

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-680
 Investigator(s): B. Viers Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 1-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.431002 Long: -79.133887 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 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 A605</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Perm portion of Wetland A605</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 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 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 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>10"</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- 680

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>Puckera aurea</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Viola spp</u>	<u>15</u>	<u>Yes</u>	<u>—</u>	
3. <u>Juncus effusus</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
4. <u>Galium boreale</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
5. <u>Cornus amomum</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
6. <u>Cornus alba</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
7. <u>Oroclen Sensibilis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
8. <u>Rosa multiflora</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
9. <u>Ranunculus acris</u>	<u>5</u>	<u>No</u>	<u>FAC</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		

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 X No _____

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

SOIL

Sampling Point: DP-630

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"	2.5y 2.5l	90	7.5g 2.4y	10	C	PL/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.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____</p>
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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: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-681
 Investigator(s): B. V. PIS Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-4%
 Subregion (LRR or MLRA): LRR-R Lat: 42.430872 Long: -79.183864 Datum: NAD 83
 Soil Map Unit Name: Bust. S. It 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 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" style="font-size: 1.2em;">Upland Data Point For Wetland A605.</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 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- 681

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>66.7</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>Galium boreale</u>	<u>20</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>Muhlenbergia Schrebert</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Dactylis glomerata</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Ambrosia artemisiifolia</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>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
7. <u>Euthamia graminifolia</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
8. <u>Solidago rugosa</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
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				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 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 _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-681

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"	2.5 Y 7.5 11	100%					SIL	
12"-18"	2.5 Y 7.5 11	95%	10 Y R 4/6	5%	C	M	SIL	
18"-20"	2.5 Y 4/6	85%	2.5 Y 4/6 ³ 10 Y R 4/6	10%	D	M	SIL	
			10 Y R 4/6	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"> ___ 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) 	<ul style="list-style-type: none"> ___ 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) 	<p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> ___ 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)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes ____ No <u>X</u></p>
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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: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-682
 Investigator(s): B. V. 255 Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Top of slope Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.431112 Long: -79.133883 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 <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 A605</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">PSS Data station for wetland A605, PSS</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <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) ___ 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 <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- 682

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. <u>Cornus alba</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Cornus amomum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Rosa multiflora</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
<u>60</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>Oxoclea Sessibilis</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Cornus alba</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Viola spp.</u>	<u>15</u>	<u>Yes</u>	<u>—</u>	
4. <u>Cornus amomum</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
5. <u>Impatiens capensis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
6. <u>Ranunculus acris</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>100</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-682

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'-14"</u>	<u>2.5Y 2.5/1</u>	<u>90%</u>	<u>7.5YR 4/4</u>	<u>10%</u>	<u>C</u>	<u>Alm</u>	<u>SIL</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 (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: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-683
 Investigator(s): B. Viets Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): top of slope Local relief (concave, convex, none): Concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.431973 Long: -79.133913 Datum: NAD 83
 Soil Map Unit Name: 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 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 A606</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PSS Data station for Wetland A606</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input 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 type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): 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>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- 683

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. <u>Coccoloba amomum</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
3.				
4.				
5.				
6.				
<u>45</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>Oxycoccus sensibilis</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Equisetum palustre</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
3. <u>Coccoloba amomum</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
4. <u>Solidago rugosa</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
5. <u>Toxicodendron radicans</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
6. <u>Euthamia graminifolia</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
7.				
8.				
9.				
10.				
11.				
<u>100</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-683

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 2.5/1	80%	7.5Y 2/6	10%	C	PLM	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 Soils ³ :	
___ Histosol (A1)	___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
___ Histic Epipedon (A2)		___ Coast Prairie Redox (A16) (LRR K, L, R)	
___ Black Histic (A3)	___ Thin Dark Surface (S9) (LRR R, MLRA 149B)	___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1) (LRR K, L)	___ Dark Surface (S7) (LRR K, L, M)	
___ Stratified Layers (A5)	___ Loamy Gleyed Matrix (F2)	___ Polyvalue Below Surface (S8) (LRR K, L)	
___ Depleted Below Dark Surface (A11)	___ Depleted Matrix (F3)	___ Thin Dark Surface (S9) (LRR K, L)	
___ Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	___ Iron-Manganese Masses (F12) (LRR K, L, R)	
___ Sandy Mucky Mineral (S1)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19) (MLRA 149B)	
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)	___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
___ Sandy Redox (S5)		___ Red Parent Material (F21)	
___ Stripped Matrix (S6)		___ Very Shallow Dark Surface (TF12)	
___ Dark Surface (S7) (LRR R, MLRA 149B)		___ 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 _____
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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: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-684
 Investigator(s): B. Vints 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: 42.431774 Long: -79.133901 Datum: NAD 83
 Soil Map Unit Name: Bust. 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 _____ 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"><u>Upland Data point for wetland A606</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 _____ No <u>X</u> Depth (inches): Water Table Present? Yes _____ No <u>X</u> Depth (inches): Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>14"</u> (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- 684

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer Saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Fagus grandifolia</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 12.5 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer Saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
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>10</u>	x 2 = <u>20</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>160</u>	x 4 = <u>640</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: _____ (A)	<u>690</u> (B)

Prevalence Index = B/A = 3.83

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Podophyllum peltatum</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Erythronium rostratum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
4. <u>Acer Saccharum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
5. <u>Cornus amomum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
6. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
7. <u>Rubus allegheniensis</u>	<u>5</u>	<u>No</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>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.)

SOIL

Sampling Point: DP- 684

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 3/3	100%					SIL	
4"-14"	10yR 3/3	90%	10yR 4/6	10%	C	M	SIL	
14"-20"	2.5y 4/3	90	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.

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)
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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 _____ No <u>X</u>
Remarks: 	

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-687
 Investigator(s): B.V. 25 Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): terrace/floodplain Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.433959 Long: -79.130884 Datum: NAD 83
 Soil Map Unit Name: Valo's gravelly silt 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 A608</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">Floodplain wetlands associated with the confluence of two perennial streams (streams A531 and A532)</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 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 <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>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- 687

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>Onoclea sensibilis</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Galium boreale</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Carex gynandra</u>	<u>15</u>	<u>NO</u>	<u>OBL</u>
4. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
5. <u>Rosa multiflora</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>)	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: 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.)

