarpos mollis</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Galium aparine</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				<u>95</u> = Total Cover
Woody Vine Stratum (Plot size: <u>10' x 10'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
				_____ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetative requirements met via the rapid test. Sampling plot was adjusted to account for the linear wetland boundaries within the delineation area.				

SOIL

Sampling Point: DP-244

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-5	10YR 3/1	100					Clay loam	
5-13	10YR 2/1	95	5YR 4/6	3	C	PL	Clay Loam	
			5YR 4/6	2	C	M	Clay Loam	
13-16	10YR 3/1	100					Sandy loam	
16+								Bedrock refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Bedrock
Depth (inches): 16

Hydric Soil Present? Yes No

Remarks:

Soils meet hydric indicators. Bedrock refusal noted at 16" with each attempt

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-245
 Investigator(s): Jaire Zsiros and Nicola Quiter Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10%
 Subregion (LRR or MLRA): LRR R Lat: 42.396800 Long: -79.151069 Datum: NAD83
 Soil Map Unit Name: BsB - Buatisiltloam, 0 to 3% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <u>Upland soil pit for wetland WL-A220.</u> <u>Upland deciduous hardwood forest dominated by Acer saccharum. Area borders mowed field. Area of western NY has experienced...</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>Does not meet hydrology indicators. Area not expected to retain water due to location on hill sloping toward open mowed field, and stream.</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DO-245

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	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>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.66%</u> (A/B)
2. <u>Fagus grandifolia</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
3. <u>Prunus serotina</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Fraxinus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
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 = _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>100</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)				
1. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Rubus pennsylvanicus</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>45</u> = Total Cover			
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Rubus pennsylvanicus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u>Dryopteris expansa</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Maianthemum canadense</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Milium repens</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Aar saccharum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	Remarks: (Include photo numbers here or on a separate sheet.) <u>Deciduous hardwood forest with mostly open understory and patches of herbaceous ground cover due to wind blown tree fall.</u>
6. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Carex gracillima</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>97</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30' R</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>∅</u> = Total Cover			

SOIL

Sampling Point: DP-245

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100%					SCL	
2-16	10YR 3/8	100%					S.C.L	
16+								Bedrock / Rock refusal

- ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.
- | | | |
|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):
 Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
 - Not a hydric soil, Bedrock / rock refusal at 16 inches, but does not act as a restrictive layer for groundwater + surface water.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-246
 Investigator(s): Nicole Outcher, Jaime Zsicos Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2.5?
 Subregion (LRR or MLRA): LRR Q Lat: 42.391792 Long: -79.148165 Datum: NAO 83
 Soil Map Unit Name: CKB-Chautauque silt loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">Upland data point, no wetland features nearby. Located on a hillslope, moderate slope, along boundary line of property owners. Possibly used as a utility track.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <p style="font-size: 1.2em; font-family: cursive;">No hydrology indicators found, area covered with stand forest. Precipitation levels are below average for the year.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-246

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Tsuga Canadensis</u>	<u>80</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>100</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Rubus pensilvanicus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rubus pensilvanicus</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Acer saccharum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Oxypetalum expansis</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Maianthemum canadense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Oxalis montana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Upland forest with mature trees, moderate shrub layer, with about 75% ground cover. Many down trees cut and rot upped. No hydrologic vegetation.</u>				

SOIL

Sampling Point: DP-246

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-2	2.5YR 2.5/1	100%					CL	
2-9	10YR 4/3	100%					CL	mixed w/ gravel
9-20	10YR 3/2	100%					S,CL	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No hydric soil indicators met. Sampling point is within an upland area.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-247
 Investigator(s): Zsiros, Jaime and Nicole Dutcher Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 40-50?
 Subregion (LRR or MLRA): LRR R Lat: 42.392562 Long: -79.143132 Datum: NAD 83
 Soil Map Unit Name: CKC - Chautauqua silt loam, 8 to 15% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A021</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em;">PEM wetland in concave section of hillslope. Wetland runs length of hillslope starting at about midway down. Area has received below average snow and rainfall so far this year.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>11</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No ___ Depth (inches): <u>5</u>	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p style="font-size: 1.2em;">Soil is saturated with some parts of wetland having water table at 3', mostly along edge of flaggall wetland and outside of study area. Geomorphic positioning being used due to concave surface of 40-50% hillslope.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 247

Tree Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.67</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)				
1. <u>Rubus idaeus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2.				
3.				
4.				
5.				
6.				
7.				
<u>10</u> = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Carex VALPINOIDEA</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Rubus idaeus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Solidago rugosa</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
5. <u>Symphoricarpon panicum</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
7. <u>Muhlenbergia Schreberi</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15' R</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
<p><u>Adjusted radius of Tree and shrub Stratum in Calculations based on July 2008</u></p>				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-248
 Investigator(s): Zsikos, Lime Section, Township, Range: N/A
 Landform (hill slope, terrace, etc.): foothill Local relief (concave, convex, none): none Slope (%): 5%
 Subregion (LRR or MLRA): LRR R Lat: 42.993311 Long: -79.141769 Datum: NAD 83
 Soil Map Unit Name: Fe-Tilluvage with indurated topsoil, fragans, N/A NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ___ No ___	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ___
Hydric Soil Present? Yes ___ No ___	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes ___ No ___	
Remarks: (Explain alternative procedures here or in a separate report.) Pm wetland at toe slope. Wetland fed by groundwater and runoff, from hill slopes due to position along toe slope and valley. Includes wooded in old flood; 20ft of stream ST-A204. Area has received below average snow/rainfall for toe slope.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		___ Surface Soil Cracks (B6)
___ Surface Water (A1)	___ Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Moss Trim Lines (B16)
___ Saturation (A3)	___ Mire Deposits (B15)	___ Dry-Season Water Table (C2)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Crayfish Burrows (C6)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Saturation Visible on Aerial Imagery (C8)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Stunted or Stressed Plants (D1)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Shallow Aquifer (D3)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	___ Microtopographic Relief (D4)
___ Sparsely Vegetated Concave Surface (B8)		___ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___
Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____	Water Table Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland fed by groundwater and runoff from hill slopes due to position at toe slope and in valley between two slopes and valley. Includes wooded in old flood. This area has also received below average snow/rainfall for area, and would expect area due to location to have soil saturation & high water table nearby.		

VEGETATION – Use scientific names of plants.

Sampling Point: DP-248

Tree Stratum (Plot size: <u>10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
\emptyset = Total Cover				Prevalence Index worksheet: <table style="width:100%; border: none;"> <tr> <td style="border: none;">Total % Cover of:</td> <td style="border: none;">Multiply by:</td> </tr> <tr> <td style="border: none;">OBL species <u>10</u></td> <td style="border: none;">x 1 = <u>10</u></td> </tr> <tr> <td style="border: none;">FACW species <u>43</u></td> <td style="border: none;">x 2 = <u>86</u></td> </tr> <tr> <td style="border: none;">FAC species <u>17</u></td> <td style="border: none;">x 3 = <u>51</u></td> </tr> <tr> <td style="border: none;">FACU species <u>20</u></td> <td style="border: none;">x 4 = <u>80</u></td> </tr> <tr> <td style="border: none;">UPL species <u>10</u></td> <td style="border: none;">x 5 = <u>50</u></td> </tr> <tr> <td style="border: none;">Column Totals: <u>100</u> (A)</td> <td style="border: none;"><u>277</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.77</u>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>43</u>	x 2 = <u>86</u>	FAC species <u>17</u>	x 3 = <u>51</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u> (A)	<u>277</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>10</u>	x 1 = <u>10</u>																	
FACW species <u>43</u>	x 2 = <u>86</u>																	
FAC species <u>17</u>	x 3 = <u>51</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>10</u>	x 5 = <u>50</u>																	
Column Totals: <u>100</u> (A)	<u>277</u> (B)																	
\emptyset = Total Cover																		
\emptyset = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Herb Stratum (Plot size: <u>3'</u>)																		
1. <u>Dennstaedtia punctilobula</u>	<u>10</u>	<u>N</u>	<u>UPL</u>															
2. <u>Tussilago farfara</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4. <u>Phytolacca arundinacea</u>	<u>33</u>	<u>Y</u>	<u>FACW</u>															
5. <u>Ranunculus acris</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
6. <u>Galium asprellum</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
7. <u>Symphoricarpon panicum</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
8. <u>Solidago rugosa</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
9. <u>Trillium flexipes</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
10.																		
11.																		
12.																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>10'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
1. <u>Not Applicable</u>																		
2.																		
3.																		
4.																		
\emptyset = Total Cover																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) Vegetation plot radii were adjusted due to size of wetland (to stay in center) and due to edge of study area. Hydrophytic vegetation requirements met via the prevalence index.																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-250
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Convex Slope (%): 40-50%
 Subregion (LRR or MLRA): LRR R Lat: 42.393156 Long: -79.141882 Datum: NAD 83
 Soil Map Unit Name: Fo - ~~Frequent~~ ~~Upland~~ ~~complex~~, frequently flooded NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">Upland data point/soil pt for WL-A221, WL-A222 (Mixed deciduous + coniferous forest on hill slope, area bordered by wetland at bottom of slope and open field) appears. Area of NY has received below average snow + rainfall</p>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p style="font-size: 1.2em; font-family: cursive;">No hydrology indicators met. Upland located on moderately steep hill slope No wetland hydrology expected.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-250

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>15' R</u>)				
1. <u>Betula alleghoniensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	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)
2. <u>Thuja canadensis</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Alnus glutinosa</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)				
1. <u>Betula alleghoniensis</u>	<u>40</u>	<u>Y</u>	<u>FAC</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. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15' R</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) Vegetation plot radii have been adjusted to consider that upland plot is in. Vegetation meets hydrophytic requirements based on a dominance of <i>B. alleghoniensis</i> . This species is almost always found in uplands within this region.				

SOIL

Sampling Point: DP-250

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

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-5	10YR 4/3	100%				S:CL	
5-12	10YR 5/4	100%				S:CL	
12+							Root Refusal

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

- | | | |
|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

Soils are not hydric, they are well drained on hillslope. Root refusal at 12 inches but does not act as a restrictive layer for ground and surface water.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-25a
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 40-50
 Subregion (LRR or MLRA): LRR R Lat: 42.392229 Long: -79.143149 Datum: NAD 83
 Soil Map Unit Name: ckc - chautauqua silt loam, 8 to 15% slope NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ___ No ___ Hydric Soil Present? Yes ___ No ___ Wetland Hydrology Present? Yes ___ No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A223</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point represents the PE m. well of WL-A223. The system is isolated and is located on a steep hillslope. Normal circumstances are present.	

HYDROLOGY

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

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

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

Remarks:
 Two primary and two secondary hydrologic indicators met. Precipitation levels are below normal for the region. Saturation was noted from the surface to depth.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 253

Tree Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

_____ = Total Cover

Sapling/Shrub Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

_____ = Total Cover

Herb Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex stricta</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>
2. <u>Muhlenbergia schrebleri</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
4. <u>Poa annua</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
5. <u>Lymphocarpus juncea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

95 = Total Cover

Woody Vine Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

_____ = Total Cover

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

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

Hydrophytic vegetation requirements met via the dominance test. Vegetation plot adjusted to a 3' r to account for water disturbance.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-253
 Investigator(s): Zsiros, Jaime and Nicole Dutcher Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1-5%
 Subregion (LRR or MLRA): LRR R Lat: 42.389483 Long: -79.145153 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 3 to 89 cm NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A224</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; margin-top: 10px;">DEM wetland in depression in forest. Western NY has had below average snow/rainfall to date for the season.</p>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two 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 (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? (includes capillary fringe) Yes ___ No <u>X</u> Depth (inches):	Wetland Hydrology Present? Yes <u>X</u> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
Area has experienced below average snow/rainfall for the season. Wetland meets primary indicators of water-stained leaves. Wetland is expected to be found in this location because wetland is located in depression of mixed forest meeting geomorphic position.	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-253

Tree Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>∅</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 = _____
Sapling/Shrub Stratum (Plot size: <u>5'R</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
<u>∅</u> = Total Cover				
Herb Stratum (Plot size: <u>5'R</u>)				
1. <u>Dryopteris cristata</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Salidago rigida</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Muhlenbergia schreberi</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Tussilago farfara</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>20</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>5'R</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>∅</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Vegetation is adjacent to the stream wetland. Sparse vegetation in PEM wetland in forest. Downed log runs length of wetland w/ moss growing on top.</u>				

SOIL

Sampling Point: DP-253

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-5	2.5Y 3/1	100?					CL	
5-13	Gley 5/10GY 7D		10YR 6/6	30	C	M	CL	
13+								clay

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

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Clay

Depth (inches): 13

Hydric Soil Present? Yes No

Remarks:

Hydric soils are met because there is a gley layer starting at 5 inches. The area is often saturated. Clay layer is seeming to restrict water penetration.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-254
 Investigator(s): Zsiros, Jaime and Nicka Dunbar Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 10%
 Subregion (LRR or MLRA): LRR R Lat: 42.389516 Long: -79.144664 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 8 to 15% slope NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A 225</u>
Remarks: (Explain alternative procedures here or in a separate report.) Isolated PEM wetland in forest, about 75% saturated to surface w/ herbaceous cover. Areas up to small open water about 10ft x 6ft x 1/2ft off study site. Area of NY has received below average snow/melt.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) ___ Water Marks (B1) ___ Sediment Deposits (B2) ___ Drift Deposits (B3) ___ Algal Mat or Crust (B4) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Sparsely Vegetated Concave Surface (B8)	___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13) ___ Marl Deposits (B15) ___ Hydrogen Sulfide Odor (C1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Presence of Reduced Iron (C4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks)	___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <u>X</u> No ___ Depth (inches): <u>0"</u> Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>3"</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No ___ Depth (inches): <u>0"</u>		Wetland Hydrology Present? Yes <u>X</u> No ___	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Wetland saturated to surface of depression area that has drainage pattern leading to area of wetland w/ some 1/2ft deep standing water off study area. Area expected to be wetter during above rain/hydrologic conditions.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>∅</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>∅</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Solidago rugosa</u>	<u>17</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Packera aura</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Oxylea serotina</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Cornus alba</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
5. <u>Tussilago farfara</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
6. <u>Equisetum arvense</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
7.				
8.				
9.				
10.				
11.				
12.				
	<u>65</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
	<u>∅</u> = Total Cover			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

Vegetation plot radii were adjusted to accommodate for size of wetland. Hydrophytic vegetative requirements met via the dominance test.

SOIL

Sampling Point: DP-254

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-5	10YR 3/1	95	7.5YR 4/6	5	C	M	SiCL		
5-16	10YR 5/3	70	10YR 4/6	30	C	M	C		
16+								Clay + rocks	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Clay and Rocks
 Depth (inches): 16"

Hydric Soil Present? Yes No

Remarks:

Wet 1 has a hydric soil that displays redox concentrations in the matrix that are FAINT. There is a clay and rock restrictive layer at 16 inches down. Based on strong hydrology and hydrophytic vegetation, the soil was determined to meet 16 although concentrations were faint.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-255
 Investigator(s): Zsiros, Jaime and Nicole Dutcher Section, Township, Range: NA
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 5%
 Subregion (LRR or MLRA): LRR R Lat: 42.389835 Long: -79.144875 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 8 to 15% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology W significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A226</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">PEM wetland nested in forested system, extending beyond survey area to the East. Area of wetland will be removed below average rainfall for area in year.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)		<u>Secondary Indicators</u> (minimum of two required)	
___ Surface Water (A1) ___ High Water Table (A2) ___ Saturation (A3) ___ Water Marks (B1) ___ Sediment Deposits (B2) ___ Drift Deposits (B3) ___ Algal Mat or Crust (B4) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Sparsely Vegetated Concave Surface (B8)	<u>X</u> Water-Stained Leaves (B9) ___ Aquatic Fauna (B13) ___ Marl Deposits (B15) ___ Hydrogen Sulfide Odor (C1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Presence of Reduced Iron (C4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks)	___ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? Yes ___ No <u>X</u> Depth (inches): (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No ___	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <p style="font-size: 1.2em; font-family: cursive;">Area is very wet outside of survey area, water table and saturation of soil likely lower than normal due to below average rainfall for area. Area expected to have hydrology/wetland characteristics due to depression in forested area acting as a geomorphic position as an indicator. Drainage patterns are evident by markings flowing out of study area.</p>			

VEGETATION – Use scientific names of plants.

Sampling Point: DP-255

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>10'</u>)				
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>Not Applicable</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. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Impatiens capensis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Tussilago farfara</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Podophyllum peltatum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. <u>Glyceria striata</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) <u>About 30% of wetland has not been</u> <u>restored, it appears to be a</u>				

SOIL

Sampling Point: DP-255

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-7	10YR 2/1	95	5YR 5/6	5	C	m	SicL	
7-9	10YR 4/1	100%					SicL	
9-11	2.5Y 5/1	95	10YR 5/6	5	C	M	SicL	
11+								clay and rock refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: Rock and Clay
 Depth (inches): 11

Hydric Soil Present? Yes No

Remarks:

This is a hydric soil because it has redox features in a dark surface that are diffuse. There is a depleted matrix starting @ 7 in. Depleted Matrix (F3) indicator would also most likely apply but could not get to a full blotch due to clay and rock refusal @ 11 in. depth, which is also a restrictive layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-256
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Ridge Local relief (concave, convex, none): Undulating Slope (%): 3-8
 Subregion (LRR or MLRA): LRR R Lat: 42.389666 Long: -79.145693 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Sampling point represents the upland area immediately surrounding WL-A224, A225, and A226.	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-056

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. <u>Juglans grandifolia</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Juglans carolinensis</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>90</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Juglans grandifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is $\leq 3.0^1$ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juglans grandifolia</u>	<u>30</u>	_____	<u>FACU</u>	
2. <u>Potamogeton amplifolius</u>	<u>20</u>	_____	<u>FACU</u>	
3. <u>Potamogeton amplifolius</u>	<u>10</u>	_____	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation as required, not met.</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

SOIL

Sampling Point: DP-256

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 3/1	100						
1-7	10YR 5/6	100						
7+								Dark Moist refuse

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soil indicators met (Dark refuse) noted at 7" with each attempt.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/10/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-257
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.400247 Long: -79.159565 Datum: NAD 83
 Soil Map Unit Name: LA B - Langford silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A227</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point represents the PEM wetland community of WL-A227. Wetland was created by historic agricultural fields and exhibits undulating terrain. Wetland is isolated and located in an open field. Disturbance is not new or normal circumstances are present.	

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 One primary and two secondary hydrologic indicators. Precipitation levels are below average and wetland systems are drier than expected.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 257

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5' r</u>)				
1. <u>Eleocharis acicularis</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Carex vulpinoidea</u>	<u>20</u>	<u>N</u>	<u>OBL</u>	
3. <u>Muhlenbergia schreberei</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
4. <u>Ornithoglossum virginicum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Paspalum conjugatum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
6. <u>Demissa acuta</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
7. <u>Chloris arundinacea</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
8. <u>Setaria pectinacea</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
9. <u>Utricularia affinis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
10.				
11.				
12.				
				<u>112</u> = Total Cover
Woody Vine Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
				_____ = Total Cover

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
 Total Number of Dominant Species Across All Strata: _____ (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

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:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation requirement is not met. The rapid test. Sampling plot was adjacent to grassy field, representative component of the wetland boundary.

SOIL

Sampling Point: DP- 257

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-14	2.5Y 4/1	90	10YR 4/6	8	C	M	Silty clay	Mixed w/ gravel
14-16	10YR 5/6	100			C	PL	Sandy loam	Mixed w/ gravel
16+								Red refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: rock
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicators 1 & 3 was met, hard refusal was noted at 16" with each attempt. Refusal layer is seeming to partially restrict water percolation. Redox concentration exhibited clear boundaries and were determined to be contemporary features.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-258
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 20
 Subregion (LRR or MLRA): LRR R Lat: 42.400193 Long: -79.157923 Datum: NAD 83
 Soil Map Unit Name: LsB - Sangford silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A228</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point represents the PEM wetland community of WL-A228. Wetland appears to have been created by tractor/tire tracks and exhibits undulating terrain. Wetland is isolated and located in an open field. Disturbance or not near normal circumstances are present.	

HYDROLOGY

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

Remarks:
 Precipitation levels are below average for the year and wetland systems are drier than normal. Under normal climatic conditions we would expect stronger hydrology. The wetland appears seasonally inundated. In accordance with Chapter 5 (problematic hydrology) of the NCEM manual, hydrology is present.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 258

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5' r</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	_____	_____	
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 = _____
Sapling/Shrub Stratum (Plot size: <u>5' r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5' r</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juncus effusus</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Carex vulpinoidea</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Muhlenbergia schreineri</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. <u>Panicum lasiocarpum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Cyperus arvensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7. <u>Sarcocornu affinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8. <u>Aulonia grammifolia</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>98</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>5' r</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirement, not used the rapid test. Sampling plot was adjusted to account for a representative component of the wetland boundaries.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

SOIL

Sampling Point: DP-258

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-6	2.5Y3/1	90	7.5YR 4/6	10		C	M	Silt loam	
6-14	2.5Y4/1	95	10YR 5/8	5				Clay	
14-20	10YR 5/6	100						Sandy loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Hydric soil indicators F3 and F6 were met

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-259
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.400393 Long: -79.157122 Datum: NAD 83
 Soil Map Unit Name: LNB - Longford silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <u>Sample point represents the forested community, obliterating NW's A007, A028, A039. The area is a second growth deciduous forest, normal circumstances are present.</u>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-259

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Quercus saccharum</i></u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u><i>Populus tremuloides</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u><i>Juglans grandifolia</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u><i>Juglans canadensis</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>100</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u><i>Fraxinus americana</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u><i>Fraxinus americana</i></u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Carex gracillima</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u><i>Carex lasiocarpa</i></u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
4. <u><i>Podophyllum peltatum</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>Y</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Sampling point is within an upland. Hydrophytic vegetation requires a wetland.</u>				

SOIL

Sampling Point: DP-259

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-20	10YR 3/6	100					Silt loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (Inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

no hydric soil indicators was met.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-260
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.400749 Long: -79.156322 Datum: NAD 83
 Soil Map Unit Name: ECB-Pine silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A229</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>Sample point represents the PFO community of WL-A229. The wetland is isolated and extends outside of our search area.</i>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>Two primary and three secondary hydrologic indicators met. Precipitation levels are below normal and wetland systems are drier than expected.</i>	

VEGETATION - Use scientific names of plants.

Sampling Point: DP- 368

Tree Stratum (Plot size: 10' x 10')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <i>Jugosa canadensis</i>	60	Y	FAC	
2. <i>J. torreyana pennsylvanica</i>	10	N	FACW	
3.				
4.				
5.				
6.				
<u>70</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 = _____
Sapling/Shrub Stratum (Plot size: 10' x 10')				
1. <i>Fraxinus pennsylvanica</i>	10	Y	FACW	
2.				
3.				
4.				
5.				
<u>10</u> = Total Cover				
Herb Stratum (Plot size: 10' x 10')				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Impatiens capensis</i>	60	Y	FACW	
2. <i>Viola labradurica</i>	10	N	FAC	
3. <i>Bidens frondosa</i>	5	N	FACW	
4. <i>Oxyclea versicolor</i>	2	N	FACW	
5. <i>Sagittaria striata</i>	2	N	OBL	
6.				
7.				
8.				
9.				
10.				
<u>81</u> = Total Cover				
Woody Vine Stratum (Plot size: 10' x 10')				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
1. N/A				
2.				
3.				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
4.				

Remarks: (Include photo numbers here or on a separate sheet.)
 of hydrophytic vegetation requirements and via the dominance test the indicator status of *J. canadensis* was changed to FAC in accordance with Chapter 5 problematic vegetation of the NCE manual. This species is frequently found in wetlands.

SOIL

Sampling Point: DP-260

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	5Y 2.5/1	100					Silt loam	
2-20	10YR 2/1	100					Silty clay loam	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soil indicator A1 was met.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 8/31/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-262
 Investigator(s): Zsiros, Jaime / Dutcher, Nicole Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10%
 Subregion (LRR or MLRA): LRR R Lat: 42.378813 Long: -79.139841 Datum: NAD 83
 Soil Map Unit Name: Shc - Schuyler silt loam, 8 to 15% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Upland Data point. Mixed deciduous forest on a moderate slope. Region of NY has received below average rainfall year-to-date.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p><i>Region has received below average rainfall to date for the year, and no hydrologic field indicators found. No indicators expected for this area due to location (hillslope) and upland</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-262

Tree Stratum (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharum</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Fagus grandifolia</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>100</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'R</u>)				
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5'R</u>)				
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Podophyllum peltatum</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Athyrium angustum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Polystichum denudicoides</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. <u>Carex pensylvanica</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>57</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'R</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>∅</u> = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Vegetation is not hydrophytic. Hydrophytic vegetation not expected to be found at top of hill slope.</u>				

SOIL

Sampling Point: DP-262

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100%					SICL	
3-20	7.5YR 4/4	100%					SICL	

- ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.
- | | | |
|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):
 Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Not a hydric soil.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/31/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-263
 Investigator(s): Zsiros, Jaime / Dutcher, Nicole Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): convex Slope (%): 25%
 Subregion (LRR or MLRA): LRR R Lat: 42.407798 Long: -79.149486 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 3 to 8% slopes WI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-family: cursive; font-size: 1.2em;">Upland data point. Area is all upland, representative sample point in fallow corn field. Region has experienced below average rainfall for the year. Point in open field, with sporadic junk piles and a dirt road along edge.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <p style="font-family: cursive; font-size: 1.2em;">No field hydrology indicators met. Point on top of hill slope, not expected to have wetland hydrology.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-203

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
ϕ = 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: <u>15' R</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
ϕ = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Dactylis glomerata</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Asclepias syriaca</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
3. <u>Solidago rugosa</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Potentilla simplex</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30' R</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
ϕ = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <p style="font-size: 1.2em; text-align: center;">Fallow corn-field that has been left to grow out into an open field,</p>				

SOIL

Sampling Point: DP-263

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-10	10YR 4/3	100						SL	
10+									Compaction/refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Multiple soil pits attempted, could not get below 10" deep. Compaction/refusal @ 10" depth, but does not act as a restrictive layer for water/gas/matter.
 No hydric soil found.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/31
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-265
 Investigator(s): Zsiros, Jaime / Dutcher, Nicole Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 10-15?
 Subregion (LRR or MLRA): LRR R Lat: 42.431095 Long: -79.115881 Datum: NAD 83
 Soil Map Unit Name: CKB-Chautauqua silt loam, 3 to 8% slope NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A230</u>
Remarks: (Explain alternative procedures here or in a separate report.) <i>PEM depression wetland in upland forest. Region has experienced below average rainfall to date for the year which impacts wetland hydrology. Wetland found in old logging/access road.</i>	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? (includes capillary fringe) Yes ___ No <u>X</u> Depth (inches):	Wetland Hydrology Present? Yes <u>X</u> No ___
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Region of NY has received below average rainfall to date for the year. Area normally expected to have saturation. Water stained leaves found throughout wetland, wetland found in depression of old logging/access road, indicator of geomorphic position.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-265

Tree Stratum (Plot size: <u>20'x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>∅</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 = _____
Sapling/Shrub Stratum (Plot size: <u>20'x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>∅</u> = Total Cover				
Herb Stratum (Plot size: <u>10'x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Onoclea sensibilis</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Impatiens Capensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Athyrium angustum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Carex debilis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
5. <u>Glycerh striata</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. <u>Rubus idaeus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>20'x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>∅</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) PEM wetland in forest w/ no trees noted in the wetland. Vegetation plot radii were adjusted to fit in the confines of the trees. All vegetation is OBL, FACW or FAC, and all dominants are FACW.				

SOIL

Sampling Point: DP-265

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-5	10YR 3/1	95	5YR 4/4	5	C	M	SicL	
5-9	10YR 3/1	80	5YR 4/4	20	C	M	SicL	
9-16	2.5Y 6/1	80	10YR 5/8	20	C	M	CL	mixed w/ gravel
16+								Rock + clay refusal

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 16

Hydric Soil Present? Yes No

Remarks:

Multiple soil pits attempted, but could not get below 16 inches. Rock and clay layer @ 16 inches is acting as a refusal layer, and restrictive layer for water penetration. First two layers meet redox of dark surface (F6) requirements, then it becomes a depleted matrix (S8) starting at 2 cm.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-206
 Investigator(s): Zsiros, Jaime / Dutcher, Nicole Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 2-5%
 Subregion (LRR or MLRA): LRR R Lat: 42.430851 Long: -79.116586 Datum: NAD 83
 Soil Map Unit Name: BsB - Busti silt loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A231</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em;">Per wetland in depression in the upland forest, along old access/logging road. Region has experienced below average rainfall to date for the year.</p>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0.5"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p style="font-size: 1.2em;">Region of NY has received below average rainfall year-to-date. About 50% of wetland has open surface water (A1) an average of 1/2 inch deep. Wetland has water stained leaves throughout entire wetland. Geomorphic position indicator of a sand because wetland is located in a depression/concave of old logging/access road.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-266

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>Not Applicable</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. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>Carex flava</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus pylaei</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Carex debilis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Solidago rugosa</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u>Persicaria sagittata</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>45</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30' x 10'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) Perm wetland in depression in forest. Vegetation is hydrophytic, and all dominant species FACW and OBL. Vegetation meets 1/2 - 1/3 rule and Rapid Test.				

SOIL

Sampling Point: DP-266

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					CL	
5-10	5GY 4/1	80	5Y 7/4	20	C	M	CL	
10+								Rock refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: Rock and clay
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

Soil is hydric and at 5 inches in a clay loam with 80% matrix and gley meeting F2 requirements. At 10 inches Rock and clay refusal layer which also acts as a restrictive layer for water penetration.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/31/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-267
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): convex Slope (%): 10?
 Subregion (LRR or MLRA): LRR R Lat: 42.430678 Long: -79.116472 Datum: NAD 83
 Soil Map Unit Name: BsB-Busti silt loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ___ No <u>X</u> Hydric Soil Present? Yes ___ No <u>X</u> Wetland Hydrology Present? Yes ___ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ___ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">Upland data point for WL-A230 and WL-A231. Data point on a hillslope in upland forest mixed deciduous and coniferous. Region of NY has received below average amount of rainfall year-to-date.</p>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) <ul style="list-style-type: none"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) 	Secondary Indicators (minimum of two required) <ul style="list-style-type: none"> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): _____ Water Table Present? Yes ___ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ___ No <u>X</u> Depth (inches): _____	
Wetland Hydrology Present? Yes ___ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p style="font-size: 1.2em; font-family: cursive;">No hydrology indicators met.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-267

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Acer pensylvanicum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
3. <u>Tsuga canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Acer saccharum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>100</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)				
1. <u>Acer pensylvanicum</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Trillium erectum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Acer pensylvanicum</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Rubus pensylvanicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Athyrium angustum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Maianthemum canadense</u>	<u>16</u>	<u>Y</u>	<u>FACU</u>	
7. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>52</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30' R</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Vegetation is not hydrophytic, all dominant vegetation is FACU.</u>				

SOIL

Sampling Point: DP-267

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

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-1	10YR 2/1	100				S'CL	
1-4	7.5YR 3/4	100				S'CL	
4-20	7.5YR 4/4	100				SL	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soil indicators were met

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-268
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Ridge Local relief (concave, convex, none): none Slope (%): 1-3
 Subregion (LRR or MLRA): LRR R Lat: 42.430908 Long: -79.115126 Datum: NAD 83
 Soil Map Unit Name: CKB - Chautauqua silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
 Sample point represents a typical trail road through the delineation area. The road is vegetated with scattered opportunistic hydrophytic vegetation. No evidence of hydrology or hydric soils. Area was determined to not be a wetland.

HYDROLOGY

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

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

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

Remarks:
 No hydrologic indicators were met. The area has received below normal precipitation over the last several months. However, this area is not in a landscape position likely to collect water, and no evidence of prior hydrology is present.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-268

Tree Stratum (Plot size: <u>30' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species <u>35</u> x 2 = <u>70</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>24</u> x 4 = <u>96</u> UPL species _____ x 5 = _____ Column Totals: <u>64</u> (A) <u>181</u> (B) Prevalence Index = B/A = <u>2.82</u>
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation are composed of opportunistic species that are frequently found in moist, cool forest in both upland and wetland conditions. The vegetation just met the prevalence index and the vegetation is marginal				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-269
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Suole Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.451827 Long: -79.108465 Datum: NAD 83
 Soil Map Unit Name: CnB - Chenango gravelly loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A232</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>Sample point represents the isolated PEM wetland community of WL-A232. The system is a small linear swale along the side of an existing agricultural field. Disturbances are not new. Normal circumstances are present.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Precipitation levels are below normal and wetland systems are drier than expected for this type of year. The area is in a landscape position that will hold water and was determined to be seasonally saturated. Chapter 5 (Problematic Hydrology) of the NCEM manual and associated procedure was used to make a positive indication of hydrology.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10' x 4')

	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

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

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

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

Sapling/Shrub Stratum (Plot size: 10' x 4')

	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			

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: 10' x 4')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Juncus effusus</i>	60	Y	FACW
2. <i>Cyperus esculentus</i>	20	Y	FACW
3. <i>Carex scapularis</i>	5	N	FACW
4. <i>Eupatorium perfoliatum</i>	5	N	FACW
5. <i>Achillea millefolium</i>	5	N	FACU
6. <i>Trifolium pratense</i>	5	N	FACU
7.			
8.			
9.			
10.			
11.			
12.			

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: 10' x 4')

	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 hydrophytic vegetation requirements met via the rapid test.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-270
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depressional Swale Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.451776 Long: -79.109331 Datum: NAD 83
 Soil Map Unit Name: CN - Chenango gravelly loam, 8 to 15% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A233</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>Sample point represents the isolated PEM wetland community of WL-A233. Small depressional swale on the side of an existing ag field. Disturbances are not new and normal circumstances are present.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):			
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
<p><i>Precipitation levels are below normal and the area is drier than expected. Wetland is a landscape position likely to hold water and exhibits hydrophytic vegetation. Chapter 5 of the NCE manual & associated problematic hydrology was utilized to make a positive determination of hydrology.</i></p>			

VEGETATION – Use scientific names of plants.

Sampling Point: DP-276

Tree Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>3' r</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Herb Stratum (Plot size: <u>3' r</u>)				
1. <u>Typha latifolia</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Aithya gracilifolia</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Phragmites australis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Symphoricarpos racemosa</u>	<u>0</u>	<u>N</u>	<u>FACW</u>	
6. <u>Arctium minus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Carex flacca</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
8.				
9.				
10.				
11.				
12.				
				<u>95</u> = Total Cover
Woody Vine Stratum (Plot size: <u>3' r</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
				_____ = 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)

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:

___ 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

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

Hydrophytic vegetation requirements met via the rapid test

Sampling plot was adjusted to account for wetland boundaries

SOIL

Sampling Point: DP- 070

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-4	10YR 4/2	95	5YR 4/6	5	C	M	SICL	
4-11	2.5Y 4/1	93	5YR 4/6	2	C	M	SICL	prominent and calcareous nodules below faint concentrations mixed w/ gravel
			10YR 4/4	5	C	M	SICL	
11"								Rock refusal

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

- | | |
|---|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):
 Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Hydric soil indicator F3 was met. Rock refusal noted at 11" with each profile attempt. Refusal layer is serving to partially restrict water.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-271
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): 3-5
 Subregion (LRR or MLRA): LRR R Lat: 42.451907 Long: -79.109189 Datum: NAD 83
 Soil Map Unit Name: CAC - Chenango gravelly loam, 8 to 15% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <i>Sample point provides the upland complement to WL-A2300 WL-A233. Sampling area is located in a second growth deciduous forest.</i>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>Sampling area is within an upland. No hydrologic indicators were met. Precipitation levels are below normal, but does not have any effects on the upland sampling area.</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-271

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharum</u>	<u>95</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>95</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Rubus allegheniensis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Rubus pensilvanicus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Dactylis glomerata</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Galium aparine</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Polygonum virginicum</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
4. <u>Elychone hederacea</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Solidago rugosa</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Impatiens racemosa</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
7. <u>Artemisia lappula</u>	<u>3</u>	<u>N</u>	<u>UPL</u>	
8. <u>Jussilago barbara</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
9. <u>Prunus pensilvanica</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
10. <u>Carex laxiculmis</u>	<u>3</u>	<u>N</u>	<u>UPL</u>	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>89</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>hydrophytic vegetation requirements were not met</u>				

SOIL

Sampling Point: DP- 371

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

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-6	10YR 3/2	100				Silty clay loam	
6-11	10YR 4/3	100				Silty clay loam	
11"							Rock refusal

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

- | | | |
|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):

Type: NA

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
No hydric soil indicators met. Rock refusal noted at 11". Not serving as a restrictive layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-573
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Toe of Slope Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.451946 Long: -79.112127 Datum: NAD 83
 Soil Map Unit Name: CK - Chautauqua silt loam, 8 to 15% slope NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A234</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>Sample point represents the PEM wetland community of WL-A234. The wetland connects with SR-A205 and may have historically been a channel. The wetland is located within a deciduous forest, but has no trees rooted and is functioning as a PEM.</u>	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	--

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

Remarks:
Precipitation levels are below normal; however hydrology indicators are strong.

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 273

Tree Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Sapling/Shrub Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Herb Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex flacca</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2. <u>Carex debilis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
3. <u>Impatiens capensis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>
4. <u>Scirpus Americanus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
5. <u>Carex stipata</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Woody Vine Stratum (Plot size: <u>3' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2.			
3.			
4.			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
 Total Number of Dominant Species Across All Strata: _____ (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

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:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes Y No _____

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation requirements met via the rapid test. Sampling plot adjusted to account for wetland boundaries.

SOIL

Sampling Point: DP-273

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-10	10YR 3/1	100					Silt loam	
10+								Refusal. Inorganic

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histic Epipedon (A1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<input checked="" type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: <u>Inorganic</u> Depth (inches): <u>10</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 Hydric soil A1 indicator was met based on the presence of an organic layer over rock/gravel.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-274
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hilllope, terrace, etc.): 9della slope Local relief (concave, convex, none): None Slope (%): 10-20
 Subregion (LRR or MLRA): LRR R Lat: 42.452331 Long: -79.12375 Datum: NAD 83
 Soil Map Unit Name: Ck1 - Chautauque silt loam, 8 to 15% slope NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: <u>WL-A 235</u>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)
Sampling point represents the PEM wetland community of WL-A 235. The system is a small isolated area influenced by groundwater seepage.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (minimum of two required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

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

Remarks:

Precipitation levels are below normal for the year. The system receives hydrology from a groundwater influence. Soil is moist at around 12 inches. Under normal climate conditions we would expect to see a water table. area is assumed to be positive for hydrology. Chapter 5 was used to evaluate problematic hydrology.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 5' r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			

_____ = Total Cover

Sapling/Shrub Stratum (Plot size: 5' r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			

_____ = Total Cover

Herb Stratum (Plot size: 5' r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Juncus effusus</i>	30	Y	FACW
2. <i>Carex vulpenculata</i>	30	Y	OBL
3. <i>Panicum acris</i>	15	N	FAC
4. <i>Cyperus perfoliatus</i>	10	N	FACW
5. <i>Muhlenbergia schrebii</i>	10	N	FAC
6. <i>Symphoricarpos racemosa</i>	5	N	FAC
7.			
8.			
9.			
10.			
11.			
12.			

100 = Total Cover

Woody Vine Stratum (Plot size: 5' r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			

_____ = Total Cover

Dominance Test worksheet:

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

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

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

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation requirements met via the rapid test
 Sampling plot was adjusted to account for its boundary of the wetland

SOIL

Sampling Point: DP-274

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-5	10YR 3/1	95	7.5YR 4/6	5	C	PL	Silty clay loam	
5-10	10YR 3/1	60	7.5YR 6/8	20	C	M	Silty clay loam	
			2.5Y 6/3	20	D	M		
10-11	2.5Y 6/3	80	7.5YR 6/8	20	C	M	Clay loam	
11"								Rock refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: Rock
Depth (inches): 11

Hydric Soil Present? Yes No

Remarks:

Hydric soil F6 was met; Rock refusal was noted at 11 inches with each profile attempt. Refusal layer is serving to partially restrict water percolation.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-276
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 42.452785 Long: -79.116407 Datum: NAD 83
 Soil Map Unit Name: FmA - Inermont silt loam, 0 to 3% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A236 (PEM)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">Sample point represents the PEM component of WL-A236 The wetland is non-isolated and connects with NWI mapped wetland (PSSIE)</p>	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>7</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No ___ Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u>X</u> No ___
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Precipitation levels are below normal; however, hydrologic indicators are strong. System is both precipitation and groundwater driven.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-276

	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>		
Tree Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2.					
3.					
4.					
5.					
6.					
7.					
_____ = 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: <u>5' r</u>)					
1. <u>N/A</u>					
2.					
3.					
4.					
5.					
6.					
7.					
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5' r</u>)					
1. <u>Phalaris arundinacea</u>	<u>75</u>	<u>Y</u>	<u>FACW</u>		
2. <u>Onoclea sensibilis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>		
3. <u>Asterias hastata</u>	<u>15</u>	<u>N</u>	<u>FACW</u>		
4. <u>Lymphyochium pumiceum</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		
5. <u>Lygodesmia repens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
6.					
7.					
8.					
9.					
10.					
11.					
12.					
<u>115</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum (Plot size: <u>5' r</u>)					
1. <u>N/A</u>					
2.					
3.					
4.					
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic requirements met via the rapid test. Vegetative plot was adjusted to the herbaceous sampling area to account for a representative component of the wetland.					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-277
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Sae of slope Local relief (concave, convex, none): Undulating Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.452666 Long: -79.116128 Datum: NAD 83
 Soil Map Unit Name: Fm A - Inceptisols with loam, 0 to 3% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A236 PSS</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>Sample point represents the PSS component of WL-A236. Wetland connects to a mapped NWI (PSSIE)</u>	

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present? Yes _____ No _____	Depth (inches): _____
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>7</u>
Saturation Present? (includes capillary fringe) Yes <u>X</u> No _____	Depth (inches): <u>0</u>

Wetland Hydrology Present? Yes X No _____

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

Remarks:
Precipitation levels are below normal; however wetland is exhibiting hydrology. Portions also include intermittent pockets of surface water. Hydrology is both groundwater, and precipitation driven.

VEGETATION - Use scientific names of plants.

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

Sapling/Shrub Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Salix bebbiana</i>	20	Y	FACW
2. <i>Salix nigra</i>	10	Y	OBL
3.			
4.			
5.			
6.			
7.			

Herb Stratum (Plot size: 5')	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Onoclea sensibilis</i>	30	Y	FACW
2. <i>A. nutans canadensis</i>	30	Y	FACW
3. <i>Symphoricarpon peruvianum</i>	10	N	OBL
4. <i>Albionia petiolata</i>	3	N	FACU
5. <i>Mallium asperellum</i>	10	N	OBL
6. <i>Myosotis scorpioides</i>	3	N	OBL
7. <i>Solidago rugosa</i>	3	N	FAC
8. <i>Juncus latifolia</i>	5	N	OBL
9. <i>Juncus virginica</i>	5	N	FACW
10. <i>Juncus nummularia</i>	5	N	FACW
11.			
12.			

Woody Vine Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
 Total Number of Dominant Species Across All Strata: _____ (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

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:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation requirements met via the rapid test.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/1/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-279
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): 9 hillslope Local relief (concave, convex, none): none Slope (%): 20
 Subregion (LRR or MLRA): LRR R Lat: 42.452804 Long: -79.115903 Datum: NAD 83
 Soil Map Unit Name: EmA - Freeport silt loam, 0 to 3% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-family: cursive;">Sample point provides an upland complement to wetlands A235 & 236. Area is a forested strip between WL-A236 and an existing agricultural field. Normal circumstances are present.</p>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP- J79

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Pinus typhina</u>	<u>60</u>	<u>Y</u>	<u>UPL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u>Acer platanoides</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>		
3. <u>Populus tremuloides</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>90</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Pinus typhina</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Rubus idaeus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>30</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Gallium aparine</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Present? Yes _____ No <u>Y</u>
2. <u>Galium aparine</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>90</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>Y</u>	
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>N/A</u>	_____	_____	_____		Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetation requirements were not met. Sampling location was in an upland.</u>
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ = Total Cover					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-289
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): 9th hillslope Local relief (concave, convex, none): none Slope (%): 30
 Subregion (LRR or MLRA): LRR R Lat: 42.467585 Long: -79.149046 Datum: NAD 83
 Soil Map Unit Name: ToF - Gouversville silt loam, 35 to 50% slope NY classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___
Hydric Soil Present? Yes <u>X</u> No ___	
Wetland Hydrology Present? Yes <u>X</u> No ___	
Remarks: (Explain alternative procedures here or in a separate report.) <u>Sample point represents the PEM wetland community of WL-A337</u> <u>The wetland is on top of a ridge that is fed by a groundwater seep. The system seeps into ST-A310 and is not isolated.</u>	
If yes, optional Wetland Site ID: <u>WL-A337</u>	

HYDROLOGY

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

Field Observations:

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

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

Remarks:
One primary (one secondary) hydrologic indicators met. System is groundwater fed. Soil was saturated to the surface, but was not associated with a water table. System is also influenced by precipitation and surface runoff. Precipitation levels are below normal; however, the system is still saturated.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>20' x 10'</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>20' x 10'</u>)				
1. <u>N/A</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Herb Stratum (Plot size: <u>20' x 10'</u>)				
1. <u>Loesia virginica</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Impatiens capensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Corallorhiza innata</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>Viola canadensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. <u>Galium boreale</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Asa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Equisetum sylvaticum</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
8.				
9.				
10.				
11.				
12.				
				<u>93</u> = Total Cover
Woody Vine Stratum (Plot size: <u>20' x 10'</u>)				
1.				
2.				
3.				
4.				
				_____ = Total Cover

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
 Total Number of Dominant Species Across All Strata: _____ (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

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:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation requirements met via the rapid test. Sampling plot was adjusted to the boundaries of the wetland.