SOIL

Sampling Point: DP-687

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"	2.5y2.5/1	85	2.5y2.5/1	10	D	m	SL	
			10y2.4/2	5	D	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)
- 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: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 686
 Investigator(s): B. VINTS Section, Township, Range: Town of Villanova
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.433860 Long: -79.130922 Datum: NAD 83
 Soil Map Unit Name: Yalco's gravelly 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 style="text-align: center; font-size: 1.2em;">Upland Data point for wetland A608.</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- 688

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Tsuga Canadensis</u>	<u>55</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Acer Saccharum</u>	<u>15</u>	<u>No</u>	<u>FACU</u>
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: 28.6% (AB)

Sapling/Shrub Stratum (Plot size: 15')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ostrya Virginiana</u>	<u>20</u>	<u>Yes</u>	<u>FACH</u>
2. <u>Tsuga Canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACH</u>
3. <u>Acer Saccharum</u>	<u>5</u>	<u>No</u>	<u>FACH</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>0</u>	x 2 = <u>0</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>120</u>	x 4 = <u>480</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>170</u> (A)	<u>670</u> (B)

Prevalence Index = B/A = 3.94

Herb Stratum (Plot size: 5')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Erythronium rostratum</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Tsuga Canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACH</u>
3. <u>Acer negundo</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
4. <u>Polystichum acrostichoides</u>	<u>5</u>	<u>No</u>	<u>FACH</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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 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')

1. <u>NOT APPLICABLE</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: DP- 688

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"	2.5Y3/3	100					SI	
10"-20"	2.5Y4/4	100					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"/> 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 X

Remarks:

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-689
 Investigator(s): B. V. ZIS Section, Township, Range: Town of Villanova
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 40%
 Subregion (LRR or MLRA): LRR-R Lat: 42.434515 Long: -79.130629 Datum: NAD 83
 Soil Map Unit Name: 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 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 A609</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Hemlock Depressional wetland</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 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 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>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- 689

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Tsuga Canadensis</u>	<u>40</u>	<u>Yes</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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
2. <u>Fraxinus Pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>45</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ulmus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACW</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>Tsuga Canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
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>Impatiens Capensis</u>	<u>20</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 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>Oxyclea Sensibilis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Ulmus americana</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
4. <u>Arisaema triphyllum</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
5. <u>Osmunda Cinnamomea</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
6. <u>Thelypteris palustris</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
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>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 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.)

Hemlock Dominated PFO

SOIL

Sampling Point: DP- 689

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"	Mucky Peat							

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

Hydric Soil Indicators: <input checked="checked" type="checkbox"/> Histosol (A1) ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) ___ Histic Epipedon (A2) ___ Black Histic (A3) ___ Thin Dark Surface (S9) (LRR R, MLRA 149B) ___ Hydrogen Sulfide (A4) ___ Loamy Mucky Mineral (F1) (LRR K, L) ___ Stratified Layers (A5) ___ Loamy Gleyed Matrix (F2) ___ Depleted Below Dark Surface (A11) ___ Depleted Matrix (F3) ___ Thick Dark Surface (A12) ___ Redox Dark Surface (F6) ___ Sandy Mucky Mineral (S1) ___ Depleted Dark Surface (F7) ___ Sandy Gleyed Matrix (S4) ___ Redox Depressions (F8) ___ Sandy Redox (S5) ___ Stripped Matrix (S6) ___ Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils³: ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B) ___ Coast Prairie Redox (A16) (LRR K, L, R) ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) ___ Dark Surface (S7) (LRR K, L, 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 <input checked="checked" type="checkbox"/> No _____
---	---

Remarks:

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-690
 Investigator(s): B. V. R. S. Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Hillslope/Floodplain Local relief (concave, convex, none): Convex/Flat Slope (%): 0% - 1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.434393 Long: -79.130735 Datum: NAD 83
 Soil Map Unit Name: Chautauque Silt 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.) <p align="center" style="font-size: 1.2em;">Upland Data Station for Wetland A609</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 <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- 690

Stratum	Plot size	Absolute % Cover	Dominant Species?	Indicator Status	Notes
Tree Stratum (Plot size: <u>30'</u>)					
1.	<u>TSuga Canadensis</u>	<u>95</u>	<u>Yes</u>	<u>FACU</u>	
2.					
3.					
4.					
5.					
6.					
7.					
		<u>95</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					
1.	<u>TSuga Canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>Fagus grandifolia</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3.					
4.					
5.					
6.					
7.					
		<u>20</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)					
1.	<u>Fagus grandifolia</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			

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)

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>120</u>	x 4 = <u>480</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>480</u> (B)

Prevalence Index = B/A = 4.80

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- 690

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)	%				
4 inches	of organic leaf/needle l. Her Present							
0"-8"	10YR 3/4	100					SI	
8"-70"	10YR 4/3	95	2.5g/5g	5%	C	m	SI	

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)
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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 _____ 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: 5/24/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-698
 Investigator(s): B. VIZIS Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): Low
 Subregion (LRR or MLRA): LRR-R Lat: 42.434892 Long: -79.131436 Datum: NAD 83
 Soil Map Unit Name: Chautauqua S: 14 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 B610</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Isolated Perm Wetland near / within an open field area.</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <input checked="" type="checkbox"/> 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) <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 ___ 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>12"</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- 691

	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>Oxycoccus sensibilis</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Carex flava</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Impatiens capensis</u>	<u>15</u>	<u>NO</u>	<u>FACW</u>	
4. <u>Euthamia grandifolia</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>	
5. <u>Solidago rugosa</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
6. <u>Juncus effusus</u>	<u>10</u>	<u>NO</u>	<u>OBL</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: 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.)

SOIL

Sampling Point: DP-691

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	95	10YR5/6	5	C	m	SIL	
9'-16"	10YR5/2	80%	10YR4/1	10	D	m	SIL	
			7.5YR4/1	10	C	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

Remarks:

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-692
 Investigator(s): B. VIZIS Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.434810 Long: -79.131451 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt 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>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	If yes, optional Wetland Site ID: <u> </u>
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
Upland Data Point for Wetland A610 - This upland Data point was collected immediately downgradient of the Wetland Boundary to demonstrate a lack of jurisdictional connection to another feature

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 X Depth (inches):
 Water Table Present? Yes No X Depth (inches):
 Saturation Present? Yes No X Depth (inches):
 (includes capillary fringe)
 Wetland Hydrology Present? Yes No X

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 692

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Betula alleghaniensis</u>	<u>30</u>	<u>Yes</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>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71.4%</u> (A/B)
2. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>50</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>15</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Rhus copallina</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>25</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Alnus serrulata</u>	<u>5</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Euthamia grandifolia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Arisaema triphyllum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>15</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				
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.				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 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 _____				
Remarks: (Include photo numbers here or on a separate sheet.) 				