SOIL

Sampling Point: DP- 289

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	2.5Y4/2	97	10YR 5/8	3				
2-5	10YR 5/1	50					Silt loam	
	10YR 6/8	50					Clay	Mixed with shale
5+								Shale refusal

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if observed):

Type: Shale
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Shale refusal noted at 5" with each profile attempt.
Refusal layer is serving to restrict water penetration.
Hydric soil indicator 1.3 was met.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-290
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 15
 Subregion (LRR or MLRA): LRR R Lat: 42.467977 Long: -79.149387 Datum: NAD 83
 Soil Map Unit Name: ToF-Townsville silt loam, 35 to 50% clay NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <i>Sample point provides an upland complement to WL-AJ37 and AJ38. Sampling area is located within a second growth deciduous forest.</i>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 090

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Acer saccharum</i>	90	Y	FACU	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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
2. <i>Ostrya virginiana</i>	10	N	FACU	
3.				
4.				
5.				
6.				
7.				
<u>100</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 = _____
Sapling/Shrub Stratum (Plot size: 15')				
1. <i>Lindera benzoin</i>	5	Y	FACW	
2.				
3.				
4.				
5.				
6.				
7.				
<u>5</u> = Total Cover				
Herb Stratum (Plot size: 5')				
1. <i>Acer saccharum</i>	5	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Parthenocissus vitacea</i>	3	Y	FACU	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>8</u> = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1. <i>Smilax rotundifolia</i>	2	Y	FAC	
2.				
3.				
4.				
<u>2</u> = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) Majority of herbaceous vegetation is covered by leaves and is sparsely vegetated. Hydrophytic vegetation indicators were not met				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-291
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.469305 Long: -79.148997 Datum: NAD 83
 Soil Map Unit Name: FmB-Insect silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ Remarks: (Explain alternative procedures here or in a separate report.) <u>Sampling point represents the PEM component of WL-A038</u> <u>The wetland is a non-isolated, linear swale on the</u> <u>side of an access road / snow mobile trail. The system</u> <u>transitions into a P35.</u>	Is the Sampled Area within a Wetland? Yes <u>Y</u> No _____ If yes, optional Wetland Site ID: <u>WL-A038 (PEM)</u>
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HYDROLOGY

Wetland Hydrology Indicators:	Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>One primary and two secondary hydrologic indicators were met. Precipitation levels are below normal. Under normal climatic conditions we would expect to observe surface water. System is primarily precipitation-driven.</u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Sapling/Shrub Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Herb Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Dyrophytum monilatum</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
2. <u>Oxycoccus sensibilis</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
3. <u>Impatiens capensis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>
4. <u>Cyperus perfoliatus</u>	<u>3</u>	<u>N</u>	<u>FACW</u>
5. <u>Cyperus cyperinus</u>	<u>3</u>	<u>N</u>	<u>DBL</u>
6. <u>Salix bicolor</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
7. <u>Sesuvium portuacastrum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
8.			
9.			
10.			
11.			
12.			

Woody Vine Stratum (Plot size: <u>10' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2.			
3.			
4.			

Dominance Test worksheet:

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

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

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

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is $\leq 3.0^1$
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain) _____
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation requirements met via the rapid test. Sampling plot was adjusted to account for the linear nature of the wetland.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-292
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Slope of slope Local relief (concave, convex, none): Flat to Convex Slope (%): 1
 Subregion (LRR or MLRA): LRR R Lat: 42.469187 Long: -79.149030 Datum: NAD 83
 Soil Map Unit Name: OC - Organic silt loam, 8 to 15% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A238 (PSS)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>Sample point represents the PSS component of WL-A238. The wetland is non-isolated and transitions into a PEM.</u>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>One primary and two secondary hydrologic indicators were met. Precipitation levels are below normal. Under normal climatic conditions we would expect to observe surface water. System is primarily precipitation driven.</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 391

Tree Stratum (Plot size: <u>15' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera tatarica</u>	<u>26</u>	<u>Y</u>	<u>FACU</u>
2. <u>Cornus amomum</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3. <u>Alnus incana</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
4. <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex blanda</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>
2. <u>Oenothera serotina</u>	<u>20</u>	<u>N</u>	<u>FACW</u>
3. <u>Aquilegia gigantea</u>	<u>20</u>	<u>N</u>	<u>FACW</u>
4. <u>Zizypus cuneatus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
5. <u>Galium boreale</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
6. <u>Cyperus atrocaryus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
7. <u>Polemonis palustris</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
8. <u>Sierisia virginica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
9. <u>Carex vulpinoidea</u>	<u>3</u>	<u>N</u>	<u>OBL</u>
10. <u>Carex crinita</u>	<u>3</u>	<u>N</u>	<u>OBL</u>
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>15' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

Hydrophytic vegetation requirements met via the dominance test. *Lonicera tatarica* is commonly found in many wetland systems within this region.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-295
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3-4
 Subregion (LRR or MLRA): LRR R Lat: 42.473481 Long: -79.149434 Datum: NAD 83
 Soil Map Unit Name: EmA-Tremont silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ___ Hydric Soil Present? Yes <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___ If yes, optional Wetland Site ID: <u>WL-A239(PEM)</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p><i>Sample point represents the PEM wetland community of A239. The wetland surrounds a shallow gas well installed years ago. The system transitions into a PFD</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes ___ No <u>X</u> Depth (inches): Water Table Present? Yes ___ No <u>X</u> Depth (inches): Saturation Present? (includes capillary fringe) Yes ___ No <u>X</u> Depth (inches):		Wetland Hydrology Present? Yes <u>X</u> No ___	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <p><i>I no secondary hydrologic indicators were met. Precipitation levels are below average. Under normal climatic conditions we would expect to see surface water. Hydrology is precipitation driven.</i></p>			

VEGETATION – Use scientific names of plants.

Sampling Point: DP-275

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				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: <u>5' r</u>)				
1. _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5' r</u>)				
1. <u>Carex crinita</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Carex flacca</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Cynoclelea sensuibus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Solum boreale</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				___ = Total Cover
Woody Vine Stratum (Plot size: <u>5' r</u>)				
1. <u>N/A</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____				
3. _____				
4. _____				
				___ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation requirements met via the rapid test. Tree Sapling and vine strata were adjusted to a 5' radius to incorporate the wetland boundaries				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-296
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R Lat: 42.473428 Long: -79.149113 Datum: NAD 83
 Soil Map Unit Name: Fm A - Salamanca silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A239 PFO</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>Sampling point represents the PFO wetland component of A239. The wetland surrounds a shallow gas well and is isolated.</u>	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Three secondary hydrologic indicators were met. Precipitation levels are below average. Under normal climatic conditions we would expect to observe, at a minimum, surface water. Hydrology is precipitation driven.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-296

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Fraxinus pennsylvanica</i></u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u><i>Crataegus crus-galli</i></u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
3. <u><i>Populus tremuloides</i></u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>105</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u><i>Cornus racemosa</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u><i>Phragmites australis</i></u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Oncoclea sensibilis</i></u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3. <u><i>Juncus roemerianus</i></u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
4. <u><i>Aithya gracilis</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u><i>Agrostis perfoliata</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>110</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</u>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Hydrophytic vegetative requirements not met via the dominance test.</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/3/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-297
 Investigator(s): Zsiros, Jaime Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): gull slope Local relief (concave, convex, none): undulating Slope (%): 15
 Subregion (LRR or MLRA): LRR R Lat: 42.472590 Long: -79.149615 Datum: NAD 83
 Soil Map Unit Name: Fm A - Fremont silt loam, 3 to 8% slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; font-family: cursive;">Sample point series as the upland/compliment to wetland Sampling area is within a second growth deciduous forest.</p>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____	
Remarks: <p style="font-size: 1.2em; font-family: cursive;">No hydrologic indicators were observed. Precipitation levels are below normal, but has no effect on upland areas</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-297

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Quercus saccharum</i></u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42</u> (A/B)
2. <u><i>Prunus pensylvanica</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u><i>Prunus serotina</i></u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>95</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 = _____
Sapling/Shrub Stratum - (Plot size: <u>15'</u>)				
1. <u><i>Liriodendron tulipifera</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. <u><i>Liriodendron benzoin</i></u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. <u><i>Taxus multiflora</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u><i>Liriodendron benzoin</i></u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Toxicodendron radicans</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>N/A</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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetative requirements were not met. <i>Liriodendron benzoin</i> and <i>Toxicodendron radicans</i> are frequently found in both upland and wetland conditions.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/20/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-500
 Investigator(s): M. ROBERG, B. VOIS Section, Township, Range: YILLINOVA
 Landform (hill slope, terrace, etc.): Floodplain Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.134382 Long: 42.40325 Datum: NAD 83
 Soil Map Unit Name: Eluvogments - udifluvents complex NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-1500</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"-4"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <u>- iron reduction film on standing water</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-500

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1. <u>Not Applicable</u> 2. 3. 4. 5. 6. 7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>) 1. <u>Ranunculus bulbosus</u> <u>39</u> <u>Y</u> <u>FACW</u> 2. <u>Bidens aristosa</u> <u>30</u> <u>Y</u> <u>FACW</u> 3. <u>mentha spicata</u> <u>5</u> <u>N</u> <u>FACW</u> 4. <u>Juncus effusus</u> <u>5</u> <u>N</u> <u>OBL</u> 5. <u>Polygonum persicaria</u> <u>1</u> <u>N</u> <u>NE</u> 6. 7. 8. 9. 10. 11. 12.				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>) 1. <u>Not Applicable</u> 2. 3. 4.				
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.) <u>FAC Neutral Test</u> <u>2</u> FACW + <u>0</u> OBL = <u>2</u> wetland <u>0</u> FACU + <u>0</u> UPL = <u>0</u> upland				
				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/20/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-501
 Investigator(s): M. Botsig B. Yuts Section, Township, Range: Villenova
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R LSE: 79.184308 Long: 42.403325 Datum: NAD 83
 Soil Map Unit Name: Fluvaquents - udifluvents complex NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> if yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B6) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C5) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C5) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (Includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ 	
Remarks: _____ 	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-50

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>365</u> (B) Prevalence Index = B/A = <u>3.65</u>
5				
6				
7				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Not Applicable</u>				
2				
3				
4				
5				
6				
7				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Schedonorus arundinaceus</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>	
2 <u>Rumex crispus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3 <u>Mentha spicata</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4 <u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5 <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6 <u>Ranunculus bulbosus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
7 <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8				
9				
10				
11				
12				
	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				
2				
3				
4				
	<u>0</u>	= Total Cover		
Remarks: (include photo numbers here or on a separate sheet.) <u>FAC Neutral Test</u> <u>0</u> FACW + <u>0</u> OBL = <u>0</u> wetland <u>1</u> FACU + <u>0</u> UPL = <u>1</u> upland ✓				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ² <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 10/26/2015
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-503
 Investigator(s): M. BOBERTS B. VINTS Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 71.13468 Long: 42.403504 Datum: NAD 83
 Soil Map Unit Name: Fluvaquents-udifluvents complex NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-501</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0⁶ - 2⁰</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0⁰</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No _____ Depth (inches): <u>0¹</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-503

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Saxifraga oppositifolia</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2 <u>Saxifraga oppositifolia</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Carex flacca</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2 <u>Scirpus cyperinus</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
4 <u>Mentha spicata</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5 <u>Carex lupulina</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6 <u>Carex hystericina</u>	<u>4</u>	<u>N</u>	<u>OBL</u>	
7 <u>Symphoricarpos procumbens</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP-563

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	2.5Y 4/2	83	2.5Y 4/1.5	15	D	M	SL	
			7.5YR 3/4	2	C	M	SL	
5-10"	2.5Y 4/1	75	2.5Y 4/2	20	C	M	S	
			10YR 5/8	5	C	PL	S	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 10/26/2015
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-505
 Investigator(s): M. Boberg B. Virts Section, Township, Range: Villanova
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.133795 Long: Villanova MB Datum: NAD 83
 Soil Map Unit Name: chadakoin silt loam NWM classification: upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A502</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-5"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-5"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-5"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-505

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>80</u> x 1 = <u>80</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>120</u> (B) Prevalence Index = B/A = <u>1.2</u>
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Carex flava</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Scirpus cyperinas</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>Mentha spicata</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Bidens aristosa</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>Eupatorium perfoliatum</u>	<u>4</u>	<u>N</u>	<u>FACW</u>	
7. <u>Symphytichum vovae-angiiac</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>FAC Neutral Test</u> <u>0</u> FACW + <u>2</u> OBL = <u>2</u> Wetland ✓ <u>0</u> FACU + <u>0</u> UPL = <u>0</u> upland				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 10/29/2015
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-506
 Investigator(s): M. B. Berg, B. V. B. Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.13386 Long: 42.404915 Datum: NAD 83
 Soil Map Unit Name: Chadakoin silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-506

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																					
1. Not Applicable				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)																					
2.				Total Number of Dominant Species Across All Strata: <u>1</u> (B)																					
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> ¹⁰⁰ (A/B)																					
4.				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 =</td> <td><u>20</u></td> </tr> <tr> <td>FAC species <u>11</u></td> <td>x 3 =</td> <td><u>33</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 =</td> <td><u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>101</u></td> <td>(A)</td> <td><u>373</u> (B)</td> </tr> </tbody> </table> <p>Prevalence Index = B/A = <u>3.69</u></p>	Total % Cover of:	Multiply by:		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>10</u>	x 2 =	<u>20</u>	FAC species <u>11</u>	x 3 =	<u>33</u>	FACU species <u>20</u>	x 4 =	<u>80</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>101</u>	(A)	<u>373</u> (B)
Total % Cover of:	Multiply by:																								
OBL species <u>0</u>	x 1 =	<u>0</u>																							
FACW species <u>10</u>	x 2 =	<u>20</u>																							
FAC species <u>11</u>	x 3 =	<u>33</u>																							
FACU species <u>20</u>	x 4 =	<u>80</u>																							
UPL species <u>0</u>	x 5 =	<u>0</u>																							
Column Totals: <u>101</u>	(A)	<u>373</u> (B)																							
5.																									
6.																									
7.																									
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ³ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
<u>0</u> = Total Cover																									
Herb Stratum (Plot size: 5')																									
1. <i>Schedonorus arundinaceus</i>	<u>64</u>	<u>Y</u>	<u>FACU</u>																						
2. <i>Trifolium repens</i>	<u>15</u>	<u>N</u>	<u>FACU</u>																						
3. <i>Euthamia graminifolia</i>	<u>10</u>	<u>N</u>	<u>FAC</u>																						
4. <i>Ranunculus bulbosus</i>	<u>5</u>	<u>N</u>	<u>FACW</u>																						
5. <i>Mentha spicata</i>	<u>5</u>	<u>N</u>	<u>FACW</u>																						
6. <i>Taraxacum officinale</i>	<u>1</u>	<u>N</u>	<u>FACU</u>																						
7.																									
8.																									
9.																									
10.																									
11.																									
12.																									
<u>100</u> = Total Cover				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.																					
<u>0</u> = Total Cover																									
<u>0</u> = Total Cover																									
Woody Vine Stratum (Plot size: 30')				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																					
1. Not Applicable																									
2.																									
3.																									
4.																									
<u>0</u> = Total Cover																									
Remarks: (Include photo numbers here or on a separate sheet.)																									
<p><u>FAC Neutral Test</u></p> <p><u>0</u> FACW + <u>0</u> OBL = <u>0</u> wetland</p> <p><u>1</u> FACU + <u>0</u> UPL = <u>1</u> upland</p>																									

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

10/26/2015
DP-507 MB

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: DP-507 MB
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-507
 Investigator(s): M. Bohrer B. VIII Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.131553 Long: 42.405829 Datum: NAD83
 Soil Map Unit Name: Erie Silt Loam NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-1503</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-1"</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: - surface water in tractor cuts	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-507

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				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 = _____
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Carex flava</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Polygonum arifolium</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Ranunculus bulbosus</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Rumex crispus</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
5. <u>Solidago canadensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. <u>Euthamia graminifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
7. <u>Symphoricarpon vovae-argillae</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) <u>FAC Neutral Test</u> <u>1 FACW + 2 OBL = 3 wetland ✓</u> <u>0 FACU + 0 UPL = 0 upland</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 10/24/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-508
 Investigator(s): M. Berg B. Virts Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.131505 Long: 42.405828 Datum: NAD 83
 Soil Map Unit Name: Erie Silt Loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> if yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply):</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	<u>Secondary Indicators (minimum of two required):</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10-27-2013

Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-509

Investigator(s): M. Oberg, B. Vitis Section, Township, Range: Villenova

Landform (hillside, terrace, etc.): drainage way / roadcut Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA): LRR-R Lat: 79.12189 Long: 42.406241 Datum: NAD 83

Soil Map Unit Name: Chautauqua Silt Loam NW classification: upland

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

Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-AS09</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C8) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquillard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-4"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-24" 0"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-24" 0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-509

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>NOT Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4				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 = _____
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Cornus racemosa</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2				
3				
4				
5				
6				
7				
<u>5</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Scirpus cyperinus</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2 <u>Typha angustifolia</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
4 <u>Mentha spicata</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5 <u>Epilobium ciliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6				
7				
8				
9				
10				
11				
12				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>NOT Applicable</u>				
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>FAC NEUTRAL TEST</u> <u>2 FACW + 2 OBL = 2 wetland ✓</u> <u>0 FACU + 0 UPL = 0 upland.</u>				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____ 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 or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10-27-2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 510
 Investigator(s): m Boberg B Viits Section, Township, Range: Villenova
 Landform (hill slope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.121347 Long: 42.406253 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt Loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="font-size: 1.2em; font-family: cursive;">upland data point</div>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B5)	Secondary Indicators (minimum of two 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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No X Depth (inches): <u>10"</u> Saturation Present? Yes <u>X</u> No X Depth (inches): <u>10"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

SOIL

Sampling Point: DP-310

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-3"	2.5Y 8/1	98	7.5YR 3/2	5	C	M	SL	
3-6"	2.5Y 8/1	85	2.5Y 9/2	10	C	mlec	SL	
6-7"			7.5YR 3/2	5	C	mlec	SL	
6-20"	2.5Y 10/3	90	2.5Y 5/6	10	C	m/ll	SC	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/27/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-511
 Investigator(s): B. Viess, M. Babony Section, Township, Range: Villenova
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.119617 Long: 42.705393 Datum: NAD 83
 Soil Map Unit Name: CHAUTAQUA SHR LOAM NW classification: Wetland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation Yes Soil Yes or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.)		If yes, optional Wetland Site ID: <u>WL-A505</u>

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Surface Soil Cracks (B9)</u>
<u>X</u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u> </u> Drainage Patterns (B10)
<u>X</u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Moss Trim Lines (B16)
<u>X</u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u>X</u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u>X</u> Presence of Reduced Iron (C4)	<u>X</u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u>X</u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> Shallow Aquifers (D3)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Microtopographic Relief (D4)
<u> </u> Sparsely Vegetated Concave Surface (B8)		<u>X</u> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>0' - 6"</u>	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Water Table Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>0"</u>	
Saturation Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>0"</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants.

Sampling Point: DP-511

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1 <u>NOT APPLICABLE</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2				
3				
4				
5				
6				
7				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1 <u>NOT APPLICABLE</u>				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1 <u>Eleocharis acicularis</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is $\leq 3.0^1$ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Potamogeton ephedrus</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Zea mays</u>	<u>5</u>	<u>N</u>	<u>NI</u>	
4 <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5 <u>Polygonum persicaria</u>	<u>5</u>	<u>N</u>	<u>NI</u>	
6 <u>Juncus tenuis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7				
8				
9				
10				
11				
12				
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				
1 <u>NOT APPLICABLE</u>				
2				
3				
4				
<u>0</u> = Total Cover				
Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.				
Remarks: (Include photo numbers here or on a separate sheet.) <u>0</u> FACW + <u>2</u> OBL = <u>2</u> wetland <u>0</u> FACU + <u>0</u> UPL = <u>0</u> upland				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				

SOIL

Sampling Point: DP-511

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4"	2.5Y 9/2	95	2.5Y 5/4	5	C	M	SL	
4-12"	2.5Y 4/1	90	2.5Y 5/4	5	C	M	SL	
			7.5YR 4/6	5	C	PL/M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Soils are significantly disturbed, wetland is located in an active corn field and is plowed/batted frequently

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/27/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-512
 Investigator(s): M. Boberg B. Vitis Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.120003 Long: 42.405635 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt Loam NMI classification: upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-506</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-3"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-512

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				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 = _____
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Symphoricarpos vovae-cuneata</u>	<u>70</u>	<u>Y</u>	<u>EAU</u>	
2. <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. <u>Eutrochium granulosum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is <3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP-512

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-12"	2.5Y 5/2	80	2.5Y 5/1	10	D	M	CL	
			2.5Y 5/1w	5	C	PL	CL	
			10YR 5/1w	5	C	PL	CL	

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

²Location: PL=Pore Living, M=Matrix

Hydric Soil Indicators:

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

- Polyvalue Below Surface (S5) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S5) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mosaic Spodic (TA8) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10-27-15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-519
 Investigator(s): M. Bobbing B. Vilts Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 1
 Subregion (LRR or MLRA): LRR-R Lat: 79.111736 Long: 42.407242 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt Loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-A508</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em; font-family: cursive;">A portion of this wetland is located in a plowed field where soils and vegetation are significantly disturbed.</p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquifers (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>10" - 4"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-514

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Not Applicable				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
4.				Prevalence Index worksheet: Total % Cover of: <u>17</u> = Total Cover OBL species <u>20</u> x 1 = <u>20</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>60</u> x 3 = <u>180</u> FACU species <u>35</u> x 4 = <u>140</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>340</u> (B) Prevalence Index = B/A = <u>2.95</u>
5.				
6.				
7.				
Sapling/Shrub Stratum (Plot size: 15')				
1. Rhamnus cathartica	5	Y	FACU	
2. Rosa multiflora	5	Y	FACU	
3. Rubus allegheniensis	5	Y	FACU	
4.				
5.				
6.				
7.				
Herb Stratum (Plot size: 5')				
1. Euthamia graminifolia	60	Y	FAC	
2. Polygonum arifolium	20	N	OBL	
3. Solidago canadensis	10	N	FACU	
4. Rubus allegheniensis	10	N	OBL	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
Woody Vine Stratum (Plot size: 30')				
1. Not Applicable				
2.				
3.				
4.				
17 = Total Cover 15 = Total Cover 100 = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)				
Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>				
Remarks: (Include photo numbers here or on a separate sheet.) <u>FAC NEUTRAL TEST</u> <u>0 FACW + 0 OBL = 0 wetland</u> <u>1 FACU + 0 UPL = 1 upland</u>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10-27-2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-515
 Investigator(s): M BOBERG B VIRTIS Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.11778 Long: 42.407228 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt Loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;"><u>upland data point</u></p>	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-515