SOIL

Sampling Point: DP-692

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"	2.5Y3/2	100					SIL	
6"-20"	10Y2/1/6	95	2.5Y3/2	5	D	m	SLL	

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

- Hydric Soil Indicators:**
- | | | |
|--|---|---|
| ___ Histosol (A1) | ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| ___ Histic Epipedon (A2) | ___ Thin Dark Surface (S9) (LRR R, MLRA 149B) | ___ Coast Prairie Redox (A16) (LRR K, L, R) |
| ___ Black Histic (A3) | ___ Loamy Mucky Mineral (F1) (LRR K, L) | ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| ___ Hydrogen Sulfide (A4) | ___ Loamy Gleyed Matrix (F2) | ___ Dark Surface (S7) (LRR K, L, M) |
| ___ Stratified Layers (A5) | ___ Depleted Matrix (F3) | ___ Polyvalue Below Surface (S8) (LRR K, L) |
| ___ Depleted Below Dark Surface (A11) | ___ Redox Dark Surface (F6) | ___ Thin Dark Surface (S9) (LRR K, L) |
| ___ Thick Dark Surface (A12) | ___ Depleted Dark Surface (F7) | ___ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ___ Sandy Mucky Mineral (S1) | ___ Redox Depressions (F8) | ___ Piedmont Floodplain Soils (F19) (MLRA 149B) |
| ___ Sandy Gleyed Matrix (S4) | | ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| ___ Sandy Redox (S5) | | ___ Red Parent Material (F21) |
| ___ Stripped Matrix (S6) | | ___ Very Shallow Dark Surface (TF12) |
| ___ Dark Surface (S7) (LRR R, MLRA 149B) | | ___ 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: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-693
 Investigator(s): B. V. R. S. Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Concave/Flat Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.440028 Long: -79.134280 Datum: NAD 83
 Soil Map Unit Name: Chautauqua 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 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 A611</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 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 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 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- 693

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Ulmus Americana</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>25</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Ulmus americana</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by:
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
6. _____	_____	_____	_____	UPL species _____ x 5 = _____
7. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
<u>35</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>Ulmus americana</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Cornus amomum</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	<input type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Fraxinus Pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	<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>20</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 <u>X</u> No _____
<p>Trees present exhibit morphological adaptations - Shallow Root systems and fluting of base</p>				

SOIL

Sampling Point: **DP- 643**

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	85%	7.5yR 3/4	15%	C	m	CL	
9-15"	10yR 5/1	70%	10yR 4/1	20%	D	m	CL	
			7.5yR 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: <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 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)
--	---	--

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 _____
Remarks: 	

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-694
 Investigator(s): B. Virts Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.44039 Long: -79.134337 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt 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>X</u> No <u> </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;">Upland Data point for wetland AB11.</p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:33%;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:33%;"><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)																				
<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> </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-6A4

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</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>Rosa multiflora</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Cornus amomum</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rosa multiflora</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Arisaema triphyllum</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Cornus amomum</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>
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: 4 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>70</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>115</u> (A)	<u>360</u> (B)

Prevalence Index = B/A = 3.13

- 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.)

SOIL

Sampling Point: DP-694

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"	10YR 3/3	100%					SIL	
16"-20"	7.5Y 5/3	90	10YR 6/8	5			SIL	
			7.5YR 3/4	5				

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 <u>X</u>
Remarks:	

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-695
 Investigator(s): B. Virts Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Hill Slope Local relief (concave, convex, none): Concave Slope (%): 0-10%
 Subregion (LRR or MLRA): LRR-R Lat: 42.438854 Long: -79.134610 Datum: NAD 83
 Soil Map Unit Name: Valios greyellly Silt loam, Rolling 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 A613</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Isolated pen in a forest.</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 type="checkbox"/> Surface Water (A1)</td> <td><input checked="" 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 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 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 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)																					
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>X</u> No <u> </u> Depth (inches): <u>10"</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-695

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				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus Pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lonicera tartarica</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3.				
4.				
5.				
6.				
<u>10</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Toxicodendron Radicans</u>	<u>25</u>	<u>Yes</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>10</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Rosa multiflora</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Lonicera tartarica</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
5. <u>Arisaema triphyllum</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
6. <u>Onoclea sensibilis</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
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	
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.)				

SOIL

Sampling Point: DP-695

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 8/2	45	10yR 3/6	5%	C	M	SIL		
5"-16"	2.5y 3/2	85	10yR 4/6	10%	C	M	SIL		
			5yR 3/4	5%	C	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

Remarks:

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-696
 Investigator(s): B. Virts Section, Township, Range: Town of Hamner
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439003 Long: -79.134651 Datum: NAD 83
 Soil Map Unit Name: Various Silty loam, Rolling 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 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">Upland Data point for Wetland A613.</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 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 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- 696

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
2. <u>Acer Saccharum</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Ulmus americana</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
4. <u>Malus Pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>UPL</u>	
5. _____				
6. _____				
7. _____				
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rosa multiflora</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lonicera tatarica</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
<u>35</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Toxicodendron radicans</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Fraxinus Pennsylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Fragaria virginiana</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>40</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: 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- 696

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 3/3	100					S±	
13"-20"	10yr 3/3	95	10yr 4/6	5	C	m	SE	

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"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<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"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<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 <input checked="" type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks:

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-697
 Investigator(s): B. Virts Section, Township, Range: Town of Harmer
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.437581 Long: -79.134121 Datum: NAD 83
 Soil Map Unit Name: Valley gravelly Silt loam, 8 to 15% slopes NWI classification: W1Cnd
 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 A614</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 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 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8"</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- 697

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Ulmus americana</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (AB)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Prevalence Index worksheet:				
<u>Total % Cover of:</u>		<u>Multiply by:</u>		
OBL species _____		x 1 = _____		
FACW species _____		x 2 = _____		
FAC species _____		x 3 = _____		
FACU species _____		x 4 = _____		
UPL species _____		x 5 = _____		
Column Totals: _____	(A)	_____	(B)	
Prevalence Index = B/A = _____				
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.				
Definitions of Vegetation Strata:				
Tree – Woody plants 3 in. (7.6 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 _____				
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- 697

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"	2.5Y 3/2	95	5YR 4/6	5	C	m	SFL	
7"-15"	2.5Y 3/2	85	2.5Y 1/1	10	D	m	SFL	
			7.5YR 5/8	5	C	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

Remarks:

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-698
 Investigator(s): B. V. Zys Section, Township, Range: Town of Harrier
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 3.5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.437581 Long: -79.134121 Datum: NAD 83
 Soil Map Unit Name: Various gravelly silt loam @ 15% slopes NWI classification: Lpland
 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"><u>Wetland Data point for wetland A614.</u></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 _____ 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-698

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer Saccharum</u>	<u>70</u>	<u>Yes</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>16.7</u> (A/B)
2. <u>Malus Pennifolia</u>	<u>10</u>	<u>NO</u>	<u>UPL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>130</u> x 4 = <u>520</u> UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>180</u> (A) <u>685</u> (B) Prevalence Index = B/A = <u>3.8</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Acer Saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Fagus grandifolia</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Acer platanoides</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Fraxinus pennsylvanica</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Acer Saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Fagus grandifolia</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>	
4. <u>Zanthoxylum armatum</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>60</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 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>

SOIL

Sampling Point: DP- 698

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 3/4	100					ST	
8"-20"	2.5Y 5/6	100					SFL	

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)

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: _____	
Depth (inches): _____	

Remarks:

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-699
 Investigator(s): B. V. R. T. S. Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.437031 Long: -79.133622 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 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 A615</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"/> 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 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>X</u> No <u> </u> Depth (inches): <u>6"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 699

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>1</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>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>not applicable</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.					
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		
1. <u>Crotona Sensibilis</u>	<u>65</u>	<u>yes</u>	<u>FACW</u>		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Euthamia graminifolia</u>	<u>10</u>	<u>no</u>	<u>FAC</u>		
3. <u>Carex Flava</u>	<u>5</u>	<u>no</u>	<u>OBL</u>		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
<u>80</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.)					

SOIL

Sampling Point: DP- 699

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"	2.5g/311	90	5y2/6	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:

- 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: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-700
 Investigator(s): B. V. RITS Section, Township, Range: Town of Harver
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Convex Slope (%): 2-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.436951 Long: -79.133425 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 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 A615.</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- 700

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Pinus Serotina</u>	<u>55</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer Saccharum</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

100 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer platanoides</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Fagus grandifolia</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Acer Saccharum</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

50 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fragaria Americana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Acer platanoides</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

20 = 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: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (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>140</u>	x 4 = <u>560</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>170</u> (A)	<u>710</u> (B)

Prevalence Index = B/A = 4.17

- 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- 700

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"-15"	10yr 3/4	100					SI	
15"-20"	7.5yr 2 1/6	100					SIL	

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"> ___ 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) | <ul style="list-style-type: none"> ___ 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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> ___ 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.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/></p>
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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: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-701
 Investigator(s): B. VIETS Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR-R Lat: 42.435955 Long: -79.132330 Datum: NAD 83
 Soil Map Unit Name: Valo's gravelly silt loam, rolling 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 A016</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>organic soil (muck) wetland (PEM).</u></p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ 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) <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 ___ No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>2"</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- 701

	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>55</u>	<u>Yes</u>	<u>FACW</u>	<u>Onoclea sensibilis</u>
2.	<u>40</u>	<u>Yes</u>	<u>FACW</u>	<u>Impatiens capensis</u>
3.	<u>5</u>	<u>No</u>	<u>FACW</u>	<u>Thelypteris palustris</u>
4.				
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>
2.				
3.				
4.				
<u>0</u> = Total Cover				
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>				

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

SOIL

Sampling Point: DP-701

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"-20"	2,542.5/1	100						Muck-organic soil

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 checked="" 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:

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-702
 Investigator(s): B. VIRTIS Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.435847 Long: -79.132347 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 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 A616</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- 702

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Tsuga canadensis</u>	<u>100</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Tsuga canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
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. _____	_____	_____	_____

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 <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>120</u>	x 4 = <u>480</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>480</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:

Tree – Woody plants 3 in. (7.6 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: 5/25/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-703
 Investigator(s): B. Viets Section, Township, Range: Town of Harover
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.437636 Long: -79.132818 Datum: NAD 83
 Soil Map Unit Name: Bust. 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 A615</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">PSS Data Point for wetland A615</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)	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 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? 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- 703

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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus amomum</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Cornus alba</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Rubus allegheniensis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of: 0 = 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. <u>Cornus amomum</u>	<u>55</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Ahus serrulata</u>	<u>15</u>	<u>no</u>	<u>OBL</u>
3. <u>Anaclea Sensibilis</u>	<u>10</u>	<u>no</u>	<u>FACW</u>
4. <u>Solidago rugosa</u>	<u>10</u>	<u>no</u>	<u>FAC</u>
5. <u>Rubus allegheniensis</u>	<u>10</u>	<u>no</u>	<u>FACW</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-703**

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 3/1	95	5Y 2/6	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: <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 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: _____ 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: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-704
 Investigator(s): B. Virts, S. Buckenmeyer Section, Township, Range: Town of Honor
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 40%
 Subregion (LRR or MLRA): LRR-R Lat: 42.447164 Long: -79.102326 Datum: NAD 83
 Soil Map Unit Name: 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 (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 A618</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PFO Data Point for Isolated wetland System</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 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 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 checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</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-704

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer Saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Viburnum americana</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
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>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer Saccharum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>35</u>	x 1 = <u>35</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>—</u>	x 3 = <u>—</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>—</u>	x 5 = <u>—</u>
Column Totals: <u>85</u> (A)	<u>215</u> (B)

Prevalence Index = B/A = 2.53

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Glyceria acutiflora</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Carex flava</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
3. <u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
4. <u>Orachia sensibilis</u>	<u>5</u>	<u>No</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 ≤3.0¹
 - 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.)

Trees are primarily limited to growth on microtopographic highs.

SOIL

Sampling Point: DP-701

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)	%				
2" leaf litter								
0"-2"	10yR 2/1	100%					SIL	
2"-7"	10yR 3/1	85%	10yR 6/2	15%	D	m	SIC	
7"-18"	10yR 6/2	90%	10yR 6/6	10%	C	m	SIC	

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 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: _____ 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: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-705
 Investigator(s): B. Viets S. Buchaninger Section, Township, Range: Town of Hamer
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.447097 Long: -79.102548 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt loam 8 to 15% 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 A618</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PCM Data Station for Wetland A618.</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 type="checkbox"/> Surface Water (A1)</td> <td><input checked="" 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 checked="" 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 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 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 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 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)																				
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<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)																					
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>15"</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-705

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: _____ (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				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = 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)
_____ = 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.)				

SOIL

Sampling Point: DP-705

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)	%				
1 inch	Leaf litter							
0"-2"	mucky peat		Layer					
2"-10"	2.5y2.5/1	80%	10yR 3/2	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: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-706
 Investigator(s): B. Vizes, S. Budwagner Section, Township, Range: Town of Hartner
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.447430 Long: -79.102147 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silty Loam, 8 to 15% 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 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 A618.</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? (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 align="center"><u>No hydrology indicators met.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 706

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Tsuga canadensis</u>	<u>95</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Acer Saccharum</u>	<u>5</u>	<u>NO</u>	<u>FACU</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>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>Tsuga canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Acer Saccharum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Fagus grandifolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</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: 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)

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>120</u>	x 4 = <u>480</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>480</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:

Tree – Woody plants 3 in. (7.6 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.)