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1 <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (AB)														
2																		
3																		
4																		
5																		
6																		
7																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>90</u></td> <td>(A) <u>365</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>4.05</u>	Total % Cover of	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>90</u>	(A) <u>365</u> (B)
Total % Cover of	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>85</u>	x 4 = <u>340</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>90</u>	(A) <u>365</u> (B)																	
<u>5</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1 <u>Rubus alleghaniensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
2																		
3																		
4																		
5																		
6																		
7																		
<u>5</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1 <u>Solidago canadensis</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>															
2 <u>Rubus alleghaniensis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>															
3 <u>Daucus pusillus</u>	<u>10</u>	<u>N</u>	<u>NE</u>															
4 <u>Taraxacum officinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5 <u>Daucus carota</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
6 <u>Fragaria vesca</u>	<u>5</u>	<u>N</u>	<u>NE</u>															
7																		
8																		
9																		
10																		
11																		
12																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1 <u>Not Applicable</u>																		
2																		
3																		
4																		
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is $\geq 3.0^1$
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/28/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-521
 Investigator(s): M. D. Greg G. Virts Section, Township, Range: Village 099
 Landform (hilltop, terrace, etc.): Drainage Swale Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 77.110665 Long: 42.396908 Datum: NAD 83
 Soil Map Unit Name: Schuyler Silt Loam NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A511</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">This is a linear stormwater structure that has wetland characteristics adjacent to Ball Hill Road.</p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Tables (C2)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Dry-Season Water Tables (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-12"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u>		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

Sampling Point: DP-521

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1 <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2				
3				
4				
5				
6				
7				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Epidendrum coloratum</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
2 <u>Salix petiolaris</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3				
4				
5				
<u>10</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Typha angustifolia</u>	<u>UD</u>	<u>Y</u>	<u>OBL</u>	
2 <u>Symphoricarpos pilosus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3 <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4				
5				
6				
7				
8				
9				
10				
11				
12				
<u>10</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/28/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-523
 Investigator(s): M. BEBEL & B. VIETS Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): <0
 Subregion (LRR or MLRA): LRR-R Lat: 79.140681 Long: 42.395722 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-A512</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>- old filled in pond feature.</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-3"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	
Remarks:	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-523

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Not Applicable</u>				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Juncus effusus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0' ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Scirpus cyperinus</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Euthamia graminifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4 <u>Ranunculus bulbosus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5 <u>Polygonum persicaria</u>	<u>5</u>	<u>N</u>	<u>NT</u>	
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/26/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-524
 Investigator(s): B.V. ASS. M. Sobczyk Section, Township, Range: VILLEROYA
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR-R Lat: 79.140616 Long: 42.315956 Datum: NAD 83
 Soil Map Unit Name: CHAUTAUQUA SILT LOAM NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C5) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>23</u> x 4 = <u>340</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>90</u> (A) <u>355</u> (B) Prevalence Index = B/A = <u>3.94</u>
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Not Applicable</u>				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Schedonorus pinnatifidus</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	
2 <u>Spiraea canadensis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3 <u>Trifolium repens</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4 <u>Daucus pusillus</u>	<u>10</u>	<u>N</u>	<u>NE</u>	
5 <u>Cissium vulgare</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6 <u>Pantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7 <u>Thymum officinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8				
9				
10				
11				
12				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not applicable</u>				
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence index is ≤3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/24/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-528
 Investigator(s): B. V. ... m. ... Section, Township, Range: Village
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 8
 Subregion (LRR or MLRA): LRR-R Lat: 79.141814 Long: 42.392699 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A515</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-528

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1 <u>Not Applicable</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 = _____
6 _____				UPL species _____ x 5 = _____
7 _____				Column Totals: _____ (A) _____ (B)
<u>0</u> = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1 <u>Juncus effusus</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2 <u>Carex flava</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3 <u>Euthamia graminifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4 <u>Scirpus cyperinus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5 <u>Mentha spicata</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6 <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7 <u>Ranunculus bulbosus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>100</u> = Total Cover				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1 <u>Not Applicable</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10-28-15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-529
 Investigator(s): M. B. Burg B. Virts Section, Township, Range: Villenova
 Landform (hilllope, terrace, etc.): Hilllope Local relief (concave, convex, none): convex Slope (%): 8%
 Subregion (LRR or MLRA): LRR-R Lat: 79.141439 Long: 42.392899 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NWI classification: upland

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP-529

	Absolute % Cover	Dominant Species?	Indicator Status																
Tree Stratum (Plot size: <u>30'</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)															
1					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>335</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.52</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>40</u>	x 4 = <u>160</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>335</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>5</u>	x 1 = <u>5</u>																		
FACW species <u>0</u>	x 2 = <u>0</u>																		
FAC species <u>30</u>	x 3 = <u>90</u>																		
FACU species <u>40</u>	x 4 = <u>160</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>95</u> (A)	<u>335</u> (B)																		
2																			
3																			
4																			
5																			
6																			
7																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≥ 3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)															
1					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2																			
3																			
4																			
5																			
6																			
7																			
Herb Stratum (Plot size: <u>5'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.															
1	<u>55</u>	<u>Y</u>	<u>FACU</u>																
2	<u>30</u>	<u>Y</u>	<u>FACU</u>																
3	<u>5</u>	<u>N</u>	<u>FACU</u>																
4	<u>5</u>	<u>N</u>	<u>OBL</u>																
5	<u>5</u>	<u>N</u>	<u>NI</u>																
6																			
7																			
8																			
9																			
10																			
11																			
12																			
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>															
1																			
2																			
3																			
4																			
Remarks: (Include photo numbers here or on a separate sheet.)																			

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 10/24/15
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-533
 Investigator(s): B. V. Zis, M. Reberg Section, Township, Range: Villanova
 Landform (hillside, terrace, etc.): Fluvial Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.108607 Long: 92.395769 Datum: NAD 83
 Soil Map Unit Name: Dutton Silt Loam NWM classification: UPLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation no, Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation no, Soil no or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-A517</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <u> </u> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0 - 4"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

SOIL

Sampling Point: **DP-533**

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-12	10yR 3/2	95	2.5y 4/6	5	C	m	Silt	

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

²Location: PL=Pure Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/30/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-534
 Investigator(s): B. Vizes, M. Bebery Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 3%
 Subregion (LRR or MLRA): LRR-R Lat: 79.108576 Long: 42.395813 Datum: NAD 83
 Soil Map Unit Name: DAVID Silt Loam NMI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation no Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation no Soil no or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: DP-534

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)														
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)														
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
4. _____				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of</th> <th style="width:50%;">Multiply by</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>35</u> (A)</td> <td><u>140</u> (B)</td> </tr> </tbody> </table> <p style="text-align: center;">Prevalence Index = B/A = <u>4.0</u></p>	Total % Cover of	Multiply by	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>35</u> (A)	<u>140</u> (B)
Total % Cover of	Multiply by																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>35</u> (A)	<u>140</u> (B)																	
5. _____																		
6. _____																		
7. _____																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>) <u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≥ 3.0 ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>														
1. <u>Rubus idaeus</u>	<u>85</u>	<u>Y</u>	<u>FACU</u>															
2. <u>S</u>	<u>10</u>	<u>MB</u>																
3. _____	<u>5</u>																	
4. _____																		
5. _____																		
6. _____																		
Herb Stratum (Plot size: <u>5'</u>) <u>85</u> <u>100</u> = Total Cover																		
1. <u>Rubus idaeus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Schedonorus arundinaceus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Solidago canadensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
Woody Vine Stratum (Plot size: <u>30'</u>) <u>25</u> = Total Cover				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.														
1. <u>VITIS rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>NI</u>															
2. _____																		
3. _____																		
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																		
<u>10</u> = Total Cover																		
Remarks: (include photo numbers here or on a separate sheet.)																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/30/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-535
 Investigator(s): M. BOBERG B. VIRTIS Section, Township, Range: VILLEROY G
 Landform (hillslope, terrace, etc.): DRAINAWAY Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.104758 Long: 42.396929 Datum: NAD 83
 Soil Map Unit Name: FREMONT SILT LOAM NVM classification: upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> if yes, optional Wetland Site ID: <u>WL-A518</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0-5"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.		
Remarks:		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Not Applicable</u>			
2			
3			
4			
5			
6			
7			

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Not Applicable</u>			
2			
3			
4			
5			
6			
7			

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Glyceria acutiflora</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>
2 <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>
3 <u>Iris pseudocorus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
4 <u>Carex intumescens</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
5 <u>Scirpus cyperinus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
6 <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
7 <u>Carex flava</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
8			
9			
10			
11			
12			

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Not Applicable</u>			
2			
3			
4			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (AB)

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0'
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.5 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 10/30/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-536
 Investigator(s): B. Viers, M. Bobry Section, Township, Range: Villanova
 Landform (hill/slope, terrace, etc.): Hill slope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR-R Lat: 79.104611 Long: 42.396999 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam NMI classification: WPLANDS
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation no Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation no Soil no or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-536

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. NOT APPLICABLE				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
4.				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>59</u> x 4 = <u>236</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>90</u> (A) <u>357</u> (B) Prevalence Index = B/A = <u>3.71</u>
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')				
1. NOT APPLICABLE				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5')				
1. <i>Schedonorus arundinaceus</i>	<u>32</u>	<u>Y</u>	<u>FACU</u>	
2. <i>Euthamia graminifolia</i>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
3. <i>Solidago canadensis</i>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. <i>Daucus carota</i>	<u>5</u>	<u>N</u>	<u>UPL</u>	
5. <i>Phleum pratense</i>	<u>3</u>	<u>N</u>	<u>FACU</u>	
6. <i>Fragaria vesca</i>	<u>2</u>	<u>N</u>	<u>NI</u>	
7. <i>Pantago lanceolata</i>	<u>2</u>	<u>N</u>	<u>FAC</u>	
8. <i>Taraxacum officinale</i>	<u>2</u>	<u>N</u>	<u>FACU</u>	
9. <i>Clinopodium vulgare</i>	<u>2</u>	<u>N</u>	<u>NI</u>	
10.				
11.				
12.				
	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30')				
1. NOT APPLICABLE				
2.				
3.				
4.				
	<u>0</u>	= Total Cover		
Remarks: (include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: DP- 536

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0"-12"	10YR 3/3	85	10YR 5/6	5	C	M	SCL	
12"-20"	10YR 4/2	90	10YR 7/3	5	C	m	SCL	
			10YR 5/6	5	C	m		

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

- | | |
|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA8) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/2/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-537
 Investigator(s): B. Van M. Babey Section, Township, Range: VIIIENOV9
 Landform (hill slope, terrace, etc.): Hill slope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.101484 Long: 42.395085 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt Loam NWI classification: UPLAND

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WCTund A519</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply): <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C5) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point DP-537

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>not applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>not applicable</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 = _____
6. _____				UPL species _____ x 5 = _____
7. _____				Column Totals: _____ (A) _____ (B)
<u>0</u> = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Agrostis stolonifera</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
3. <u>Euthamia araminifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Carex flacca</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. <u>Lycopus americanus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. _____				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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>not applicable</u>				Yes <u>X</u> No _____
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/2/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-538
 Investigator(s): B. Viets, M. Beberg Section, Township, Range: Villenova
 Landform (hill/slope, terrace, etc.): H. slope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR-R Lat: 79.10167 Long: 42.89602 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam NWI classification: Wetland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) _____ _____	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-538

Tree Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1	<u>not applicable</u>					
2						
3						
4						
5						
6						
7						
				<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1	<u>not applicable</u>					
2						
3						
4						
5						
6						
7						
				<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1	<u>Agrostis stolonifera</u>	<u>70</u>	<u>Y</u>	<u>row</u>		
2	<u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>DBI</u>		
3	<u>Carex flacca</u>	<u>5</u>	<u>N</u>	<u>DBI</u>		
4	<u>Elythraechium glaucum <u>gracile</u></u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
5	<u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
6	<u>Pantego lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
7	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
8						
9						
10						
11						
12						
				<u>100</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1	<u>not applicable</u>					
2						
3						
4						
				<u>X</u>	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is $\leq 3.0^1$

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Weedy vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-5A5
 Investigator(s): M. DUBERLE - S. DUCKENMEYER Section, Township, Range: VILLENAVA
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 2
 Subregion (LRR or MLRA): LRR-R Lat: 79.144888 Long: 42.387294 Datum: NAD 83
 Soil Map Unit Name: BUSTI SILT LOAM NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WU-1952A</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-545

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Euthamia graminifolia</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is $\leq 3.0^1$ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Oenoclea sensibilis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Agrostis stolonifera</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Scirpus cyperinus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. <u>Carex flava</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
7. <u>Epilobium ciliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-546
 Investigator(s): M. Boberg, S. Buckenmeyer Section, Township, Range: Village
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.145093 Long: 42.387325 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP- EAV

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>TSUGA canadensis</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)														
2. <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Fagus grandifolia</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u>Carpinus carolinia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. <u>Prunus serotina</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>115</u></td> <td>(A) <u>445</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.86</u>	Total % Cover of	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u>	(A) <u>445</u> (B)
Total % Cover of	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>100</u>	x 4 = <u>400</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>115</u>	(A) <u>445</u> (B)																	
7. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
<u>45</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Fagus grandifolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Thelypteris noveboracensis</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>Not Applicable</u>	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 11/03/15
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-548
 Investigator(s): M. Boberg, S. Buckenmeyer Section, Township, Range: Villageville
 Landform (hillslope, terrace, etc.): ditch/floodplain Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.145543 Long: 42.388479 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NWI classification: UPLR1
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-8525</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Man Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0" - 1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-548

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1 <u>Not Applicable</u>				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)
2				
3				
4				
5				
6				
7				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2 <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3 <u>Tsuga canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4				
5				
<u>30</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Ranunculus bulbosus</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Carex flava</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Lycopus americanus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4 <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5 <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6				
7				
8				
9				
10				
11				
12				
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/01/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-549
 Investigator(s): M. Boberg, S. Buckenmeyer Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 79.145482 Long: 42.390279 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-A526</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C5) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> 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 (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-549

Tree Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Tsuga canadensis</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3.	<u>Betula alleghaniensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
4.	<u>Fraxinus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
5.						
6.						
7.						
				<u>80</u> = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Tsuga canadensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
3.	<u>Fraxinus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
4.						
5.						
6.						
7.						
				<u>15</u> = Total Cover		
Herb Stratum (Plot size: <u>5'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Onoclea sensibilis</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
2.	<u>Thelypteris noveboracensis</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>		
3.	<u>Carex flava</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>		
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
				<u>20</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Not Applicable</u>					
2.						
3.						
4.						
				<u>0</u> = 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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>115</u> (A)	<u>410</u> (B)

Prevalence Index = B/A = 3.56

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0'

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

Problematic Hydrophytic Vegetation² (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No MO

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

Trees + Saplings have adapted to living in a wetland through morphological adaptations like fluted trunks + shallow roots.

• Eastern Hemlock • Sugar maple • White Ash

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11-3-15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-550
 Investigator(s): M. Bohrer, S. Buckenmeyer Section, Township, Range: Villereva
 Landform (hill slope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 79.145244 Long: 42.390496 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A527</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C8) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> 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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-550

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42</u> (A/B)
1. <u>TSUGA canadensis</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Betula alleghaniensis</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
3. <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>95</u> x 3 = <u>185</u> FACU species <u>80</u> x 4 = <u>320</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>180</u> (A) <u>495</u> (B) Prevalence Index = B/A = <u>3.53</u>
1. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>TSUGA canadensis</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Acer rubrum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input checked="" type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ² (Explain)
1. <u>Thelypteris noveboracensis</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Oxyclea sensibilis</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>10</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>SMC</u>				
Remarks: (Include photo numbers here or on a separate sheet.) <p style="text-align: center;">TREES + SAPLINGS HAVE ADAPTED TO LIVING IN A WETLAND BY DEVELOPING MORPHOLOGICAL ADAPTATIONS LIKE FLUDED TRUNKS</p> <p>- EASTERN HEMLOCK - WHITE ASH</p>				

SOIL

Sampling Point: DP-SSO

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

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-8	2.5Y 2.5/1	90	2.5Y 3/2	5	C	M	Sil		
			10YR 5/8	5	C	M	Sil		

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11-03-15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-561
 Investigator(s): M. Boberg, S. Buckenmeyer Section, Township, Range: Villavorn
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 79.145285 Long: 42.390438 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NW classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-551

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>TSUGA canadensis</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
2. <u>FRAXINUS americana</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>ALER saccharinum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>90</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>110</u> x 4 = <u>440</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>130</u> (A) <u>500</u> (B) Prevalence Index = B/A = <u>3.84</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Fagus grandifolia</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Dryopteris</u>	<u>30</u>	<u>Y</u>	<u>NI</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Thelypteris noveboracensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua County Sampling Date: 11/29/15
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-555
 Investigator(s): M BOBERG B VIRTIS Section, Township, Range: VILLEROVA
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.157559 Long: 42.394865 Datum: NAD 83
 Soil Map Unit Name: ELP SILT LOAM NWI classification: UPLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation YES, Soil YES or Hydrology YES significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL552</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;"><u>ACTIVE CORN FIELD</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-1"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-555

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NOT APPLICABLE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				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 = _____
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>NOT APPLICABLE</u>				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>3'</u>)				
1. <u>Agrostis stolonifera</u>	<u>32</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Eleocharis acicularis</u>	<u>6</u>	<u>N</u>	<u>OBL</u>	
3. <u>Bidens aristosa</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Zea mays</u>	<u>2</u>	<u>N</u>	<u>NI</u>	
5. <u>Galium boreale</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
6. <u>Pantago lanceolata</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
7.				
8.				
9.				
10.				
11.				
12.				
	<u>50</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>NOT APPLICABLE</u>				
2.				
3.				
4.				
	<u>0</u>	= Total Cover		
Remarks: (include photo numbers here or on a separate sheet.) 				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Size: Bali Hill Wind Project City/County: Chautauqua County Sampling Date: 11/14/15
 Applicant/Owner: Bali Hill Wind Energy, LLC State: NY Sampling Point: DP-556
 Investigator(s): M. BOYER - B. VIRTIS Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): FLAT Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.157363 Long: 42.394933 Datum: NAD 83
 Soil Map Unit Name: Langford silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation ~~NO~~ YES Soil YES or Hydrology YES significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;"><u>ACTIVE CORN FIELD</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two 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 (C8) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>2-3 v</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP-556

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>NOT Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4 _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>20</u> (A) <u>80</u> (B) Prevalence Index = B/A = <u>4</u>
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>NOT Applicable</u>				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Trifolium repens</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2 <u>zea mays</u>	<u>10</u>	<u>Y</u>	<u>NI</u>	
3 <u>Pantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4 _____				
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>NOT Applicable</u>				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-5X

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

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0"-16"	2.5y4/2	42%	10y2.5/8	10	C	m	Sil		
16"-20"	2.5y4/2	80	10y2.5/8	10	D	m	Sil		
			10y2.5/8	10	C	m			

3x

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Soils are within a cropped Ag Field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/09/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-567
 Investigator(s): M. Boberg B. Virts Section, Township, Range: Villenova
 Landform (hilllope, terrace, etc.): Hilllope Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.148389 Long: 42.393333 Datum: NAD 83
 Soil Map Unit Name: ERIC SILT LOAM NWI classification: upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> if yes, optional Wetland Site ID: <u>WL-A531</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<p><u>Secondary Indicators (minimum of two required)</u></p> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-557

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				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 = _____
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Euthamia graminifolia</u>	<u>55</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ³ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Scirpus cyperinus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
3. <u>Carex flava</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>Anoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
7. <u>Equisetum arvense</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-558
 Investigator(s): M. Breyer B. Virts Section, Township, Range: Villenova
 Landform (hilltops, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONVEX Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.148478 Long: 42.393237 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NWI classification: uphri
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point DP- 558

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
1. <u>Acer saccharum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28</u> (A/B)
3. <u>Acer rubrum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Prunus serotina</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>105</u> x 4 = <u>420</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>135</u> (A) <u>510</u> (B) Prevalence Index = B/A = <u>3.77</u>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Prunus serotina</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Tsuga canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Betula alleghaniensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u>Fagus americana</u>	<u>5</u>	<u>MO</u>	_____	
6. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. _____	_____	_____	_____	
_____ = Total Cover				Herb Stratum (Plot size: <u>5'</u>)
1. <u>Rubus idaeus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Dryopteris intermedia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				Woody Vine Stratum (Plot size: <u>30'</u>)
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/09/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-39
 Investigator(s): M BOBERG B VIRTIS Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.148533 Long: 42.395668 Datum: NAD 83
 Soil Map Unit Name: Ashville silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WLAS3A</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moas Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point DP- 559

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>NOT Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)																
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
4. _____				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of _____</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = _____</td> </tr> </table>	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 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 = _____																				
5. _____																				
6. _____																				
7. _____																				
<u>0</u> = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>NOT Applicable</u>				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
<u>0</u> = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Euthamia graminifolia</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. <u>Carex flava</u>	<u>10</u>	<u>N</u>	<u>OBL</u>																	
3. <u>Salix petiolaris</u>	<u>10</u>	<u>N</u>	<u>FACU</u>																	
4. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>																	
5. <u>Scirpus cyperinas</u>	<u>5</u>	<u>N</u>	<u>OBL</u>																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
<u>100</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u>NOT Applicable</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																
2. _____																				
3. _____																				
4. _____																				
<u>0</u> = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/04/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-560
 Investigator(s): M. Bobrig B. Virts Section, Township, Range: Villavona
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.149646 Long: 42.395661 Datum: NAD 83
 Soil Map Unit Name: Ashtville silt loam NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bali Hill Wind Project City/County: Chautauqua County Sampling Date: 11/09/15
 Applicant/Owner: Bali Hill Wind Energy, LLC State: NY Sampling Point: DP-501
 Investigator(s): M. BOBERG B. VIRTIS Section, Township, Range: VILLERARD
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.149841 Long: 42.397062 Datum: NAD 83
 Soil Map Unit Name: BUSTI SILT LOAM NWT classification: WPA00

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A535</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP-511

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <i>Acer saccharum</i>	25	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42</u> (A/B)														
2. <i>Fraxinus americana</i>	25	Y	FACW															
3. <i>Betula nigra</i>	10	N	FACW															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>545</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.63</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>545</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>15</u>	x 4 = <u>60</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>150</u> (A)	<u>545</u> (B)																	
Sapling/Shrub Stratum (Plot size: 15')																		
1. <i>Fraxinus americana</i>	40	Y	FACU															
2. <i>Acer saccharum</i>	25	Y	FACU															
3. <i>Betula nigra</i>	10	N	FACW															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover																		
Herb Stratum (Plot size: 15')																		
1. <i>Dryopteris intermedia</i>	5	Y	FAC															
2. <i>Equisetum arvense</i>	5	Y	FAC															
3. <i>Euthamia graminifolia</i>	5	Y	FAC															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Woody Vine Stratum (Plot size: 30')																		
1. NOT APPLICABLE	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <p style="font-size: 1.2em;">Trees are using adaptations in wetland.</p> <ul style="list-style-type: none"> - Flutting - Shallow rooting - utilizing microtopographic relief. <div style="float: right; text-align: right;"> <ul style="list-style-type: none"> - White Ash - sugar maple </div>																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/09/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-562
 Investigator(s): M. Berger B.V.I.R.T.S Section, Township, Range: Villageville
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 77.50022 Long: 42.397047 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-502

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. <u>Populus tremuloides</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Prunus serotina</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>105</u></td> <td>x 4 = <u>420</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td><u>675</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.97</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>105</u>	x 4 = <u>420</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>170</u> (A)	<u>675</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>105</u>	x 4 = <u>420</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>170</u> (A)	<u>675</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Acer saccharum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Populus tremuloides</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Fagus grandifolia</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Rubus idaeus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Dryopteris intermedia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. <u>Fragaria vesca</u>	<u>5</u>	<u>N</u>	<u>NI</u>															
4. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>40</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>NOT APPLICABLE</u>	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (include photo numbers here or on a separate sheet.)																		