No hydrophytic vegetation

SOIL

Sampling Point: DP-706

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"-15"	10y2-4/6	100					SI	
15"-17"	10y2-5/8	100					SI	

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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Auger Refused @ 17"

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-708
 Investigator(s): B. Virts S. Buckenmeyer Section, Township, Range: Town of Harrier
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.451988 Long: -79.103368 Datum: NAD 83
 Soil Map Unit Name: Chenango gravelly 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 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 A619</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">Hillside gw seep discharge wetland PEM</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 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)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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>5"</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- 708

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>Equisetum palustre</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Oxoclea sensibilis</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Carex gynandra</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
4. <u>Mentha x piperita</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
5. <u>Ranunculus acris</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>
6. <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>
7. <u>Parkeria aurea</u>	<u>5</u>	<u>NO</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>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-708

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"	mucky Peat							
4"-8"	2.5Y 3/1	98	10YR 6/4	2	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"/> 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 checked="" 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 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):	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: Chautauqua County Sampling Date: 5/26/19
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 709
 Investigator(s): B. Viets, S. Buckenmeyer Section, Township, Range: Town of Hamner
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.452071 Long: -79.103683 Datum: NAD 83
 Soil Map Unit Name: Chemung gravelly loam 8 to 15% 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 _____ 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"><u>upland data point for wetland A619.</u></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"><u>No hydrology indicators found/observed.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 709

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Malus Pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				<u>5</u> = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rosa multiflora</u>	<u>15</u>	<u>Yes</u>	<u>FAC</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	
1. <u>Euthamia graminifolia</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Solidago canadensis</u>	<u>15</u>	<u>Yes</u>	<u>FACH</u>	
3. <u>Ipomoea carnea</u>	<u>15</u>	<u>Yes</u>	<u>FACH</u>	
4. <u>Ranunculus acris</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5. <u>Galium boreale</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
6. <u>Alliaria petiolata</u>	<u>5</u>	<u>No</u>	<u>FACH</u>	
7. <u>Fragaria Virginiana</u>	<u>5</u>	<u>No</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>				
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (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>80</u>	x 3 = <u>240</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>120</u> (A)	<u>405</u> (B)

Prevalence Index = B/A = 3.37

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-709

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					SI	

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: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

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: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-710
 Investigator(s): B. Virts S. Beckenmeier Section, Township, Range: Rvn of Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-19%
 Subregion (LRR or MLRA): LRR-R Lat: 42.453394 Long: -79.104779 Datum: NAD 83
 Soil Map Unit Name: Collamer S. 1+1 cam, 8 to 15% 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 B620</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">Per wetland forms from the outfall from an agricultural pond.</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) <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) <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) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ___ No ___ Depth (inches): Water Table Present? Yes <u>X</u> No ___ Depth (inches): <u>8"</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- 710

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>Onoclea sensibilis</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Equisetum palustre</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Impatiens capensis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
4. <u>Typha latifolia</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
5. <u>Carex gynandra</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
6. <u>Solidago rugosa</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>
7. <u>Rubus allegheniensis</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>
8. <u>Ranunculus acris</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>
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: 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

SOIL

Sampling Point: DP-710

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"	2.5y3/1	90	10YR5/8	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:

- 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: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-71
 Investigator(s): B. Virts, S. Buckenmeyer Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2-4%
 Subregion (LRR or MLRA): LRR-R Lat: 42.453421 Long: -79.104889 Datum: NAD 83
 Soil Map Unit Name: Cullamer 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 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 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" style="font-size: 1.2em;">Upland Data Point for wetland A620.</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- 711

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>Euthamia graminifolia</u>	<u>55</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Galium boreale</u>	<u>15</u>	<u>No</u>	<u>FAC</u>
3. <u>Equisetum palustre</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
4. <u>Trifolium repens</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
5. <u>Ranunculus acris</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
6. <u>Rosa multiflora</u>	<u>5</u>	<u>No</u>	<u>FAC</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: 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-711

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"	10YR4/3	98	10YR5/6	2%	C	m	SI	
15"-20"	10YR6/6	100					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 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: 5/26/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-714
 Investigator(s): B. Virts, S. Beckenmeyer Section, Township, Range: Town of Honer
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.457291 Long: -79.105223 Datum: NAD 83
 Soil Map Unit Name: Fremont 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>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 A621</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) <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) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>X</u> 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 <u>X</u> No ___ Depth (inches): <u>8"</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- 714

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>Oenoclea sensibilis</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Mentha X piperita</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>
3. <u>Juncus effusus</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
4. <u>Euthamia graminifolia</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>
5. <u>Eupatorium perfoliatum</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
6. <u>Carex flava</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>
7. <u>Cottoneaster amomum</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>
8. <u>Lythrum Salicaria</u>	<u>5</u>	<u>NO</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>			
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.)

SOIL

Sampling Point: DP- 714

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" - 2"	2.5Y3/2	100%				SIL	
2" - 8"	2.5Y3/1	85%	10YR 5/8	15%	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: 6/20/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-715
 Investigator(s): B. Virts S. Bickemeyer Section, Township, Range: Town of Hamner
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3.5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.457223 Long: -79.105082 Datum: NAD 83
 Soil Map Unit Name: Fremont S; lt 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>X</u> No _____ 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" style="font-size: 1.2em;">Upland Data point for wetland A621</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 _____ 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- 715

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>Muhlenbergia Schreber</u> <u>65</u> <u>Yes</u> <u>FAC</u>			
2. <u>Euthamia graminifolia</u> <u>15</u> <u>No</u> <u>FAC</u>			
3. <u>Solidago canadensis</u> <u>10</u> <u>No</u> <u>FACU</u>			
4. <u>Thymus affinis</u> <u>5</u> <u>No</u> <u>OBL</u>			
5. <u>Ratunculus acris</u> <u>5</u> <u>No</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>			
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- 715

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"-13"	10YR 3/3	2.5 1.5	10YR 5/8	5%	C	m	SIL	Rock Auger Refused 21305

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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-716
 Investigator(s): B. Vrees, N. Dutcher Section, Township, Range: Town of Hamer
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439011 Long: -79.132622 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silty 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 A617</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 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 type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9"</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- 716

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>Rosa multiflora</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Cornus alba</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.			
5.			
6.			
7.			

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Onoclea sensibilis</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>
2. <u>Solidago rugosa</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
3. <u>Carex gyracifera</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
4. <u>Cornus alba</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>Galium boreale</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: 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: 0 = 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 No

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

SOIL

Sampling Point: DP-716

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	10yr 5/8	5	C	m	CL	
5'-20"	10yr 5/1	90	10yr 5/8	10	C	m	CL	mixed w/ gravel

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 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: _____ 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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-717
 Investigator(s): B. Virts, N. Dutcher Section, Township, Range: Town of Harover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439287 Long: -79.132492 Datum: NAD 83
 Soil Map Unit Name: 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 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 A617</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-717**