Hydrophytic Vegetation Present? Yes _____ No X

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/05/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-568
 Investigator(s): M. Boberg, S. Buckenmeyer Section, Township, Range: Village Green
 Landform (Hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR-R Lat: 79.164332 Long: 42.404195 Datum: NAD 83
 Soil Map Unit Name: ENE SILT LOAM NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL17539</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-3"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-568

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				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 = _____
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Cornus alba</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Salix petiolaris</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Cornus racemosa</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4.				
5.				
6.				
7.				
<u>70</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Equisetum arvense</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Epipatorium perfoliatum</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Typna angustifolia</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. <u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>Euthamia gamnifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7.				
8.				
9.				
10.				
11.				
12.				
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) 				Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.

SOIL

Sampling Point: DP-568

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10"	2.5Y 3/1	90	10YR 5/8	10	C	M	Sil	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/06/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-569
 Investigator(s): M. Baberg, S. Buckenmeyer Section, Township, Range: Villageville
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.119752 Long: 42.445767 Datum: NAD 83
 Soil Map Unit Name: Erie silt loam NW classification: Wetland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A540</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-569

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

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)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

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: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex flava</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Onoclea sensibilis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Thelypteris noveboracensis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
4. <u>Symphoricarpon pilosum</u>	<u>2</u>	<u>No</u>	<u>FAC</u>
5. <u>Acer saccharum</u>	<u>1</u>	<u>No</u>	<u>FACU</u>
6. <u>Fragaria americana</u>	<u>1</u>	<u>No</u>	<u>FACU</u>
7. <u>Rubus idaeus</u>	<u>1</u>	<u>No</u>	<u>FACU</u>
8.			
9.			
10.			
11.			
12.			

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

SOIL

Sampling Point DP-SW9

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
D-8	2.5Y 3/1	90	10YR 5/6	5	C	M	SIL		
			10YR 6/3	5	C	M	SIL		

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesc Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/06/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-570
 Investigator(s): S. Buckenmeyer, M. Bobberg Section, Township, Range: VIII, Oneida
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79-119699 Long: 42-445857 Datum: NAD 83
 Soil Map Unit Name: _____ NWM classification: upland

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																															
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<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Stunted or Stressed Plants (D1)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> Microtopographic Relief (D4)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION - Use scientific names of plants.

Sampling Point: DP- 570

Tree Stratum (Plot size: <u>30'</u>)				Dominance Test worksheet:	
Species	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species That Are OBL, FACW, or FAC:	
1. <u>Fagus grandifolia</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	<u>2</u>	(A)
2. <u>Acer saccharum</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>		
3. <u>Tsuga canadensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	<u>6</u>	(B)
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>75</u> = Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>30</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet:	
Species	Absolute % Cover	Dominant Species?	Indicator Status	Total % Cover of:	Multiply by:
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	OBL species _____	x 1 = _____
2. _____	_____	_____	_____	FACW species _____	x 2 = _____
3. _____	_____	_____	_____	FAC species <u>8</u>	x 3 = <u>24</u>
4. _____	_____	_____	_____	FACU species <u>82</u>	x 4 = <u>328</u>
5. _____	_____	_____	_____	UPL species _____	x 5 = _____
6. _____	_____	_____	_____	Column Totals: <u>90</u>	(A) <u>352</u> (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.91</u>	
<u>5</u> = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot size: <u>5'</u>)				<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ² (Explain)	
1. <u>Dryopteris intermedia</u>	<u>6</u>	<u>Yes</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Thelypteris noveboracensis</u>	<u>2</u>	<u>Yes</u>	<u>FAC</u>	Definitions of Vegetation Strata:	
3. <u>Rubus idaeus</u>	<u>2</u>	<u>Yes</u>	<u>FACU</u>	Tree - Woody plants 3 in. (7.8 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>10</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)					
1. <u>Not Applicable</u>	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: DP- 570

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-1	10YR 4/2	100					SIL	
1-20	2.5Y 5/4	80	10YR 4/2	20	D	M	SIL	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/06/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 571
 Investigator(s): M. Berger S. Buekenmeyer Section, Township, Range: VILLEROY
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 79.170654 Long: 42.445692 Datum: NAD 83
 Soil Map Unit Name: Lanford silt loam NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WLA541</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one is required, check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	Secondary indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-4"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point DP- 571

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				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 = _____
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Carex flava</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Typha angustifolia</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Cythamia graminifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Symphoricarpos vovae anglicae</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
7. <u>Carex intumescens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8.				
9.				
10.				
11.				
12.				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/05/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-572
 Investigator(s): M. Boberg S. Buckenmeyer Section, Township, Range: Village
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 79.120813 Long: 42.445855 Datum: NAD 83
 Soil Map Unit Name: Largford silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (if no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation No Soil No or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ if yes, optional Wetland Site ID: <u>WLA542</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Insundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B6)	Secondary Indicators (minimum of two required): _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-572

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of _____ Multiply by: OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>7</u> x 4 = <u>28</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>11</u> (A) <u>153</u> (B) Prevalence Index = B/A = <u>1.98</u>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Acer saccharum</u>	<u>1</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lonicera tatarica</u>	<u>1</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>2</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Carex flava</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Droclea sensibilis</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Euthamia graminifolia</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
5. <u>Eupatorium pertouatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>Polygonum arifolium</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
7. <u>Carex intumescens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain): _____

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP-372

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10"	2.5Y 3/1	95	10YR 5/8	5	C	M	SIL	

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

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F8)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mosaic Spodic (TA8) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bull Hill Wind Project City/County: CHAMPLAIN COUNTY Sampling Date: 11/15
 Applicant/Owner: Bull Hill Wind Energy, LLC State: NY Sampling Point: DA575
 Investigator(s): B. Viets, J. Buckenmeyer Section, Township, Range: VILLENOVA
 Landform (hillslope, terrace, etc.): Drainage way Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-2 Lat: 79.118433 Long: 42.453273 Datum: NAD83
 Soil Map Unit Name: Fine sand silt loam 0 to 3% silt NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A543</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"-4"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u>	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-9525

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>NOT APPLICABLE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4 _____				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 = _____
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>NOT APPLICABLE</u>				
2 _____				
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Agrostis stolonifera</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Bidens acicosa</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3 _____	<u>10</u>	<u>N</u>		
4 <u>Eupatorium perfoliatum</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>75</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>NOT APPLICABLE</u>				
2 _____				
3 _____				
4 _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) 				
Hydrophytic Vegetation Present? Yes <u>X</u> No				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: CHAMPLAIN COUNTY Sampling Date: 11/4/15
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-576
 Investigator(s): B. V. ZS, S. Gutermaier Section, Township, Range: VILLERONA
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%
 Subregion (LRR or MERA): LRR-R Lat: 79.118439 Long: 42.453234 Datum: NAD83
 Soil Map Unit Name: Fremont S. 11 to 0 to 3% Slopes NWI classification: UPLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation no Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation no Soil no or Hydrology no naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, official Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply): <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: 00576

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>NOT Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3 _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (AB)
4 _____				
5 _____				
6 _____				
7 _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1 <u>NOT Applicable</u>				Total % Cover of OBL species: <u>5</u> x 1 = <u>5</u>
2 _____				FACW species: <u>5</u> x 2 = <u>10</u>
3 _____				FAC species: <u>5</u> x 3 = <u>15</u>
4 _____				FACU species: <u>80</u> x 4 = <u>320</u>
5 _____				UPL species: <u>5</u> x 5 = <u>25</u>
6 _____				Column Totals: <u>100</u> (A) <u>375</u> (B)
7 _____				Prevalence Index = B/A = <u>3.75</u>
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1 <u>Schedonorus annulaceus</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2 <u>Trifolium repens</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> 2 - Dominance Test is >50%
3 <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<input type="checkbox"/> 3 - Prevalence Index is $\geq 3.0^1$
4 <u>Ranunculus bulbosus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5 <u>Daucus carota</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6 <u>Solanum carolinense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7 <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
8 _____				
9 _____				
10 _____				
11 _____				
12 _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
1 <u>NOT Applicable</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 or equal to 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 1.28 ft in height.
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

SOIL

Sampling Point: DP 576

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0'-9"	2.5Y3/2	100					SIL	
9"-20"	2.5Y3/2	85	2.5Y4/2	10%	O	m	SFL	
			7.5Y2/1/6	5%	C	m		

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

²Location: PL=Pure 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)
- Sarcly Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

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

Indicators for Problematic Hydric Soils¹:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A15) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: CHARLESTON CTY Sampling Date: 11/9/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-577
 Investigator(s): B. Vires, S. Buckenmeyer Section, Township, Range: VILLENOVA
 Landform (hillslope, terrace, etc.): Drainage way Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.119116 Long: 42.452562 Datum: map 83
 Soil Map Unit Name: Oc Park S. 11 loam 3 to 8% slope NWI classification: wetland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 19574</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B6) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B7) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0 - 1 1/2"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0 1/2"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available 	
Remarks: 	

VEGETATION - Use scientific names of plants.

Sampling Point: DP-577

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>not applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (AB)
4				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 = _____
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>not applicable</u>				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Juncus effusus</u>	<u>55</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2 <u>Phalaris arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3 <u>Eleocharis acicularis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4 <u>Carex intumescens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5				
6				
7				
8				
9				
10				
11				
12				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>not applicable</u>				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 1.28 ft in height.
2				
3				
4				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No				
Remarks: (include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: CHAMPLAIN COUNTY Sampling Date: 11/9/15
 Applicant/Owner: BALL Hill Wind Energy, LLC State: NY Sampling Point: DP 518
 Investigator(s): B. VIRT, S. Buckenmeyer Section, Township, Range: VILLANOVA
 Landform (hillside, terrace, etc.): Hill slope Local relief (concave, convex, none): Convex Slope (%): 1%
 Subregion (LRR or MLRA): LPR-R Lat: 79.11936 Long: 42.452602 Datum: na83
 Soil Map Unit Name: Orpisk Silty loam, 3 to 8% slopes NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
6			
7			

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
6			
7			

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Woody Vine Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			

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 (AB)

Prevalence Index worksheet:

Total % Cover of	Multiply by:
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>0</u> x 2 = <u>0</u>
FAC species	<u>0</u> x 3 = <u>0</u>
FACU species	<u>100</u> x 4 = <u>400</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column Totals:	<u>100</u> (A) <u>400</u> (B)

Prevalence Index = B/A = 4.0

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is $\geq 3.0^1$
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: CHAMPLAIN COUNTY Sampling Date: 11/9/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP 579
 Investigator(s): R. V. Ellis, S. Burkhammer Section, Township, Range: VILLENOVA
 Landform (hillslope, terrace, etc.): D. irregular Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.119603 Long: 42.450179 Datum: NAD 83
 Soil Map Unit Name: _____ NWI classification: Upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>Wetland AS116</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply): _____ Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> 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 (minimum of two required): _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point DP-579

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1 <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2 <u>Tsuga canadensis</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
3 _____																		
4 _____																		
5 _____																		
6 _____																		
7 _____																		
<u>20</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of</th> <th style="width:50%;">Multiply by</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>270</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>2.70</u>	Total % Cover of	Multiply by	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>270</u> (B)
Total % Cover of	Multiply by																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>30</u>	x 4 = <u>120</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>270</u> (B)																	
<u>20</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1 <u>Lindera benzoin</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
2 <u>Tsuga canadensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3 _____																		
4 _____																		
5 _____																		
6 _____																		
7 _____																		
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1 <u>Matteuccia struthiopteris</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2 <u>Dryopteris cristata</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>															
3 <u>Enoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4 <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5 <u>Bidens ariflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6 _____																		
7 _____																		
8 _____																		
9 _____																		
10 _____																		
11 _____																		
12 _____																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1 <u>not applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
2 _____																		
3 _____																		
4 _____																		
<u>0</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Cherokee Co, GA Sampling Date: 11/9/15
 Applicant/Owner: Ball Hill Wind Energy LLC State: GA Sampling Point: DP 580
 Investigator(s): B. Vitis, S. Burkhammer Section, Township, Range: Villecova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MIRA): LRR-K Lat: 79.11964 Long: 42.449912 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: upland

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> if yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks): ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C6) ___ Saturation Visible on Aerial Imagery (C0) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquifers (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants:

Sampling Point DP 560

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>80</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>37</u> (A/B)														
2. <u><i>Betula alleghaniensis</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>100</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>130</u></td> <td>x 4 = <u>520</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>615</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.72</u>	Total % Cover of	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>130</u>	x 4 = <u>520</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>615</u> (B)
Total % Cover of	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>30</u>	x 3 = <u>90</u>																	
FACU species <u>130</u>	x 4 = <u>520</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>615</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u><i>Fagus grandifolia</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Carpinus caroliniana</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>50</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Fagus grandifolia</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>													
2. <u><i>Tsuga canadensis</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Dryopteris cristata</i></u>	<u>5</u>	<u>Y</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Not Applicable</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (include photo numbers here or on a separate sheet.)																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bull Hill Wind Project City/County: Chautauque CTY Sampling Date: 11/09/15
 Applicant/Owner: B. Virts, S. Buckenmeyer Bull Hill Wind Energy LLC State: NY Sampling Point: DP-581
 Investigator(s): B. Virts, S. Buckenmeyer Section, Township, Range: VILLENOVA
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.119414 Long: 42.448568 Datum: NAD83
 Soil Map Unit Name: Vale's gravelly Silt loam, Redding NWI classification: Wetland SB Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland A547</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-581

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Tsuga canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2 <u>Betula alghariensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3 _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66 2/3</u> (A/B)
4 _____	_____	_____	_____	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 = _____
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
<u>50</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Tsuga canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2 <u>Betula alghariensis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3 <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4 <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Glyceria alatiflora</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
2 <u>Dryopteris cristata</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Carex intumescens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
11 _____	_____	_____	_____	
12 _____	_____	_____	_____	
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>not applicable</u>	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤ 3.0
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 11/9/15
 Applicant/Owner: Ball Hill Wind Energy LLC State: Ny Sampling Point: DP5B2
 Investigator(s): B. V. ... S. Burkholder Section, Township, Range: VILLEHORN
 Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR-R Lat: 79.119808 Long: 42.44868 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: h1pnd

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> <u>MD</u>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two 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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-552

Tree Stratum (Plot size: <u>30'</u>)	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>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
1. <u>Tsuga canadensis</u>	<u>105</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Carpinus carolina</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>5</u> × 1 = <u>5</u> FACW species <u>0</u> × 2 = <u>0</u> FAC species <u>0</u> × 3 = <u>0</u> FACU species <u>115</u> × 4 = <u>460</u> UPL species <u>0</u> × 5 = <u>0</u> Column Totals: <u>120</u> (A) <u>465</u> (B) Prevalence Index = B/A = <u>3.87</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Tsuga canadensis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Carpinus carolina</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Dryopteris cristata</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>10</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Weedy vines – All woody vines greater than 3.28 ft in height.
1. <u>NOT APPLICABLE</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____ _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ban Hill Wind Project City/County: Chatham Co NY Sampling Date: 11/10/15
 Applicant/Owner: Ban Hill Wind Energy, LLC State: NY Sampling Point: DP-548-AV 583
 Investigator(s): B. V. RTS Section, Township, Range: Villanova
 Landform (hill/slope, terrace, etc.): Hill slope Local relief (concave, convex, none): Concave Slope (%): 41
 Subregion (LRR or MLRA): LRR-R Lat: 79.123487 Long: 42.447716 Datum: NAD 83
 Soil Map Unit Name: Ashville silt loam NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland 03418</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B5) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Train Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquifer (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>3"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ban 11.11 Wind Project City/County: CHRYSTALTON CTY Sampling Date: 11/10/15
 Applicant/Owner: Ban 11.11 Wind Energy, LLC State: NY Sampling Point: DP-583
 Investigator(s): B. V. RYS Section, Township, Range: VILLANOVA
 Landform (hilltop, terrace, etc.): H. 11 slope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): L20R Lat: 79.123914 Long: 42.447289 Datum: NAD83
 Soil Map Unit Name: Ashtville S. 11 flow NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation no, Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation no, Soil no or Hydrology no naturally problematic? (if needed, explain any answers in Remarks)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DD-501

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	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>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>12.5</u> (A/B)
2. <u>Tsuga canadensis</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Betula allegheniensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of _____ Multiply by _____ OBL species: <u>10</u> x 1 = <u>10</u> FACW species: <u>0</u> x 2 = <u>0</u> FAC species: <u>5</u> x 3 = <u>15</u> FACU species: <u>100</u> x 4 = <u>400</u> UPL species: <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>425</u> (B) Prevalence Index = B/A = <u>3.69</u>
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____	<u>50</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is <3.0 ⁴ <input type="checkbox"/> 4 - Morphological Adaptations ⁴ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ⁴ (Explain)
1. <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Lonicera tatarica</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	⁴ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____	<u>40</u>	= Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall Woody vines – All woody vines greater than 128 ft in height
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Dryopteris cristata</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Polystichum acrostichodes</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Fagus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____	<u>25</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>None applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____	<u>0</u>	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Barr Hill Wind Project City/County: CHAUTAUGUE CO. Sampling Date: 11/10/15
 Applicant/Owner: Barr Hill Wind Energy, LLC State: NY Sampling Point: 02585
 Investigator(s): B. V. ZFS Section, Township, Range: Villageville
 Landform (hillslope, terrace, etc.): Drainage way Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): 16A-R Lat: 79.17709 Long: 42.745981 Datum: NAD83
 Soil Map Unit Name: Valeris Silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation no Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation no Soil no or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: <u>Wetland AS44</u>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">Wetland is primarily a PFA with some minor areas of Pm</p>	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required):
Primary Indicators (minimum of one is required; check all that apply):		
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0" to 4"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u>		
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants.

Sampling Point: DP585

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Tsuga canadensis</u>	<u>58</u>	<u>Y</u>	<u>FACU</u>
2 <u>Betula alleghensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3 <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
4			
5			
6			
7			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Tsuga canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
2 <u>Betula alleghensis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3 <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4 <u>Betula alleghensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5 <u>populifolia</u>			
6			
7			

Prevalence Index worksheet:

Total % Cover of	Multiply by
OBL species <u>18</u>	x 1 = <u>18</u>
FACW species <u>7</u>	x 2 = <u>14</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>95</u>	x 4 = <u>380</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>160</u>	(A) <u>532</u> (B)

Prevalence Index = B/A = 3.32

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Dryopteris cristata</u>	<u>18</u>	<u>Y</u>	<u>OBL</u>
2 <u>Rubus idaeus cristata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
3 <u>Agrostis stolonifera</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
4 <u>Phalaris arundinacea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
5			
6			
7			
8			
9			
10			
11			
12			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation:
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤ 3.0 :
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet):
- Problematic Hydrophytic Vegetation¹ (Explain): _____
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: 30')

1 <u>not applicable</u>			
2			
3			
4			

0 = Total Cover

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua Sampling Date: 11/10/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: 00536
 Investigator(s): B. VITS Section, Township, Range: Villenova
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): convex Slope (%): 3
 Subregion (LRR or MLRA): LRR-R Lat: 79.12298 Long: 42.44611 Datum: NAD 83
 Soil Map Unit Name: Valois gravelly silt loam, rolling NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No (if no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants

Sampling Point: 586

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u><i>Tsuga canadensis</i></u>	<u>35</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)														
2. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>8</u> (B)														
3. <u><i>Betula allegheniensis</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>12.5</u> (A/B)														
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>125</u></td> <td>x 4 = <u>500</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u> (A)</td> <td><u>545</u> (B)</td> </tr> </tbody> </table> <p style="text-align: center;">Prevalence Index = B/A = <u>3.89</u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>125</u>	x 4 = <u>500</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u> (A)	<u>545</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>125</u>	x 4 = <u>500</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>140</u> (A)	<u>545</u> (B)																	
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u><i>Tsuga canadensis</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is <3.0* <input type="checkbox"/> 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation* (Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Fagus grandifolia</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>40</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u><i>Rubus idaeus</i></u>	<u>30</u>	<u>Y</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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
2. <u><i>Oxypteris intermedia</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Fagus grandifolia</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>Not Applicable</u>	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: 586

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0"-1"	04R317	100					S ₁	
1"-20"	10YR5/8	100					S _{1L}	

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

- | | | |
|---|---|---|
| <p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</p> | <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> | <p>Indicators for Problematic Hydric Soils⁴:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</p> <p><input type="checkbox"/> Coast Prairie Redox (A18) (LRR K, L, R)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</p> <p><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> |
|---|---|---|

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____	Hydric Soil Present? Yes _____ No <u>A</u>
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/11/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: 595
 Investigator(s): M. Boberg R. Virts Section, Township, Range: Villemonais
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-2 Lat: 79.121248 Long: 42.442435 Datum: NAD 83
 Soil Map Unit Name: _____ NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-A552</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> 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 (C5) _____ _____ Thin Muck Surface (C7) _____ _____ Other (Explain in Remarks) _____	_____ Surface Soil Cracks (B6) _____ _____ Drainage Patterns (B10) _____ _____ Moss Trim Lines (B18) _____ _____ Dry-Season Water Table (C2) _____ _____ Crayfish Burrows (C8) _____ _____ Saturation Visible on Aerial Imagery (C9) _____ _____ Stunted or Stressed Plants (D1) _____ _____ Geomorphic Position (D2) _____ _____ Shallow Aquitard (D3) _____ _____ Microtopographic Relief (D4) _____ _____ FAC-Neutral Test (D5) _____
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point 595

	Absolute % Cover	Dominant Species?	Indicator Status																		
Tree Stratum (Plot size: <u>30'</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>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					Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;">Total % Cover of</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = _____</td> </tr> </table>	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 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																					
6																					
7																					
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1																					
2																					
3																					
4																					
5																					
6																					
7																					
<u>0</u> = Total Cover																					
Herb Stratum (Plot size: <u>5'</u>)																					
1	<u>70</u>	<u>Y</u>	<u>OBL</u>																		
2	<u>10</u>	<u>N</u>	<u>OBL</u>																		
3	<u>10</u>	<u>N</u>	<u>FACW</u>																		
4	<u>5</u>	<u>N</u>	<u>FACW</u>																		
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
<u>95</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1																					
2																					
3																					
4																					
<u>0</u> = Total Cover																					
Remarks: (Include photo numbers here or on a separate sheet.)																					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bain Hill Wind Project City/County: Chautauque County Sampling Date: 11/11/15
 Applicant/Owner: Bain Hill Wind Energy, LLC State: NY Sampling Point: SP6
 Investigator(s): B. Viets, m. Bobery Section, Township, Range: VILLENova
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 79.121197 Long: 42.442227 Datum: WAD 83
 Soil Map Unit Name: _____ NWI classification: upland

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C5) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (maximum of two 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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-596

Tree Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1	<u>not applicable</u>					
2						
3						
4						
5						
6						
7						
				<u>0</u> = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)						
1	<u>not applicable</u>					
2						
3						
4						
5						
6						
7						
				<u>0</u> = Total Cover		
Herb Stratum (Plot size: <u>5'</u>)						
1	<u>Scheuchzeria arundinaceus</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>		
2	<u>Tritolium repens</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3	<u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>DISL</u>		
4	<u>Rosa multiflora</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
5	<u>Daucus carota</u>	<u>5</u>	<u>N</u>	<u>UPL</u>		
6	<u>Ranago lancofolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
7						
8						
9						
10						
11						
12						
				<u>100</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)						
1	<u>not applicable</u>					
2						
3						
4						
				<u>0</u> = Total Cover		

Dominance Test worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u>	(A)
Total Number of Dominant Species Across All Strata:	<u>2</u>	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u>	(AB)

Prevalence Index worksheet:		
Total % Cover of:		Multiplicity by:
OBL species	<u>10</u>	x 1 = <u>10</u>
FACW species	<u>0</u>	x 2 = <u>0</u>
FAC species	<u>0</u>	x 3 = <u>0</u>
FACU species	<u>85</u>	x 4 = <u>340</u>
UPL species	<u>5</u>	x 5 = <u>25</u>
Column Totals:	<u>100</u>	(A) <u>375</u> (B)
Prevalence Index = B/A = <u>3.75</u>		

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/>	1 - Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/>	2 - Dominance Test is >50%
<input type="checkbox"/>	3 - Prevalence Index is $\geq 3.0^1$
<input type="checkbox"/>	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
<input type="checkbox"/>	Problematic Hydrophytic Vegetation ¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:	
Tree	– Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub	– Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb	– All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines	– All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---------------------------------	---

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

SOIL

Sampling Point DP-596

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0"-2"	2.5Y3/3	95	10Y2/5/8	5	C	m	SIL	
2"-6"	2.5Y3/3	100					SIL	
16"-20"	10Y2/5/6	100	10Y2/5/8	5	C	m	SIL	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/11/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-5A7
 Investigator(s): McNaberg, B. Viets Section, Township, Range: Villenard R
 Landform (hill slope, terrace, etc.): Hill slope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR or MLRA): LR2P Lat: 79.12464 Long: 42.44157 Datum: NAD 83
 Soil Map Unit Name: _____ NWI classification: upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>WL-A559</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> Saturation (A3) _____ _____ Water Marks (B1) _____ _____ Sediment Deposits (B2) _____ _____ Drill Deposits (B3) _____ _____ Algal Mat or Crust (B4) _____ _____ Iron Deposits (B5) _____ _____ Inundation Visible on Aerial Imagery (B7) _____ _____ Sparsely Vegetated Concave Surface (B8) _____ _____ Water-Stained Leaves (B9) _____ _____ Aquatic Fauna (B13) _____ _____ Marl Deposits (B15) _____ _____ Hydrogen Sulfide Odor (C1) _____ _____ Oxidized Rhizospheres on Living Roots (C3) _____ _____ Presence of Reduced Iron (C4) _____ _____ Recent Iron Reduction in Tilled Soils (C6) _____ _____ Thin Muck Surface (C7) _____ _____ Other (Explain in Remarks) _____	_____ Surface Soil Cracks (B6) _____ _____ Drainage Patterns (B10) _____ _____ Moss Trim Lines (B16) _____ _____ Dry-Season Water Table (C2) _____ _____ Crayfish Burrows (C8) _____ _____ Saturation Visible on Aerial Imagery (C9) _____ _____ Stunted or Stressed Plants (D1) _____ _____ Geomorphic Position (D2) _____ _____ Shallow Aquitard (D3) _____ _____ Microtopographic Relief (D4) _____ _____ FAC-Neutral Test (D5) _____
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	
Wetland Hydrology Present? Yes <u>A</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1				<u>Not Applicable</u>
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1				<u>Not Applicable</u>
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1	<u>60</u>	<u>X</u>	<u>FACW</u>	<u>Carex intumescens</u>
2	<u>15</u>	<u>N</u>	<u>OBL</u>	<u>Juncus effusus</u>
3	<u>15</u>	<u>N</u>	<u>OBL</u>	<u>Typha latifolia</u>
4	<u>5</u>	<u>N</u>	<u>OBL</u>	<u>Carex flava</u>
5	<u>5</u>	<u>N</u>	<u>OBL</u>	<u>Lythrum salicaria</u>
6				
7				
8				
9				
10				
11				
12				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				<u>Not Applicable</u>
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

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)
Prevalence Index worksheet:	
Total % Cover of	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UFL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B)
Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines – All woody vines greater than 3.28 ft in height.	
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/11/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: 398
 Investigator(s): M. G. Berg B. Virts Section, Township, Range: Villenova
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR or MLRA): UREP Lat: 79.121374 Long: 42.941687 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: upland

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is 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)	Secondary Indicators (minimum of two required): _____ 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)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: 518

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Prunus serotina</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. <u>Populus tremuloides</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>125</u> x 4 = <u>500</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>135</u> (A) <u>540</u> (B) Prevalence Index = B/A = <u>4</u>
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>40</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Rhamnus cathartica</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Trifolium repens</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Scheuchzeria palustris</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Potamogeton lanceolatus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Dactylis glomerata</u>	<u>5</u>	<u>N</u>	<u>NI</u>	
5. <u>Fragaria vesca</u>	<u>5</u>	<u>N</u>	<u>NI</u>	
6. <u>Taraxacum officinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
8. <u>Dactylis aegyptia</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
9. <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: 598

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6	2.5Y ^{3/3}	100					S	
6-9	2.5Y ^{6/8}	80	2.5Y ^{3/3}	15	O	m	SIL	
			10YR ^{5/8}	5	C	m	SIL	
9-20	10YR ^{3/4}	100					SIL	

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

²Location: PL=Pure Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind City/County: Chautauque Sampling Date: 11/11/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: 599
 Investigator(s): M. Boberg B. Virks Section, Township, Range: Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.121369 Long: 42.44105 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
 Are Vegetation No, Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-9560</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> 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) _____ _____ Muck Deposits (B15) _____ _____ Hydrogen Sulfide Odor (C1) _____ _____ Oxidized Rhizospheres on Living Roots (C3) _____ _____ Presence of Reduced Iron (C4) _____ _____ Recent Iron Reduction in Tilled Soils (C6) _____ _____ Thin Muck Surface (C7) _____ _____ Other (Explain in Remarks) _____	_____ Surface Soil Cracks (B6) _____ _____ Drainage Patterns (B10) _____ _____ Moss Trim Lines (B16) _____ _____ Dry-Season Water Table (C2) _____ _____ Crayfish Burrows (C8) _____ _____ Saturation Visible on Aerial Imagery (C9) _____ _____ Stunted or Stressed Plants (D1) _____ _____ Geomorphic Position (D2) _____ _____ Shallow Aquitard (D3) _____ _____ Microtopographic Relief (D4) _____ _____ FAC-Neutral Test (D5) _____
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0-1"</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION - Use scientific names of plants.

Sampling Point: 599

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of _____ Multiply by: OBL species <u>50</u> x 1 = <u>50</u> FACW species <u>15</u> x 2 = <u>30</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>80</u> (A) <u>115</u> (B) Prevalence Index = B/A = <u>1.43</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Juncus effusus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Polygonum persicaria</u>	<u>20</u>	<u>Y</u>	<u>NI</u>	
3. <u>Eupatorium perfoliatum</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
4. <u>Carex flava</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
5. <u>Eieocharis acicularis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No

SOIL

Sampling Point: 599

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	2.5Y 3/1	95	10YR 5/1	5	C	M	slt	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/11/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: UCO
 Investigator(s): M. Baberg, B. Virts Section, Township, Range: Village
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-12 Lat: 79.121339 Long: 42.740976 Datum: upland
 Soil Map Unit Name: _____ NW classification: upland

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

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants

Sampling Point: UCC

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				Prevalence Index worksheet: Total % Cover of _____ Multiply by: OBL species <u>1</u> x 1 = <u>1</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>1</u> x 3 = <u>3</u> FACU species <u>98</u> x 4 = <u>392</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>396</u> (B) Prevalence Index = B/A = <u>3.96</u>
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Schedonorus arundinaceus</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Trifolium repens</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Pantago lanceolata</u>	<u>8</u>	<u>N</u>	<u>FACU</u>	
4. <u>Juncus effusus</u>	<u>1</u>	<u>N</u>	<u>OBL</u>	
5. <u>Juncus tenuis</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 1.28 ft in height.
2.				
3.				
4.				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind City/County: Chautauque Sampling Date: 11/11/15
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: 1601
 Investigator(s): M. Goldberg B. Virts Section, Township, Range: Villeport
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LER-R Lat: 79.119456 Long: 42.440737 Datum: NAD-83
 Soil Map Unit Name: _____ NMI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-A701</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0-1"</u> Water Tables Present? Yes <u>X</u> No _____ Depth (inches): <u>2"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants

Sampling Point: U/D

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				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 = _____
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Juncus effusus</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is <3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Eleocharis acicularis</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
3. <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Scirpus cyperinus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: BALL HILL WIND PROJECT City/County: Crawford Sampling Date: 11/11/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: 102
 Investigator(s): M. Balberg, B. Yurts Section, Township, Range: VILLUORNA
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): FLAT Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.119253 Long: 42.440761 Datum: NAD83
 Soil Map Unit Name: _____ NW classification: upland

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

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

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

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: 1002

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2																		
3																		
4																		
5																		
6																		
7																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 8 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>95</u></td> <td>(A) <u>370</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.89</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>5</u>	x 8 = <u>25</u>	Column Totals: <u>95</u>	(A) <u>370</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>85</u>	x 4 = <u>340</u>																	
UPL species <u>5</u>	x 8 = <u>25</u>																	
Column Totals: <u>95</u>	(A) <u>370</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Not Applicable</u>																		
2																		
3																		
4																		
5																		
6																		
7																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Schedonorus arundinaceus</u>	<u>100</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Trifolium repens</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Daucus carota</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
4. <u>Daucus pusillus</u>	<u>5</u>	<u>N</u>	<u>NI</u>															
5. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
6																		
7																		
8																		
9																		
10																		
11																		
12																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>Not Applicable</u>																		
2																		
3																		
4																		
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bull Hill Wind Project City/County: Chatham County Sampling Date: 11/12/2015
 Applicant/Owner: Bull Hill Wind Energy LLC State: NY Sampling Point: DP-604
 Investigator(s): B. Vicks, S. Buckenmeyer Section, Township, Range: Villenova
 Landform (hill slope, terrace, etc.): hill slope Local relief (concave, convex, none): concave Slope (%): 2-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.16115 Long: 42.440785 Datum: NAD 83
 Soil Map Unit Name: Chatham silt loam, 3-9% slopes NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>A562</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Filled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u>	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-604

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
4				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 = _____
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Not Applicable</u>				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Juncus effusus</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Carex flacca</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	
3 <u>Schedonorus arundinaceus</u>	<u>33</u>	<u>YES</u>	<u>FACW</u>	
4 <u>Trifolium Repens</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
5 <u>Taraxacum officinale</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
6 <u>Ranunculus abortivus</u>	<u>2</u>	<u>NO</u>	<u>FACW</u>	
7				
8				
9				
10				
11				
12				
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bull Hill Wind Project City/County: Chautauque CT Sampling Date: 11/12/2015
 Applicant/Owner: Bull Hill Wind Energy, LLC State: NY Sampling Point: DP-605
 Investigator(s): B. Virts, S. Buckenmeyer Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2-3
 Subregion (LRR or MIRA): LRR-R Lat: 79.115942 Long: 42.440811 Datum: NAD83
 Soil Map Unit Name: ADP100-200S silt loam 3-8% slopes NW classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B0) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D6)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point OP-605

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)														
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)														
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
4.				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of</th> <th style="width:50%;">Multiply by</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals <u>100</u> (A)</td> <td><u>405</u> (B)</td> </tr> </tbody> </table> <p style="text-align: center;">Prevalence Index = B/A = <u>4.05</u></p>	Total % Cover of	Multiply by	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals <u>100</u> (A)	<u>405</u> (B)
Total % Cover of	Multiply by																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>95</u>	x 4 = <u>380</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals <u>100</u> (A)	<u>405</u> (B)																	
5.																		
6.																		
7.																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1. <u>Not Applicable</u> 2. 3. 4. 5. 6. 7.																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>) 1. <u>Trifolium Repens</u> <u>50</u> <u>YES</u> <u>FACU</u> 2. <u>Taraxacum officinale</u> <u>20</u> <u>YES</u> <u>FACU</u> 3. <u>Schekmanus arundinaceus</u> <u>18</u> <u>NO</u> <u>FACU</u> 4. <u>Daucus carota</u> <u>5</u> <u>NO</u> <u>UPL</u> 5. <u>Rosa multiflora</u> <u>5</u> <u>NO</u> <u>FACU</u> 6. <u>Solanum Carolinense</u> <u>2</u> <u>NO</u> <u>FACU</u> 7. 8. 9. 10. 11. 12.																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>) 1. <u>Not Applicable</u> 2. 3. 4.																		
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) 				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≥ 3.0 ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes ___ No <u>X</u>														

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bull Hill Wind Project City/County: CHATEAUGUE CT Sampling Date: 11/12/2015
 Applicant/Owner: Bull Hill Wind Energy, LLC State: NY Sampling Point: DP-606
 Investigator(s): B. Viets, S. Burkemeyer Section, Township, Range: VILLEROVA
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 2-3
 Subregion (LRF or MLRA): _____ Lat: 79.114576 Long: 42.440212 Datum: NAD 83
 Soil Map Unit Name: Best. Silt loam 3, 8-15% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ Remarks: (Explain alternative procedures here or in a separate report.)	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>A564</u>
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HYDROLOGY

Wetland Hydrology indicators:	
Primary indicators (minimum of one is required, check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> 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) _____ <input checked="" type="checkbox"/> 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 (minimum of two required) _____ Surface Soil Cracks (B6) _____ <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ _____ Moss Trim Lines (B16) _____ _____ Dry-Season Water Table (C2) _____ _____ Crayfish Burrows (C8) _____ _____ Saturation Visible on Aerial Imagery (C9) _____ _____ Stunted or Stressed Plants (D1) _____ _____ Geomorphic Position (D2) _____ _____ Shallow Aquitard (D3) _____ _____ Microtopographic Relief (D4) _____ <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	
Remarks:	

VEGETATION - Use scientific names of plants

Sampling Point: DP-606

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4				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 = (A) = _____
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>Not Applicable</u>				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Typha angustifolia</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% 3 - Prevalence Index is >3.0 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Thalictrum officinale</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	
3 <u>Carex flacca</u>	<u>15</u>	<u>NO</u>	<u>OBL</u>	
4 <u>Scheuchzeria palustris</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
5 <u>Euthamia gaumeriifolia</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
6 <u>Bidens aristosa</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
7 <u>Alisma terrestris</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>	
8				
9				
10				
11				
12				
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
2				
3				
4				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque, NY Sampling Date: 11/12/2015
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-607
 Investigator(s): B. Virts, S. Buckenmeyer Section, Township, Range: Villenova
 Landform (hill slope, terrace, etc.): hill slope Local relief (concave, convex, none): concave Slope (%): 2-3
 Subregion (LRR or MLRA): LRR-R Lat: 79.114542 Long: 42.440291 Datum: NAD83
 Soil Map Unit Name: Bush S. 141m 3-B Yelster NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (minimum of two required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Muck Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

- Surface Soil Cracks (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 (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Not Applicable</u>			
2			
3			
4			
5			
6			
7			

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Not Applicable</u>			
2			
3			
4			
5			
6			
7			

Prevalence Index worksheet:

Total % Cover of	Column Total	Multiply by	Result
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>95</u>	x 4 =	<u>380</u>
UPL species	<u>5</u>	x 5 =	<u>15</u>
Column Totals:	<u>100</u> (A)		<u>395</u> (B)

Prevalence Index = B/A = 3.95

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Schedocarpus arundinaceus</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>
2 <u>Trifolium repens</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>
3 <u>Taraxacum officinale</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>
4 <u>Solidago canadensis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
5 <u>Rumex crispus</u>	<u>5</u>	<u>No</u>	<u>UPL</u>
6			
7			
8			
9			
10			
11			
12			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤ 3.0
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain):
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Woody Vine Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Not Applicable</u>			
2			
3			
4			

Hydrophytic Vegetation Present? Yes No

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bell Hill Wind Project City/County: Cherokee County, GA Sampling Date: 11/12/15
 Applicant/Owner: Bell Hill Wind Energy, LLC State: GA Sampling Point: DP-610
 Investigator(s): R. V. ETS, S. Beckenmeyer Section, Township, Range: VILLEMONTA
 Landform (hillslope, terrace, etc.): Flats/plain Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 79.114078 Long: 42.43755 Datum: NAD 83
 Soil Map Unit Name: Bust. Silty loam 3-8% slopes NWT classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland A565</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>wetland is a peatland DEM</u></p>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ <input checked="" type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> Saturation (A3) _____ <input type="checkbox"/> Water Marks (B1) _____ <input type="checkbox"/> Sediment Deposits (B2) _____ <input type="checkbox"/> Drift Deposits (B3) _____ <input type="checkbox"/> Algal Mat or Crust (B4) _____ <input type="checkbox"/> Iron Deposits (B5) _____ <input type="checkbox"/> Ironation Visible on Aerial Imagery (B7) _____ <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) _____ <input type="checkbox"/> Water-Stained Leaves (B9) _____ <input type="checkbox"/> Aquatic Fauna (B13) _____ <input type="checkbox"/> Marl Deposits (B15) _____ <input type="checkbox"/> Hydrogen Sulfide Odor (C1) _____ <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ <input type="checkbox"/> Presence of Reduced Iron (C4) _____ <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) _____ <input type="checkbox"/> Thin Muck Surface (C7) _____ <input type="checkbox"/> Other (Explain in Remarks) _____	<input type="checkbox"/> Surface Soil Cracks (B6) _____ <input type="checkbox"/> Drainage Patterns (B10) _____ <input type="checkbox"/> Moss Trim Lines (B16) _____ <input type="checkbox"/> Dry-Season Water Table (C2) _____ <input type="checkbox"/> Crayfish Burrows (C8) _____ <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) _____ <input type="checkbox"/> Stunted or Stressed Plants (D1) _____ <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ <input type="checkbox"/> Shallow Aquitard (D3) _____ <input checked="" type="checkbox"/> Microtopographic Relief (D4) _____ <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0"-2"</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-610

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				
5.				
6.				
7.				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Not Applicable</u>				<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2.				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3.				<input type="checkbox"/> 3 - Prevalence Index is ≥ 3.0
4.				<input type="checkbox"/> 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
5.				<input type="checkbox"/> Problematic Hydrophytic Vegetation* (Explain)
				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>0</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>Juncus effusus</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Carex Flaca</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Mentha Spicata</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Eupatorium perfoliatum</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
5. <u>Rumex crispus</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Remarks: (Include photo numbers here or on a separate sheet.)
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ban Hill Wind Project City/County: Hamilton County Sampling Date: 11/12/15
 Applicant/Owner: Ban Hill Wind Energy LLC State: NY Sampling Point: DP 614
 Investigator(s): B. Viers, S. Bruckmeyer Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): CR2-R Lat: 79.114195 Long: 42.437799 Datum: NAD83
 Soil Map Unit Name: Bost. S. H. Hum 3 G. Osliper NWI classification: U1A1D
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-611

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>not applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4				Prevalence Index worksheet: Total % Cover of _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>90</u> x 4 = <u>360</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>380</u> (B) Prevalence Index = B/A = <u>3.80</u>
5				
6				
7				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1 <u>not applicable</u>				
2				
3				
4				
5				
6				
7				
<u>0</u> = Total Cover:				
Herb Stratum (Plot size: <u>5'</u>)				
1 <u>Trifolium Repens</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	
2 <u>Schedonorus arundinaceus</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
3 <u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4 <u>Pantago lanceolata</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
5 <u>Ranunculus bulbosus</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
6				
7				
8				
9				
10				
11				
12				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1 <u>not applicable</u>				
2				
3				
4				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet)				

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is <3.0'

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Cattaraugus NY Sampling Date: 11/12/13
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-613
 Investigator(s): B. Vias, S. Beckenmeyer Section, Township, Range: Villemonais
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-11 Lat: 79.112189 Long: 42.435276 Datum: NAD83
 Soil Map Unit Name: Cherry Creek Loam, fa, 3-Erskine NWI classification: UPLand
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation no Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation no Soil no or Hydrology no naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A367</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants

Sampling Point: DP-613

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>11</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63.6</u> (A/B)
4.				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 = _____
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Phytolacca americana</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
2. <u>Cornus alba</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
3. <u>Hamamelis virginiana</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>	
4. <u>Fraxinus americana</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
5. <u>Astrya virginiana</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
6. <u>Rosa multiflora</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
7.				
<u>60-50%</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Cornus alba</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Rosa multiflora</u>	<u>5</u>	<u>YES</u>	<u>FACU</u>	
3. <u>Epilobium angustifolium</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>	
4. <u>Rumex crispus</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	
5. <u>Euthrachium maculatum</u>	<u>5</u>	<u>YES</u>	<u>OBL</u>	
6. <u>Symphoricarpos albus</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	
7. <u>Euthamia tetralobata</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	
8.				
9.				
10.				
11.				
12.				
<u>45</u> = Total Cover				
Woody Vines Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

<p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> 2 - Dominance Test is >50%</p> <p><input type="checkbox"/> 3 - Prevalence Index is <3.0¹</p> <p><input type="checkbox"/> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</p>	<p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p>
<p>Hydrophytic Vegetation Present? Yes <u>X</u> No</p>	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bull Hill Wind Project City/County: Cattaraugus County Sampling Date: 11/12/15
 Applicant/Owner: Bull Hill Wind Energy State: NY Sampling Point: DP-6014
 Investigator(s): B. Viers, S. Beckenweger Section, Township, Range: Villemonais
 Landform (Hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR R Lat: 79.112211 Long: 42.43534 Datum: NAD 83
 Soil Map Unit Name: Chenango channery loam fan, 3-8% slopes NWI classification: W1land
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Wetland Area is Road shoulder Adjacent to wetland AS67</u></p>	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP 614

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1 <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2																		
3																		
4																		
5																		
6																		
7																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>410</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.10</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>100</u>	(A) <u>410</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>80</u>	x 4 = <u>320</u>																	
UPL species <u>15</u>	x 5 = <u>75</u>																	
Column Totals: <u>100</u>	(A) <u>410</u> (B)																	
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1 <u>Not Applicable</u>																		
2																		
3																		
4																		
5																		
6																		
7																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1 <u>Poa Pratensis</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>															
2 <u>Elymus villosus</u>	<u>15</u>	<u>No</u>	<u>FACU</u>															
3 <u>Daucus carota</u>	<u>10</u>	<u>No</u>	<u>UPL</u>															
4 <u>Rumex crispus</u>	<u>5</u>	<u>No</u>	<u>FAC</u>															
5 <u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
6 <u>Cirsium discolor</u>	<u>5</u>	<u>No</u>	<u>UPL</u>															
7																		
8																		
9																		
10																		
11																		
12																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1 <u>Not Applicable</u>																		
2																		
3																		
4																		
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is >3.0'

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

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: CHAUTAUQUE CTY Sampling Date: 11/13/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-617
 Investigator(s): B. Virts Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3
 Subregion (LRR or MLRA): LRR-R Lat: 79.112856 Long: 42.432927 Datum: NAD83
 Soil Map Unit Name: CHAUTAUQUE Silt loam 3-8% slope NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WETLAND A570</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Grazed Perm slope wetland</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input checked="" type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																				
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																				
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																					
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-3"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks:																					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-617

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</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. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Juncus effusus</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Scirpus atrovirens</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
3. <u>Ranunculus bulbosus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Carex flava</u>	<u>45</u>	<u>Y</u>	<u>OBL</u>	
5. <u>Eleocharis spp.</u>	<u>10</u>	<u>—</u>	<u>—</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <u>X</u> No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: BAIL Hill Wind Project City/County: CHANTAWAUA CTY Sampling Date: 11/13/15
 Applicant/Owner: BAIL Hill Wind energy, LLC State: NY Sampling Point: 00-618
 Investigator(s): B. VIETS Section, Township, Range: VILLANOVA
 Landform (hillslope, terrace, etc.): Hill side Local relief (concave, convex, none): convex Slope (%): 3%
 Subregion (LRR or MLRA): LRR-R Lat: 79.112794 Long: 42.432798 Datum: NAD83
 Soil Map Unit Name: CHANTAWAUA SILT loam 3-9% Slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: DP-618

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>not applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>not applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Trifolium repens</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Ranunculus bulbosus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Schedonorus arundinaceus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15'</u>)				
1. <u>not applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.) 				