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Prunus serotina</i>	80	Y	FACU	
2.				
3.				
4.				
5.				
6.				
7.				
				<u>80</u> = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Prunus serotina</i>	30	Y	FACU	
2. <i>Fagus grandifolia</i>	10	Y	FACU	
3.				
4.				
5.				
6.				
7.				
				<u>40</u> = Total Cover
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Fraxinus americana</i>	40	Y	FAC	
2. <i>Fragaria virginiana</i>	10	N	OPL	
3. <i>Acer saccharum</i>	15	Y	FACU	
4. <i>Tsuga canadensis</i>	5	N	FACU	
5.				
6.				
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. <i>Not Applicable</i>				
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: 5 (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>—</u>	x 1 = <u>—</u>
FACW species <u>—</u>	x 2 = <u>—</u>
FAC species <u>—</u>	x 3 = <u>—</u>
FACU species <u>180</u>	x 4 = <u>720</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>190</u> (A)	<u>770</u> (B)

Prevalence Index = B/A = 4.05

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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-718
 Investigator(s): B. Vizz, N. Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439941 Long: -79.132081 Datum: NAD 83
 Soil Map Unit Name: Bust. Silt 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>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 A622</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> 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) <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) ___ 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 <u>X</u> No ___ Depth (inches): <u>11"</u> Saturation Present? Yes <u>X</u> No ___ Depth (inches): <u>9"</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-718

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ulmus americana</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Populus tremuloides</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
	<u>55</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ulmus americana</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Cornus amomum</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>60</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Onoclea sensibilis</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Cornus amomum</u>	<u>15</u>	<u>Y</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>				
2. _____				
3. _____				
4. _____				
	<u>0</u>	= Total Cover		

Dominance Test worksheet:

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

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

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

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-718

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 3/1	95	5YR 4/6	5	C	m	CL	
4"-13"	10YR 5/4	95	10YR 5/4	5	C	m	CL	
13"+	Rock Refused							

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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-721
 Investigator(s): B. Virts, P. Dutcher Section, Township, Range: Town of Hamaker
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439575 Long: -79.130044 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 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 A624</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Per Data point + for wetland A624.</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 type="checkbox"/> Surface Water (A1)</td> <td><input checked="" 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 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 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 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)																					
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:																					

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 721

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>)	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>Ranunculus acris</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 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>Onoclea sensibilis</u>	<u>38</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Cornus amomum</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
5. <u>Carex flava</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
6. <u>Alnus serrulata</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
7. <u>Scirpus cuspidatus</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	
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"/>

SOIL

Sampling Point: DP-721

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	7.5YR 4/6	5	C	m	CL	
8"-17"	2.5Y 5/3	80	2.5Y 5/6	10	C	m	SCL	
			10YR 4/1	10	D	m		
17"-20"	10YR 5/6	100					SCL	

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: Chautauqua County Sampling Date: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 722
 Investigator(s): B. Viets, N. Dutcher Section, Township, Range: Town of Henover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439790 Long: -79.130049 Datum: NAD 83
 Soil Map Unit Name: Bwti 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 A624</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">PSS Data Point for Wetland A624</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 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)	<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 checked="" 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:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 722

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>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.				
<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	
1. <u>Cornus amomum</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Ulmus Americana</u>	<u>15</u>	<u>NO</u>	<u>FACW</u>	
3. <u>Populus tremuloides</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
5.				
6.				
7.				
<u>65</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Equisetum palustre</u>	<u>40</u>	<u>Yes</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>Oxalis sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Cornus amomum</u>	<u>15</u>	<u>NO</u>	<u>FACW</u>	
4. <u>Impatiens capensis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
5. <u>Euthamia gaumifolia</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
6. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
7. <u>Ranunculus acris</u>	<u>5</u>	<u>NO</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				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

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

SOIL

Sampling Point: DP-722

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 3/1	95	7.5yR 4/1b	5	C	m	CL	
4"-12"	10yR 4/1	90	5yR 3/1	5	C	m	CL	
			7.5yR 5/6	5	C	m		
12"-20"	2.5y 5/1	60	10yR 5/6	25	C	m	CL	Small gravel component
			2.5y 3/1	15	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

Remarks:

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-723
 Investigator(s): B. Viass, N. Dutcher Section, Township, Range: Town of Hamer
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 25%
 Subregion (LRR or MLRA): LRR-R Lat: 42.439724 Long: -79.129271 Datum: NAD 83
 Soil Map Unit Name: Bhs2: 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"><u>Upland Data Point for wetland A624.</u></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 <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 align="center"><u>No wetland hydrology indicators observed.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 723

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>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>70</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Prunus serotina</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>45</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>
2. <u>Fraxinus americana</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
3. <u>Prunus serotina</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
<u>55</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: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (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 $\leq 3.0^1$
 - 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

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

No hydrophytic vegetation ~ all species are FACU.

SOIL

Sampling Point: DP-723

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 4/4	100%					SF	
8"+	Auger Refused							

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:

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-724
 Investigator(s): B. Viatis, N. Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 40%
 Subregion (LRR or MLRA): LRR-R Lat: 42.440930 Long: -79.114057 Datum: NAD 83
 Soil Map Unit Name: Bust: 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 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 0625</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>PEM wetland in depression.</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 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 checked="" 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:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 724

<u>Tree Stratum</u> (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
<u>Sapling/Shrub Stratum</u> (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
<u>Herb Stratum</u> (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Onoclea sensibilis</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Carex flava</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
3. <u>Glyceria acutiflora</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				<u>65</u> = Total Cover
<u>Woody Vine Stratum</u> (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: _____ (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.)

SOIL

Sampling Point: DP- 724

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"	10Gp2/1	100%					SCL	Organics within profile
2'-12"	2.5/6/1	85%	2.5/6/6	15%			C	
13' 4'	Auger-Refused within Clay confining layer							

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): 2"

Hydric Soil Present? Yes X No _____

Remarks:

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-725
 Investigator(s): B. Vires, N. Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): H:11 slope Local relief (concave, convex, none): Convex Slope (%): 2-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.440859 Long: -79.113760 Datum: NAD 83
 Soil Map Unit Name: Busti S:lt 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 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" style="font-size: 1.2em;">Upland Data point for Wetland AG25</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 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;">No hydrology indicators met/observed.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 725

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>TSuga Canadensis</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

95 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
2. <u>TSuga Canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
3. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

30 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotica</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
2. <u>Rubus pensilvanicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
3. <u>Fagus grandifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
4. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

30 = 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: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (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 $\leq 3.0^1$
 - 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

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

Vegetation is not hydrophytic, all species are FACU.

SOIL

Sampling Point: DP-725

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"	10yR 2/1	100					SIL	
2"-7"	5yR 4/6	100					SIL	
7"-14"	10yR 4/6	100					SCL	
14"-18"	10yR 4/6	100					SCL	mixed with gravel
Rock Refusal @ 18"								

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:

Rock refusal layer for auger starting at 18" but does not act 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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-726
 Investigator(s): B. V. O'S, N. Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 20%
 Subregion (LRR or MLRA): LRR-R Lat: 42.440513 Long: -79.111659 Datum: NAD 83
 Soil Map Unit Name: CkB-Chautauqua silt loam, 3-8% 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"/>	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 A626</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">Isolated PEM in a forest.</p>	

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 checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<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:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input 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? 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:	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 726

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>Carex gynandra</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>
2. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
3. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
5. <u>Glyceria acutiflora</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			
<u>60</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: _____ (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.)

Vegetation is hydric, meeting both the Fac-Neutral test and Rapid test.

SOIL

Sampling Point: **DP- 726**

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"	10yR2/1	95%	5yR2/1b	5%	C	m	SCL	
2"-11"	7.5y6/3	60%	10yR5/8	40%	C	m	SCL	
11"-16"	7.5y6/3	60%	10yR5/8	40%	C	m	SCL	with gravel

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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP- 72.7
 Investigator(s): B. Viets, N. Dutcher Section, Township, Range: Town of Heuveler
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-10%
 Subregion (LRR or MLRA): LRR-R Lat: 42.440486 Long: -79.111822 Datum: NAD 83
 Soil Map Unit Name: Ck13 - Chautauqua Silty 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> </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"><u>Upland Data Point for Wetland A626.</u></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 <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"><u>No hydrology indicators found.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-727

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>
2. <u>Acer saccharum</u>	<u>40</u>	<u>Y</u>	<u>FACU</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>Prunus serotina</u>	<u>S</u>	<u>Y</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>S</u> = Total Cover			
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer pensylvanicum</u>	<u>S</u>	<u>Y</u>	<u>FACU</u>
2. <u>Rubus pensilvanicus</u>	<u>S</u>	<u>Y</u>	<u>FACU</u>
3. <u>Acer saccharum</u>	<u>S</u>	<u>Y</u>	<u>FACU</u>
4. <u>Prunus serotina</u>	<u>S</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>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: 0 (A)

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

No hydro vegetation observed, all species have an indicator of FACU.

SOIL

Sampling Point: DP-727

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"	10yR3/2	100					SIL	
2"-9"	10yR4/6	100					SIL	
9"-20"	10yR5/6	100					SCL	

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: 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: 5/27/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-728
 Investigator(s): B. VIZTS, N. Dwyer Section, Township, Range: Town of Honour
 Landform (hillslope, terrace, etc.): Top of slope Local relief (concave, convex, none): Concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.441409 Long: -79.110929 Datum: NAD 83
 Soil Map Unit Name: Valais gravelly s. lt loam, Rolling 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 #627</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>PFO wetland data point.</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"/> 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 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)	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 checked="" 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>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- 728

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Betula alleghaniensis</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

60 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Tsuga canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

30 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Osmunda cinnamomea</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Oxyclea sensibilis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

80 = 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: 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 $\leq 3.0^1$
 - 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 X No _____

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

Trees are rooted on microtopographic highs.

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-729
 Investigator(s): B. Viets, N. Dutcher Section, Township, Range: Town of Hemlock
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.441247 Long: -79.111394 Datum: NAD 83
 Soil Map Unit Name: Various gravelly silt loam, Rolling 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"><u>Upland Data Point for Wetland A627</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 style="width:33%;"><u> </u> Surface Water (A1)</td> <td style="width:33%;"><u> </u> Water-Stained Leaves (B9)</td> </tr> <tr> <td><u> </u> High Water Table (A2)</td> <td><u> </u> Aquatic Fauna (B13)</td> </tr> <tr> <td><u> </u> Saturation (A3)</td> <td><u> </u> Marl Deposits (B15)</td> </tr> <tr> <td><u> </u> Water Marks (B1)</td> <td><u> </u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><u> </u> Sediment Deposits (B2)</td> <td><u> </u> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><u> </u> Drift Deposits (B3)</td> <td><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><u> </u> Algal Mat or Crust (B4)</td> <td><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><u> </u> Iron Deposits (B5)</td> <td><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td><u> </u> Inundation Visible on Aerial Imagery (B7)</td> <td><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td><u> </u> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<u> </u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> 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) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
<u> </u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)																				
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)																				
<u> </u> 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)																					
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? (includes capillary fringe) Yes <u> </u> No <u>X</u> Depth (inches):	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"><u>No hydro indicators observed.</u></p>																					

VEGETATION – Use scientific names of plants.

Sampling Point: DP-729

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>FACW</u>	
2. <u>Acer Saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<u>80</u> = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>Yes</u>	<u>FACW</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>Parathelypteris novboracensis</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Fagus grandifolia</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Acer Saccharum</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
4. <u>Acer platanoides</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	
5. <u>Rubus allegheniensis</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>40</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: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (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>15</u>	x 3 = <u>45</u>
FACU species <u>120</u>	x 4 = <u>480</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>140</u> (A)	<u>550</u> (B)

Prevalence Index = B/A = 3.93

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- 729

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"-20"	7.5 yr 4/11	100					SIL	
2"-20"	10 yr 5/6	100					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 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: 6/6/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-730
 Investigator(s): B. V. Vass / N. Dutcher Section, Township, Range: Town of Hamaker
 Landform (hillslope, terrace, etc.): Depression/Drainage Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.143905 Long: -79.128139 Datum: NAD 83
 Soil Map Unit Name: Chautauqua Silt 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>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 A628</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Linear PEM wetland within a Pasture field</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 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> </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><u>Geomorphic positioning used because area is in a low/linear area between two upland fields.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 730

	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: _____ (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		
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. _____				
	ϕ	= 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 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) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex lupulina</u>	<u>55</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Carex flava</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>Eupatorium perfoliatum</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>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. _____				
	ϕ	= Total Cover		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.) <u>Vegetation meets both Rapid Test and Fac reversal test.</u>				

SOIL

Sampling Point: DP- 730

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"	10y2z1	95	2.5y6/1	5	D	M	SIL	
9"-14"	2.5y6/1	100					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): Type: <u>N/A</u> Depth (Inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/6/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-731
 Investigator(s): Ben Vints and Nicole Dutcher Section, Township, Range: Town of Hamner
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0-27
 Subregion (LRR or MLRA): LRR-R Lat: 42.443984 Long: -79.128262 Datum: NAD 83
 Soil Map Unit Name: 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 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 to wetland A628.</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 align="center"><i>No hydrology indicators observed, none to be expected in open field that is flat.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-731

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: <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: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>44</u> x 3 = <u>132</u> FACU species <u>49</u> x 4 = <u>196</u> UPL species <u>7</u> x 5 = <u>35</u> Column Totals: <u>100</u> (A) <u>363</u> (B) Prevalence Index = B/A = <u>3.63</u>
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
\emptyset = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Ranunculus acris</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
2. <u>Dactylis glomerata</u>	<u>34</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Daucus carota</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
5. <u>Trifolium medium</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
6. <u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Arctium minus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8. <u>Muhlenbergia Schreberia</u>	<u>34</u>	<u>Y</u>	<u>FAC</u>	
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.				
\emptyset = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-731