SOIL

Sampling Point: DP-618

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0"-14"	10YR 3/3	95	10YR 3/6	5	C	m	SIL	
14"-20"	10YR 5/2	70	2.5Y 3/3	20	C	m	SIL	
			10YR 5/6	10	C	m		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<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.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: BAIL Hill Wind Project City/County: CHAUTAUCQUA CITY Sampling Date: 11/13/15
 Applicant/Owner: BAIL Hill Wind Energy, LLC State: NY Sampling Point: 00-622
 Investigator(s): B. Virts, M. Bohery Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRP-R Lat: 79.12908 Long: 42.443007 Datum: NAD 83
 Soil Map Unit Name: Bust. S. It loam 0 to 3% slopes NWI classification: UPLAND

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WETLAND A578</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2-8</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-622

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>not applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
<u>0</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Cornus alba</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Lonicera tatarica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Rubus idaeus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Rosa multiflora</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5.				
<u>75</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cornus alba</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Ranunculus bulbosus</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Carex flava</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Symphotichum pilosum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
5. <u>Euthamia graminifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>35</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. <u>not applicable</u>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-622

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0"-8"	10yR 3/2	95	10yR 4/6	5	C	m	SIL	

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

- | | | |
|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: CHAUTAQUA CTY Sampling Date: 11/13/15
 Applicant/Owner: Ball Hill Wind Energy LLC State: NY Sampling Point: DP-623
 Investigator(s): B. Vitis, M. Bobery Section, Township, Range: Villanova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 4
 Subregion (LRR or MLRA): LRR-R Lat: 79.127223 Long: 42.441704 Datum: NAD83
 Soil Map Unit Name: Brtsi S: 1+ loam 0 to 3% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-623

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pinus resinosa</u>	<u>95</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. <u>Prunus serotina</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>100</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 = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Lonicera tatarica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Pinus resinosa</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Rubus idaeus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____				
<u>35</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>NOT Applicable</u>				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>NOT Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

SOIL

Sampling Point: DP-623

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-10	10YR3/3	100					SIL	
10-20	2.5Y 5/6	85	10YR4/2	15	D	M	SIL	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1625
 Investigator(s): M. Boberg S. Buckenmeyer Section, Township, Range: Harover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): 12R-2 Lat: 42.44548448 Long: -79.12933903 Datum: NAD83
 Soil Map Unit Name: Chautauqua silt loam NWI classification: upland

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

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A579</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B6) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B0) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-12"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: 025

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NOT APPLICABLE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Alnus incana</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by:
2. <u>Cornus racemosa</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
6. _____				UPL species _____ x 5 = _____
7. _____				Column Totals: _____ (A) _____ (B)
<u>15</u> = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Carex intumescens</u>	<u>15</u>	<u>No</u>	<u>FACW</u>	1 - Rapid Test for Hydrophytic Vegetation
2. <u>Typha angustifolia</u>	<u>15</u>	<u>No</u>	<u>OBL</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Polygonum arifolium</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>	3 - Prevalence Index is ≤3.0'
4. <u>Leersia oryzoides</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
5. <u>Epilobium ciliatum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	Problematic Hydrophytic Vegetation* (Explain)
6. <u>Carex lupulina</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. <u>Scirpus cyperinus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	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 or equal to 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.
11. _____				Woody vines – All woody vines greater than 3.28 ft in height.
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>NOT APPLICABLE</u>				Yes <input checked="" type="checkbox"/> No
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-026
 Investigator(s): m. Baberg S. Buckenmeyer Section, Township, Range: Hanover
 Landform (hilllope, terrace, etc.): Hilllope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR or MERA): LRR-2 Lat: 42.44516235 Long: -79.1287335 Datum: NAD83
 Soil Map Unit Name: Chautauque silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A580</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D6)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6"</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 626

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Not Applicable</u>				Prevalence Index worksheet: Total % Cover of: <u>0</u> = Total Cover Multiply by: OBL species <u>60.5B</u> x 1 = <u>60.5B</u> 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.				
6.				
7.				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Juncus effusus</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex flava</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Ranunculus bulbosus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Symphitrichum pilosum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5. <u>Epilobium ciliatum</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____ _____				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy State: NY Sampling Point: DP-027
 Investigator(s): M. Boberg S. Buckenmeyer Section, Township, Range: Harover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.44490263 Long: -79.12882435 Datum: NAD-83
 Soil Map Unit Name: Fremont Silt Loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u> </u> Depth (inches): Water Table Present? Yes <u> </u> No <u> </u> Depth (inches): Saturation Present? Yes <u> </u> No <u> </u> Depth (inches): (Includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: 027

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4.				
5.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Not Applicable</u>				Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u>
2.				FACW species <u>0</u> x 2 = <u>0</u>
3.				FAC species <u>0</u> x 3 = <u>0</u>
4.				FACU species <u>60</u> x 4 = <u>240</u>
5.				UPL species <u>0</u> x 5 = <u>0</u>
6.				Column Totals: <u>60</u> (A) <u>240</u> (B)
7.				Prevalence Index = B/A = <u>4</u>
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>Calamagrostis canadensis</i> ^{MB} MB				<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <i>Schedonorus arundinaceus</i>	<u>30</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> 2 - Dominance Test is >50%
3. <i>Trifolium repens</i>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. <i>Taraxacum officinale</i>	<u>5</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <i>Pantago lanceolata</i>	<u>5</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.				
8.				
9.				
10.				
11.				
12.				
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
1. <u>Not Applicable</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 or equal to 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.
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1028
 Investigator(s): M. Boberg S. Buckenmeyer Section, Township, Range: Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR or MLRA): LRR-2 Lat: 42.44659163 Long: -79.13040717 Datum: NAD-83
 Soil Map Unit Name: Fremont silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A581</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-5"</u> Saturation Present? (Includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: Le28

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Not Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (AB)
4				
5				
6				
7				
<p>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</p> <p><u>0</u> = Total Cover</p>				<p>Prevalence Index worksheet:</p> <p>Total % Cover of: _____ Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p>Prevalence Index = B/A = _____</p>
1 <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> 2 - Dominance Test is >50%</p> <p><input type="checkbox"/> 3 - Prevalence Index is <3.0¹</p> <p><input type="checkbox"/> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>
2 <u>Rhamnus cathartica</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3				
4				
5				
6				
7				
<p>Herb Stratum (Plot size: <u>5'</u>)</p> <p><u>15</u> = Total Cover</p>				<p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Weedy vines – All woody vines greater than 3.28 ft in height.</p>
1 <u>Euthamia graminifolia</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	<p>Hydrophytic Vegetation Present? Yes <u>X</u> No</p>
2 <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3 <u>Carex flava</u>	<u>18</u>	<u>N</u>	<u>OBL</u>	
4 <u>Polygonum multiflorum</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
5 <u>Leersia oryzoides</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
6 <u>Cornus racemosa</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7				
8				
9				
10				
11				
12				
<p>Woody Vine Stratum (Plot size: <u>30'</u>)</p> <p><u>100</u> = Total Cover</p>				
1 <u>Not Applicable</u>				
2				
3				
4				
<p><u>0</u> = Total Cover</p>				
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Energy City/County: Chautauque Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: 029
 Investigator(s): M. Boberg S. Buckenmeyer Section, Township, Range: Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0-3
 Subregion (LRR or MLRA): L2R-R Lat: 42.44674723 Long: -79.13071287 Datum: NAD83
 Soil Map Unit Name: Fremont silt loam NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation NO, Soil NO, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>WMB</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Mud Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (Includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants.

Sampling Point: 629

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>10</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>05</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u></td> <td>(A) <u>405</u> (B)</td> </tr> </tbody> </table> Prevalence Index = BIA = <u>4.05</u>	Total % Cover of	Multiply by:	OBL species <u>05</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	OBL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u>	(A) <u>405</u> (B)
Total % Cover of	Multiply by:																	
OBL species <u>05</u>	x 1 = <u>5</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>100</u>	x 4 = <u>400</u>																	
OBL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>105</u>	(A) <u>405</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Hamamelis virginiana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Fraxinus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Solidago canadensis</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Fragaria vesca</u>	<u>20</u>	<u>Y</u>	<u>NI</u>															
3. <u>Scirpocyperus arundinaceus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
4. <u>Carex flava</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
5. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>Not Applicable</u>	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) 																		

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree -- Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub -- Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb -- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines -- All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-630
 Investigator(s): M. Boberg S. Buckenmeyer Section, Township, Range: Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LD2-R Lat: 42.4474133 Long: -79.1352377 Datum: NAD83
 Soil Map Unit Name: Chautauqua silt loam NWM classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A582</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5'</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3'</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 630

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Tsuga canadensis</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Fraxinus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Carpinus carolina</u>	<u>15</u>	<u>No</u>	<u>FAC</u>
4. <u>Acer saccharum</u>	<u>15</u>	<u>No</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Alnus incana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
4. <u>Fraxinus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>2</u>	x 1 = <u>2</u>
FACW species <u>18</u>	x 2 = <u>36</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species _____	x 5 = _____
Column Totals: <u>135</u> (A)	<u>483</u> (B)

Prevalence Index = B/A = 3.6

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Symphoricarpos vovae-angliae</u>	<u>8</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Onoclea sensibilis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Carex flava</u>	<u>2</u>	<u>No</u>	<u>OBL</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0 ¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Species adapted to living in wet conditions, through morphological adaptations. Examples include fluted trunks, shallow roots. Species: Tsuga canadensis, Fraxinus americana, Acer saccharum.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bail Hill Wind Project City/County: Chautauqua Sampling Date: 11/10/15
 Applicant/Owner: Bail Hill Wind Energy, LLC State: NY Sampling Point: DP-1031
 Investigator(s): M. Berger S. Bukermeier Section, Township, Range: Hanover
 Landform (hilllope, terrace, etc.): Hilllope Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.44710811 Long: -79.1326629 Datum: NAD83
 Soil Map Unit Name: Fremont silt loam NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: 631

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fagus grandifolia</u>	<u>20'</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. <u>Prunus serotina</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Fraxinus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>80</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 <u>105</u> x 4 = <u>420</u> UPL species _____ x 5 = _____ Column Totals: <u>105</u> (A) <u>420</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Acer saccharum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Fraxinus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Prunus serotina</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Fraxinus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Not Applicable</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1032
 Investigator(s): M. Boberg, S. Buckermeyer Section, Township, Range: Hanover
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0.2
 Subregion (LRR or MLRA): LRR-2 Lat: 42.44888946 Long: -79.13402909 Datum: NAD-83
 Soil Map Unit Name: Fremont silt loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A583</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary indicators (minimum of two required) ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B18) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0-1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>0"</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants

Sampling Point: 1032

Tree Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Fraxinus americana</i>			40	Y	FACU
2.	<i>Acer saccharum</i>			20	Y	FACU
3.						
4.						
5.						
6.						
7.						
				<u>60</u> = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Fraxinus americana</i>			10	Y	FACU
2.	<i>Fagus grandifolia</i>			5	Y	FACU
3.	<i>Acer saccharum</i>			5	Y	FACU
4.						
5.						
6.						
7.						
				<u>20</u> = Total Cover		
Herb Stratum (Plot size: <u>5'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Epilobium ciliatum</i>			30	Y	FACU
2.	<i>Symphoricarpos viciae-anglicae</i>			28	Y	FACU
3.	<i>Oxycoccus sensibilis</i>			6	N	FACU
4.	<i>Rosa multiflora</i>			2	N	FACU
5.	<i>Rubus idaeus</i>			2	N	FACU
6.	<i>Carex flava</i>			2	N	OBL
7.						
8.						
9.						
10.						
11.						
12.						
				<u>70</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				Absolute % Cover	Dominant Species?	Indicator Status
1.	Not Applicable					
2.						
3.						
4.						
				<u>0</u> = Total Cover		

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>7</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>29</u> (A/B)

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species <u>2</u>	x 1 = <u>2</u>
FACW species <u>04</u>	x 2 = <u>128</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>84</u>	x 4 = <u>336</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>150</u> (A) <u>466</u> (B)
Prevalence Index = B/A = <u>3.10</u>	

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain):

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo numbers here or on a separate sheet.)

-species have adapted to living in wet conditions through morphological adaptations – examples include fluted trunks and shallow roots

-species: White Ash, Sugar maple, Beech

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project Site: Ball Hill Wind Project City/County: Chautauque Sampling Date: 11/16/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: OP-1033
 Investigator(s): M. Goberg & Buckenmeyer Section, Township, Range: Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR or MLRA): LRR-2 Lat: 42.44841489 Long: -79.13349488 Datum: NAD83
 Soil Map Unit Name: Fremont silt loam NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one is required; check all that apply): <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B0) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C5) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: 633

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Fraxinus americana</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)	
2. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Populus grandidentata</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
4. <u>Prunus serotina</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
5. <u>Acer saccharum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
6. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>1105</u> x 4 = <u>4420</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>1105</u> (A) <u>4420</u> (B) Prevalence Index = B/A = <u>4</u>	
7. _____	_____	_____	_____		
<u>100</u> = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Fagus grandifolia</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
<u>50</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Fraxinus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
<u>15</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30'</u>) 1. <u>Not Applicable</u> 2. _____ 3. _____ 4. _____ <u>0</u> = Total Cover	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
<u>0</u> = Total Cover				Remarks: (Include photo numbers here or on a separate sheet.) 	
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/17/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-034
 Investigator(s): M. Barbara R. PekarSKI Section, Township, Range: Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 42.45109239 Long: -79.13433237 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam NWI classification: Wpland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation No Soil NA or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No Soil NA or Hydrology NA naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> if yes, optional Wetland Site ID: <u>WL-A584</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-1"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-4"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-134

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NOT Applicable</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
4. _____				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 = _____
5. _____				
6. _____				
7. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Cornus racemosa</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Cornus alba</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Rhamnus cathartica</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Carex flava</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
3. <u>Epilobium ciliatum</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
4. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Panicum rigidulum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>NOT Applicable</u>				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Remarks: (include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauque County Sampling Date: 11/17/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-635
 Investigator(s): M. Baberg R. Pokorski Section, Township, Range: Harover
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.45122406 Long: -79.13439883 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam NWM classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C8) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D6)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (Includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP-635

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rosa multiflora</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. <u>Rubus idaeus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3.			
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	<u>x 1 = 5</u>
FACW species <u>0</u>	<u>x 2 = 0</u>
FAC species <u>0</u>	<u>x 3 = 0</u>
FACU species <u>105</u>	<u>x 4 = 420</u>
UPL species <u>0</u>	<u>x 5 = 0</u>
Column Totals: <u>110</u> (A)	<u>420</u> (B)

Prevalence Index = B/A = 3.81

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sparganium angustifolium</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>
2. <u>Scheuchzeria palustris</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. <u>Phelipendula pratense</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
4. <u>Rosa multiflora</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
5. <u>Carex flava</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤ 3.0
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-1235

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	2.5Y 4/3	100					SIL	
10-14	2.5Y 9/2	100					SIL	
14-20	2.5Y 7/2	90	12.5R 5/1	5	C	M	SIL	
			2.5Y 4/2	5	O	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/17/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-631e
 Investigator(s): M. Coberg R. Perarski Section, Township, Range: Harover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR-R Lat: 42.45204165 Long: -79.13509953 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	if yes, optional Wetland Site ID: <u>WL-A585</u>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required, check all that apply)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Mose Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0-10"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>2"</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0"</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 636

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer saccharum</i>	50	Y	FACU
2. <i>Fraxinus americana</i>	20	Y	FACU
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B)

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Fagus grandifolia</i>	15	Y	FACU
2. <i>Acer saccharum</i>	5	Y	FACU
3. <i>Fraxinus americana</i>	5	Y	FACU
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>2</u>	x 1 = <u>2</u>
FACW species <u>12</u>	x 2 = <u>24</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u>	(A) <u>444</u> (B)

Prevalence Index = B/A = 3.7

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Symphoricarpos vovae-angliae</i>	15	Y	FACW
2. <i>Epiobium ciliatum</i>	5	Y	FACW
3. <i>Rubus idaeus</i>	5	N	FACU
4. <i>Euthamia graminifolia</i>	4	N	FAC
5. <i>Thelypteris noveboracensis</i>	2	N	FAC
6. <i>Carex flava</i>	2	N	OBL
7. <i>Oenoclea sensibilis</i>	2	N	FACW
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: 30')

1. <u>Not Applicable</u>			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (include photo numbers here or on a separate sheet.)

Trees/shrub species have adapted to living in wet conditions through morphological adaptations. These species have fluted trunks, and shallow roots.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/17/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-637
 Investigator(s): M. Gohberg R. Dekarski Section, Township, Range: Hanover
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): convex Slope (%): 3.5
 Subregion (LRR or MLRA): LRR-R Lat: 42.45232509 Long: -79.13504189 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam NWM classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	if yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (Includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 037

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
3. <u>Prunus serotina</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. <u>Tsuga canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3. <u>Prunus serotina</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>65</u> (A)	<u>260</u> (B)

Prevalence Index = B/A = 4.0

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: DP- 637

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-1	10YR 3/3	100					SIL	Leaf litter
1-8	10YR 5/8	90	10YR 3/2	10	A	M	SIL	
8-20	10YR 5/8	60	2.5Y 7/8	20	C	M	SIL	
			2.5Y 7/2	10	C	M	SIL	
			10YR 3/2	10	D	M	SIL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F16) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/7/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-638
 Investigator(s): M. Bohig R. Pokarski Section, Township, Range: HANOVER
 Landform (hilllope, terrace, etc.): Hill slope Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR-R Lat: 42.45322107 Long: -79.13486225 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam NWM classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No Soil No or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A58U</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width:100%;"> <tr> <td><input checked="" type="checkbox"/> Surface Water (A1)</td> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input checked="" type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Soil Cracks (B6)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Drainage Patterns (B10)</td> </tr> <tr> <td><input type="checkbox"/> Moss Trim Lines (B16)</td> </tr> <tr> <td><input type="checkbox"/> Dry-Season Water Table (C2)</td> </tr> <tr> <td><input type="checkbox"/> Crayfish Burrows (C8)</td> </tr> <tr> <td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td> </tr> <tr> <td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td> </tr> <tr> <td><input type="checkbox"/> Geomorphic Position (D2)</td> </tr> <tr> <td><input type="checkbox"/> Shallow Aquitard (D3)</td> </tr> <tr> <td><input type="checkbox"/> Microtopographic Relief (D4)</td> </tr> <tr> <td><input type="checkbox"/> FAC-Neutral Test (D6)</td> </tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D6)
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<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
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<p>Field Observations:</p> <table style="width:100%;"> <tr> <td>Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Depth (Inches): <u>0-12"</u></td> </tr> <tr> <td>Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Depth (Inches): <u>0"</u></td> </tr> <tr> <td>Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Depth (Inches): <u>0"</u></td> </tr> </table>	Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (Inches): <u>0-12"</u>	Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (Inches): <u>0"</u>	Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (Inches): <u>0"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																									
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Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (Inches): <u>0"</u>																															
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 038

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix petiolaris</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>
2. <u>Fraxinus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

15 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix petiolaris</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
2. <u>Cornus alba</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
3. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

40 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Polygonum arifolium</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>
2. <u>Euthamia graminifolia</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Eupatorium perfolium</u>	<u>15</u>	<u>N</u>	<u>FACW</u>
4. <u>Scirpus cyperinas</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
5. <u>Carex lupulina</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
6. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

100 = Total Cover

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>65</u>	x 1 = <u>65</u>
FACW species <u>3550</u>	x 2 = <u>100</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>295</u> (B)
<u>155</u> Prevalence Index = B/A = <u>1.90</u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/11/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-439
 Investigator(s): M. Baberg, R. Pekarski Section, Township, Range: Handover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR-R Lat: 42.45571903 Long: -79.13493859 Datum: NAD 83
 Soil Map Unit Name: BUST1 silt loam NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

SOIL

Sampling Point: DP-639

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
2"								leaf litter
0-2	10YR 4/4	100					SIL	
2-14	10YR 4/4	95	10YR 5/8	5	C	M	SIL	
14-20	10YR 4/6	90	10YR 4/4	10	D	M	SIL	

- ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.
- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S8)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S6) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L, M)
 - Polyvalue Below Surface (S6) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/17/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-640
 Investigator(s): M. BOBERG R. PEKARSKI Section, Township, Range: HANOVER
 Landform (hillside, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 0.3
 Subregion (LRR or MLRA): LRR-R Lat: 42.45455102 Long: -71.13541263 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A587</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width:100%;"> <tr> <td><input checked="" type="checkbox"/> Surface Water (A1)</td> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input checked="" type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width:100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input checked="" type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D6)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D6)
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<input type="checkbox"/> Microtopographic Relief (D4)																																
<input type="checkbox"/> FAC-Neutral Test (D6)																																
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (Inches): <u>0-10"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (Inches): <u>0"</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (Inches): <u>0"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION - Use scientific names of plants.

Sampling Point: DP-040

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. <u>Fraxinus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus alba</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
2. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>11</u>	x 4 = <u>44</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>131</u>	(A) <u>299</u> (B)

Prevalence Index = B/A = 2.28

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Epilobium ciliatum</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>
2. <u>Bidens aristata</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
3. <u>Eupatorium perfoliatum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
4. <u>Symphoricarpos vovae-angulae</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
5. <u>Elymus graminifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
6. <u>Scirpus cyperinus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
7. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Parthenocissus quinquefolia</u>	<u>1</u>	<u>Y</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/17/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1041
 Investigator(s): M. Peberg, R. Pokorski Section, Township, Range: HANOVER
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3.5
 Subregion (LRR or MLRA): LRR-R Lat: 42.45399529 Long: -79.13926398 Datum: NAD 83
 Soil Map Unit Name: Chautauqua silt loam NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-104

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus americana</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>
3. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4.			
5.			
6.			
7.			

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)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3.			
4.			
5.			
6.			
7.			