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 3/3	100?						SIL	
12-14	2.5Y 3/2	95	10YR 3/6	5	C	M		SIL	
14-20	2.5Y 4/4	85	2.5Y 5/1	5	D	M		SIL	
			5YR 3/3	10	C	M			

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: 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: 6/16/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-732
 Investigator(s): Ben Virts and Nick Outler Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 4-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.449316 Long: -79.132284 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loams, 3-8% 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 A629</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Large PFO wetland along transitional edge between field and upland forest.</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 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 <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: <p align="center"><i>Water stained leaves were found throughout the wetland. Drainage patterns run through the center of the wetland. Evidence of Algal mat/crust in eastern edge of wetland not where data point was taken.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-732

Tree Stratum (Plot size: <u>15'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>
2. <u>Acer rubrum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

80 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ostrya virginiana</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
2. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
3. <u>Acer rubrum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
4. <u>Lonicera japonica</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

72 = Total Cover

Herb Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Onoclea sensibilis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2. <u>Toxicodendron radicans</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
3. <u>Symphoricarpos prenanthoides</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
4. <u>Equisetum palustre</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
5. <u>Poclophyllum pelatum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

54 = Total Cover

Woody Vine Stratum (Plot size: <u>15'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: 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.)

Tree vegetation plot was adjusted to accommodate size of wetland

SOIL

Sampling Point: DP- 732

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	0.5Y 2.5/1	95	7.5YR 2/4	5	C	M	SIL	
7-15	10YR 4/1	90	7.5YR 4/6	10	C	M	SIL	
15-20	2.5Y 4/2	85	10YR 4/6	15	C	M	CL	

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"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<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"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<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 X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/6/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-733
 Investigator(s): Ben Virts and Nicole Outler Section, Township, Range: Town of Harlow
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion (LRR or MLRA): LRR-R Lat: 42.449514 Long: -79.132352 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam, 3-8% 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 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" style="font-size: 1.2em;">Upland data point for wetlands A629 and A630.</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: <p align="center" style="font-size: 1.2em;">No hydrology indicators found. 12</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 733

Tree Stratum (Plot size: <u>15'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharum</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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
2. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Y</u>	<u>FACW</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>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>25</u> = Total Cover				
Herb Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Toxicodendron radicans</u>	<u>60</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>Rubus pensilvanicus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
3. <u>Acer saccharum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Toxicodendron radicans</u>	<u>5</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. _____				
3. _____				
4. _____				
<u>5</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation is borderline but meets hydrophytic requirements

SOIL

Sampling Point: DP-733

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	10YR 3/2	100					Si	
6-20	2.5Y 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:

Not a hydric soil.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/6/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-734
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 1-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.4497411 Long: -79.132479 Datum: NAD 83
 Soil Map Unit Name: Fremont 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 A630</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; margin: 0;"><i>Per wetland along edge of upland and open field. Slight topographic depression before open area turns into upland field</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 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 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 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: 1.2em; margin: 0;"><i>Water stained leaves found throughout the wetland</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-734

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>10 x 20</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)
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
<u>∅</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 x 20</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>Salix purpurea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5 x 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. <u>Juncus effusus</u>	<u>27</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. <u>Ranunculus acris</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Symphytichum puriceum</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
5. <u>Solidago rugosa</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. <u>Carex flava</u>	<u>28</u>	<u>Y</u>	<u>OBL</u>	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10 x 20</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>∅</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <p style="font-size: 1.2em; margin-top: 10px;">Vegetation plot sizes were adjusted to fit within the boundaries of the wetland.</p>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

SOIL

Sampling Point: DP-734

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 4/2	85	10YR 4/6	10	C	m	SIL	
			5YR 4/6	5	C	PL		
6-12"	2.5YR 4/6	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:

- 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:

Soil is hydric and has redox concentrations in the top layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/7/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-738
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.4545949 Long: -79.1425368 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 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>633</u> If yes, optional Wetland Site ID: <u>Wetland A623</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PSS wetland in low spot of scrub/shrub field.</u></p>	

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 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)		<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 checked="" type="checkbox"/> Microtopographic Relief (D4)</td> </tr> <tr> <td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</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 checked="" 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)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
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<input type="checkbox"/> Shallow Aquitard (D3)																																
<input checked="" type="checkbox"/> Microtopographic Relief (D4)																																
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)																																
<p>Field Observations:</p> 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>X</u> No <u> </u>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks: <p align="center"><u>Microtopographic relief due to small hummocks throughout. Drainage patterns throughout, low channels that carry water east to west of wetland.</u></p>																																

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 738

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 racemosa</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Cornus amomum</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Phalaris arundinacea</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Cornus amomum</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Solidago rugosa</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Fragaria virginiana</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
5. <u>Symphytichum prenanthoides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Ranunculus acris</u>	<u>3</u>	<u>N</u>	<u>FAC</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				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-738

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	2.5Y 3/2	100					Si	
6-16	10YR 3/2	85	7.5YR 4/6	10	C	M	SiL	
			2.5Y 5/4	5	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"/> Histic Epipedon (A2) | <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"/> Black Histic (A3) | <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"/> Hydrogen Sulfide (A4) | <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"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L, M) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | <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: <u>N/A</u> Depth (Inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 Distinct concentrations in the matrix found between 6-16 inches of soil profile of a dark matrix.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/7/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-739
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 3-10?
 Subregion (LRR or MLRA): LRR-R Lat: 42.4543687 Long: -79.1426433 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt Loam, 0-3% 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, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Upland data point for wetland A633.</u></p>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></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 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 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>Field Observations:</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)	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 align="center"><u>No wetland hydrology indicators observed.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 739

Tree Stratum (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus americana</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<u>30</u> = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus racemosa</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Rosa multiflora</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Cornus amomum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<u>50</u> = Total Cover
Herb Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Solidago canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Cornus racemosa</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Toxicodendron radicans</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Rubus pensilvanicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Rosa multiflora</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
6. <u>Fragaria virginiana</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
7. <u>Ranunculus acris</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'R</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.)				

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33% (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 X

SOIL

Sampling Point: DP-739

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 3/3	100					SiL	
4-14	10YR 3/2	100					SiL	
14-20	2.5Y 5/6	85	2.5Y 3/2	10	D	M	SL	
			10YR 4/6	5	C	M		

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)
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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 _____ 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: 6/7/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-740
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 16-15%
 Subregion (LRR or MLRA): LRR-R Lat: 42.455011 Long: -79.145378 Datum: NAD 83
 Soil Map Unit Name: Fremont S: It 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 634</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">PFD portion of PFO/PEM wetland A634.</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): 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>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: DP- 740

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus pennsylvanica</u>	<u>80</u>	<u>Y</u>	<u>FACW</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>Fagus grandifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
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' R</u>)				
1. <u>Rosa multiflora</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Amelanchier canadensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
<u>