80 = Total Cover

10 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. <u>Rubus idaeus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

10 = Total Cover

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

0 = Total Cover

Hydrophytic Vegetation Present?

Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/19/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1048
 Investigator(s): M. Boderg S. Buckenmeyer Section, Township, Range: Forestville
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0.1
 Subregion (LRR or MLRA): LRR-R Lat: 42.4625045 Long: -79.14864427 Datum: NAD 83
 Soil Map Unit Name: ORPARK silt loam NWM classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WL-P-591</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary indicators (minimum of two required)
Primary indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0-4"</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0.5-1"</u> Saturation Present? (includes capillary fringe) Yes <u>X</u> No _____ Depth (inches): <u>0"</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- U42

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NOT APPLICABLE</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2. <u>Cornus alba</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
4.			
5.			
6.			
7.			

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Eupatorium ciliatum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
2. <u>Euthamia graminifolia</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Juncus effusus</u>	<u>15</u>	<u>N</u>	<u>OBL</u>
4. <u>Leersia oryzoides</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
5. <u>Polygonum arifolium</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
6. <u>Ranunculus bulbosus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
7.			
8.			
9.			
10.			
11.			
12.			

Woody Vine Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NOT APPLICABLE</u>			
2.			
3.			
4.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤ 3.0
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/19/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-049
 Investigator(s): M. Bobak, S. Buckenmeier Section, Township, Range: Forestville
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR-R Lat: 42.46130332 Long: -79.14892645 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt Loam NWM classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> if yes, optional Wetland Site ID: <u> </u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D6)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): (Includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-1049

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera tatarica</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
2. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago canadensis</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>
2. <u>Schedonorus arundinaceus</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. <u>Galium boreale</u>	<u>18</u>	<u>N</u>	<u>FAC</u>
4. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6. <u>Carex flava</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
7.			
8.			
9.			
10.			
11.			
12.			

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>2</u>	x 1 = <u>2</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>28</u>	x 3 = <u>84</u>
FACU species <u>110</u>	x 4 = <u>440</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>140</u> (A)	<u>524</u> (B)

Prevalence Index = B/A = 3.75

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is $\leq 3.0^1$
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/19/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1050
 Investigator(s): M. Berg S. Buckenmeyer Section, Township, Range: HANOVER
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONCAVE Slope (%): 0.1
 Subregion (LRR or MLRA): LRR-R Lat: 42.45717264 Long: -79.14740587 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam NWM classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> if yes, optional Wetland Site ID: <u>NL-A592</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oddized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-2"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-1050

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>FRAXINUS AMERICANA</u>	<u>10</u>	<u>Y</u>	<u>EPCL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>CORNUS ALBA</u>	<u>15</u>	<u>Y</u>	<u>FAW</u>
2. <u>CORNUS RALEMOSA</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3. <u>CRATAEGUS MOLLI</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
4. _____			
5. _____			
6. _____			
7. _____			

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>SCIRPUS CYPERINAS</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>
2. <u>JUNCUS EFFUSUS</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>
3. <u>EUTHAMIA GRAMINIFOLIA</u>	<u>20</u>	<u>Y</u>	<u>FAW</u>
4. <u>EUPATORIUM PERFOLIATUM</u>	<u>10</u>	<u>N</u>	<u>FAW</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

Woody Vine Stratum (Plot size: 30')

1. <u>NOT APPLICABLE</u>			
2. _____			
3. _____			
4. _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 67 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 90 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>70</u>	x 1 = <u>70</u>
FACW species <u>45</u>	x 2 = <u>90</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>260</u> (B)

Prevalence Index = B/A = 179

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/19/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1051
 Investigator(s): M. Boring S. Burkenmeyer Section, Township, Range: Harver
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR-R Lat: 42.45829341 Long: -79.14867895 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt Loam NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D6)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-051

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>NOT APPLICABLE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)														
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)														
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (AB)														
4. _____				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> </tbody> </table> <p style="text-align: center;">Prevalence Index = B/A = <u>4</u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>100</u>	x 4 = <u>400</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>400</u> (B)																	
5. _____																		
6. _____																		
7. _____																		
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>NOT APPLICABLE</u>				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Triticum repens</u>	<u>45</u>	<u>Y</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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Pantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
4. <u>Phleum pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. <u>Oxalis purpurea</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>NOT APPLICABLE</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____																		
3. _____																		
4. _____																		
<u>0</u> = Total Cover																		

Remarks: (include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/20/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-652
 Investigator(s): M. BODER & BUCKENMEYER Section, Township, Range: HANOVER
 Landform (hillside, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-R Lat: 42.50711476 Long: -79.15555379 Datum: NAD 83
 Soil Map Unit Name: NIAGARA SILT LOAM NWI classification: PFO1/SS16
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>WL-A593</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oddized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-8"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 652

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>TSUGA CANADENSIS</i>	90	Y	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2. <i>ACER SACCHARINUM</i>	10	N	FACW	Total Number of Dominant Species Across All Strata: 5 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species 0 x 1 = 0 FACW species 30 x 2 = 60 FAC species 5 x 3 = 15 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Column Totals: 135 (A) 475 (B) Prevalence Index = B/A = 3.51
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
100 = Total Cover				
Sapling/Shrub Stratum (Plot size: 15')				
1. <i>ACER SACCHARINUM</i>	10	Y	FACW	
2. <i>FRAXINUS AMERICANA</i>	10	Y	FACU	
3. <i>LIRIODENDRON BENZOIN</i>	10	Y	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
30 = Total Cover				
Herb Stratum (Plot size: 5')				
1. <i>DILYPTERIS INTERMEDIA</i>	5	Y	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 or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
5 = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1. NOT APPLICABLE	_____	_____	_____	Hydrophytic Vegetation Present? Yes X No _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0 = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)

species have adapted to living in wet conditions through morphological adaptations. species had shallow roots and fluted trunks → Eastern Hemlock

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/20/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-653
 Investigator(s): M. Boberg, J. Buckenmeyer Section, Township, Range: HANOVER
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 0.1
 Subregion (LRR or MLRA): LRR-R Lat: 42.50658109 Long: -79.15380229 Datum: NAD 83
 Soil Map Unit Name: Canaanadogua silt loam NW classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B18) <input type="checkbox"/> Dry-Season Water Tables (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquifard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-1053

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>
2. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

70 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3. <u>Lindera benzoin</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>91</u> (A)	<u>350</u> (B)

Prevalence Index = B/A = 3.89

15 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rosa multiflora</u>	<u>2</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>2</u>	<u>Y</u>	<u>FACU</u>
3. <u>Fagus grandifolia</u>	<u>2</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

10 = Total Cover

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 11/20/15
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-654
 Investigator(s): M. Boberg, S. Bullenmeyer Section, Township, Range: Hanover
 Landform (hilllope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR-R Lat: 42.50549219 Long: -79.15257103 Datum: NAD 83
 Soil Map Unit Name: Niagara silt loam NWM classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>NL-AS94</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply): <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required): <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-1254

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus rubra</u>	<u>80</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer rubrum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>
3. <u>Acer saccharum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. <u>Fraxinus americana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

100 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus rubra</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Lindera benzoin</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

20 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Oxalis sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Symphoricarpos vovae-angliae</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Euthamia graminifolia</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
4. <u>Quercus rubra</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
5. <u>Lindera benzoin</u>	<u>4</u>	<u>No</u>	<u>FACU</u>
6. <u>Acer rubrum</u>	<u>2</u>	<u>No</u>	<u>FAC</u>
7. <u>Acer saccharum</u>	<u>2</u>	<u>No</u>	<u>FACU</u>
8. <u>Rosa multiflora</u>	<u>2</u>	<u>No</u>	<u>FACU</u>
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

50 = Total Cover

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

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:**
- ___ 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - ___ 3 - Prevalence Index is ≤3.0¹
 - ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ___ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-659
 Investigator(s): B. Viets N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Concave Slope (%): 1-73%
 Subregion (LRR or MLRA): LRR-R Lat: 42.429161 Long: -79.125850 Datum: NAD 83
 Soil Map Unit Name: Bust. S. It Loam, 3-8% Slopes NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A595</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"-2"</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-659

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NOT APPLICABLE</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) 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.				
6.				
7.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. Swida sericea <u>Cornus alba</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Sambucus nigra</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3.				
4.				
5.				
6.				
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Onoclea sensibilis</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Impatiens capensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. Swida sericea <u>Cornus alba</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Solidago rugosa</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5.				
6.				
7.				
8.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>NOT APPLICABLE</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
<u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/19/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-660
 Investigator(s): B. Vias N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 3-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.42905 Long: -79.125769 Datum: NAD 83
 Soil Map Unit Name: Busti S. 1+ Loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Upland data point for Wetland A595</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-060

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rhamnus citharica</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
2. <u>Fagus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
3. <u>Viburnum lentiginos</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

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: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Erythronium albidum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
2. <u>Pinus serotina</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
3. <u>Pteridium aquilinum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-661
 Investigator(s): B. Virts / N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.399081 Long: -79.103513 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt loam 3 to 8% slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland A596</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Peripheral portion of large off ROW. adjacent wetland complex.</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 661

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Acer rubrum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>30</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Alnus serrulata</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>		Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Fagus flavinus pennsylvanica</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>10</u> = Total Cover					
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Onoclea sensibilis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. <u>Solidago gigantea</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Equisetum palustre</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>50</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>NOT Applicable</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-662
 Investigator(s): Ben Virts, Nicole Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.399033 Long: -79.103600 Datum: NAD 83
 Soil Map Unit Name: Valois gravelly silt loam, 15 to 25% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>upland Data Point for Wetland A596</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____	
Remarks: _____	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 662

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Carpinus carolinia</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)	
2. <u>Acer rubrum</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Celtis occidentalis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>90</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>7</u> x 2 = <u>14</u> FAC species <u>110</u> x 3 = <u>330</u> FACU species <u>17</u> x 4 = <u>68</u> UPL species _____ x 5 = _____ Column Totals: <u>134</u> (A) <u>412</u> (B) Prevalence Index = B/A = <u>3.07</u>	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Celtis occidentalis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Fraxinus pennsylvanica</u>	<u>7</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Carpinus carolinia</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>		
4. <u>Fagus grandifolia</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>29</u> = Total Cover					
Herb Stratum (Plot size: <u>35'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Erythronium rostratum</u>	<u>10</u>	<u>—</u>	<u>NI</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. <u>Dryopteris intermedia</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
3. <u>Dryopteris marginalis</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>30</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Not Applicable</u>	<u>0</u>	_____	_____	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet.)

Location has a mix of vegetation, FAC species tend to grow all over area in both upland and wetlands. Area does not meet Rapid-Test or Fac-Neutral test. Dominance test was calculated @ 80% but do to false positives prevalence test was also done with an index of just above 3, due to these factors and marginal calculations this are 15 not considered hydrophytic.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-663
 Investigator(s): Ben Vits, Nicole Outler Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR-R Lat: 42.407826 Long: -79.114228 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt loam, 0 to 3% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>WL-A597</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>—</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>—</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-663

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rosa multiflora</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Salix bicolor</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3.				
4.				
5.				
6.				
7.				
				<u>15</u> = Total Cover
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Typha latifolia</u>	<u>33</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Euthamia graminifolia</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Impatiens capensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Onoclea sensibilis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
5. <u>Rubus allegheniensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. <u>Juncus effusus</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
7.				
8.				
9.				
10.				
11.				
12.				
				<u>100</u> = Total Cover
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
				<u>∅</u> = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

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:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-663

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 3/2	100%					Silt	
4-8	2.5Y 3/2	90%	5YR 3/4	10%	C	PL/M	Silt Loam	
8-20	2.5Y 3/1	95%	5YR 3/4	5%	C	PL/M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/26/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1064
 Investigator(s): Ben Virts, Nicole Oulch Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.407738 Long: -79.113954 Datum: NAD 83
 Soil Map Unit Name: Fremont Silty loam, 0 to 3% slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Upland data point for wetland A597</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP-664

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33% (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>27</u>	x 2 = <u>54</u>
FAC species <u>7</u>	x 3 = <u>21</u>
FACU species <u>64</u>	x 4 = <u>256</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>100</u> (A)	<u>341</u> (B)

Prevalence Index = B/A = 3.41

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago canadensis</u>	<u>32</u>	<u>Y</u>	<u>FACU</u>
2. <u>Solidago rigida</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
3. <u>Ambrosia artemisiifolia</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>
4. <u>Phalaris arundinacea</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
5. <u>Asclepias syriaca</u>	<u>2</u>	<u>N</u>	<u>UPL</u>
6. <u>Impatiens capensis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
7. <u>Galium boreale</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
8. <u>Dactylis glomerata</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
9. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-668
 Investigator(s): B. V. Vitis, N. Dutcher Section, Township, Range: Town of Villanova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0% - 1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.409058 Long: -79.110855 Datum: NAD 83
 Soil Map Unit Name: FmB - Fremont Silt Loam, 3 to 8% slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland A59B</u>
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 668

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>
2. <u>Ulmus americana</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. <u>Ulmus americana</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
3. <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ulmus americana</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
2. <u>Rubus alleghenensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NOT APPLICABLE</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-669
 Investigator(s): B. Viers, N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0% - 2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.408968 Long: -79.110986 Datum: NAD 83
 Soil Map Unit Name: FmB - Frequent Silt Loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Upland data point for wetland AS98.</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-669

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana <u>Fraxinus</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2. <u>Malus prunifolia</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>
3. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Malus prunifolia</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>
2. Ulmus americana <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3. Multiflora ros <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>
2. <u>Rubus allegheniensis</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>
3. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
4. <u>Prunus serotina</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
5. <u>Fragaria vesca</u>	<u>10</u>	<u>N</u>	<u>UPL</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	<u>0</u>	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43.89 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>50/65</u>	x 2 = <u>130</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>145</u> (A)	<u>485</u> (B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0¹
- ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-670
 Investigator(s): B. Viets, N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.409526 Long: -79.110832 Datum: NAD 83
 Soil Map Unit Name: FmB - Frement silt loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland AS99</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PFO wetland data point.</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 670

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
2. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
3. <u>Malus prunifolia</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera tatarica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
2. <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
3. <u>Ulmus americana</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
4. <u>Malus prunifolia</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus amomum</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
2. <u>Lonicera tatarica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
3. <u>Viburnum dentatum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
4. <u>Solidago rugosa</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
6. <u>Ulmus americana</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NOT Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5 (A/B)

Prevalence Index worksheet:

Total % Cover of: 30 = Total Cover 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:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 671

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Malus prunifolia</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>
2. <u>Acer saccharum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Amelanchier tatarica</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
2. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3. <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2. <u>Lonicera tatarica</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. <u>Acer saccharum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
4. <u>Fragaria vesca</u>	<u>10</u>	<u>N</u>	<u>UPL</u>
5. <u>Rubus allegheniensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>not applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.57% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>120</u>	x 4 = <u>480</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>210</u> (A)	<u>810</u> (B)

Prevalence Index = B/A = 3.86

- Hydrophytic Vegetation Indicators:**
- ___ 1 - Rapid Test for Hydrophytic Vegetation
 - ___ 2 - Dominance Test is >50%
 - ___ 3 - Prevalence Index is ≤3.0¹
 - ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - ___ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP- 671

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-1	10YR 4/3	100?				S	S:L	
1-16	2.5Y 4/2	90?	7.5YR 4/6	10?	C	M	S:L	
16-20	2.5Y 5/4	90?	10YR 5/8	10?	C	M	SL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | |
|---|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-672
 Investigator(s): Ben Viits and Nicole Quinby Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): Concave Slope (%): 5?
 Subregion (LRR or MLRA): LRR-R Lat: 42.406459 Long: -79.119304 Datum: NAD 83
 Soil Map Unit Name: Bust. S. 1t Loam, 3 to 8% slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland A600</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10"</u> (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 672

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) 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. _____				
6. _____				
7. _____				
	<u>0</u>			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>0</u>			
Herb Stratum (Plot size: <u>5'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. <u>Salix discolor</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Fragaria vesca</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
3. <u>Galium boreale</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Equisetum arvense</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
5. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. <u>Viburnum dentatum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7. <u>Solidago rugosa canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
9. <u>Muhlenbergia Schrebert</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
10. _____				
11. _____				
12. _____				
	<u>100</u>			
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
	<u>0</u>			
Remarks: (Include photo numbers here or on a separate sheet.) 				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1273
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion (LRR or MLRA): LRR-R Lat: 42.400287 Long: -79.119349 Datum: NAD 83
 Soil Map Unit Name: Busti Silt Loam, 3 to 8% slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">Upland soil pit of wetland A595.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 673

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

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)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>—</u>	x 1 = <u>—</u>
FACW species <u>—</u>	x 2 = <u>—</u>
FAC species <u>69</u>	x 3 = <u>207</u>
FACU species <u>16</u>	x 4 = <u>64</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>100</u> (A)	<u>346</u> (B)

Prevalence Index = B/A = 3.46

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago rugosa</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>
2. <u>Taraxacum officinale</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
3. <u>Fragaria vesca</u>	<u>15</u>	<u>N</u>	<u>UPL</u>
4. <u>Muhlenbergia schrebert</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
5. <u>Ranunculus acris</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
6. <u>Galium boreale</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
7. <u>Ambrosia artemisiifolia</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
8. <u>Chanaecrista fasciculata</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
9. <u>Dactylis glomerata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

Area meets dominance test, but when considering the non-dominants for prevalence test it is not considered hydrophytic vegetation.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-674

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus alba</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
2. <u>Salix discolor</u>	<u>55</u>	<u>Y</u>	<u>FACW</u>
3.			
4.			
5.			
6.			
7.			

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: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ranaculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
2. <u>Muhlenbergia schrebert</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Euthamia graminifolia</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
4. <u>Galium boreale</u>	<u>6</u>	<u>N</u>	<u>FAC</u>
5. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6. <u>Solidago rugosa</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
7. <u>Viburnum dentatum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-675
 Investigator(s): B. Viets, N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 40%
 Subregion (LRR or MLRA): LRR-R Lat: 42.427949 Long: -79.135108 Datum: NAD 83
 Soil Map Unit Name: BsA - Best silt loam, 0 to 3 percent slope NWI classification: PEMSE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A602</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>wetland is an old and shallow impoundment located within a previously mapped NWI area.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: 	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-675

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>NOT APPLICABLE</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
<u>0</u> = Total Cover					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>125</u> (B)</td> </tr> </tbody> </table> <p style="text-align: center;">Prevalence Index = B/A = <u>1.9</u></p>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>65</u> (A)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>40</u>	x 2 = <u>80</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>65</u> (A)	<u>125</u> (B)																	
<u>10</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																		
1. <u>Salix discolor</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
<u>10</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>															
2. <u>Carex flava</u>	<u>10</u>	<u>N</u>	<u>OBL</u>															
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
4. <u>Galium aparine</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		
11.																		
12.																		
<u>55</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																		
1. <u>NOT APPLICABLE</u>																		
2.																		
3.																		
4.																		
<u>0</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: DP-675

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0"-13"	10yR 2/1	90	2.5yR 4/6	10	C	PL/m	SI	
13"-16"	10yR 2/1	85	2.5y 4/6	5	C	m	SI	
			10yR 5/8	10	C	m		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>N/A</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 676
 Investigator(s): B. V. Arts N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.427954 Long: -79.134963 Datum: NAD 83
 Soil Map Unit Name: BsA - Burt Silt loam, 0 to 3 percent slope NWI classification: upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Upland Data point for wetland AB02. In open field, currently being cultivated for spruce/pine tree farm.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two 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 (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p align="center"><i>No hydrology indicators observed.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-676

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			
<u>∅</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Picea pungens</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2.			
3.			
4.			
5.			
6.			
7.			
<u>20</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago rugosa</u>	<u>15</u>	<u>N</u>	<u>FAC</u>
2. <u>Solidago canadensis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>
3. <u>Fragaria virginiana</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
4. <u>Muhlenbergia schreberi</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>
5. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			
<u>100</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
<u>∅</u> = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>∅</u>	x 1 = <u>∅</u>
FACW species <u>0</u>	x 2 = <u>∅</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>120</u> (A)	<u>410</u> (B)

Prevalence Index = B/A = 3.42

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

Property owner actively using upland field to grow blue spruce (Picea pungens) tree farm.

SOIL

Sampling Point: DP- 676

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6	2.5Y 3/3	100?					S ₁ L	
6-20	2.5Y 4/3	85?	5YR 3/4	5	C	M	SL	
			10YR 4/2	10	D	M	SL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Soils do not meet hydric soil indicators.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP1077
 Investigator(s): Ben Wirtz and Nicole Antcher Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 10
 Subregion (LRR or MLRA): LRR-R Lat: 42.426381 Long: -79.133742 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam, 0 to 3 percent slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A603</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>PEM wetland.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																					
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks: <p align="center"><i>Geomorphic position indicator met because wetland is located in a depression.</i></p>																					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-677

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			
5.			
6.			
7.			

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: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix discolor</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2.			
3.			
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>90</u>	x 2 = <u>180</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>130</u>	(A) <u>300</u> (B)

Prevalence Index = B/A = 2.31

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix discolor</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
2. <u>Phalaris arundinacea</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>
3. <u>Muhlenbergia Schreberi</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
4. <u>Solidago gigantea</u>	<u>15</u>	<u>N</u>	<u>FACW</u>
5. <u>Galium boreale</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>			
2.			
3.			
4.			

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-677

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	2.5Y 3/1	95	7.5YR 4/6	5	C	M	SIL	
4-14	2.5Y 10YR 3/1	85	10YR 4/6	5	C	M	SIL	
			5YR 4/6	10	C	M		
14-20	2.5Y 4/3	40	2.5Y 4/1	30	D	M	SIL	
			10YR 5/8	30	C	M	SIL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 5/23
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-1078
 Investigator(s): B. Virts and N. Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.426420 Long: -79.133754 Datum: NAD 83
 Soil Map Unit Name: Busti silt loam, 0 to 3 percent slopes NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">Upside pit of wetland A603.</p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																				
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<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																					
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 																					
Remarks: <p align="center" style="font-size: 1.2em;">No hydrologic indicators found.</p>																					

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 678

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				<u>0</u> = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
				<u>0</u> = Total Cover
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Muhlenbergia schreberi</u>	<u>65</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Ambrosia artemisiifolia</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. <u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7.				
8.				
9.				
10.				
11.				
12.				
				<u>100</u> = Total Cover
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1.				
2.				
3.				
4.				
				_____ = Total Cover

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>30</u>	x 3 = <u>210</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>330</u> (B)
Prevalence Index = B/A = <u>3.3</u>	

Hydrophytic Vegetation Indicators:
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> 2 - Dominance Test is >50%
<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)

1 Vegetation does not meet hydrologic parameters.

SOIL

Sampling Point: DP- 678

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-14	2.5Y 3/2	100%					S.L	
14-16	2.5Y 3/2	95	7.5YR 4/6	5	C	M	S.L	
16-20	2.5Y 5/4	85	10YR 3/1	5	D	M	SL	
			7.5YR 4/6	10	C	M	SL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

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|--|--|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <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.

<p>Restrictive Layer (if observed):</p> <p>Type: <u>N/A</u></p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
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Remarks: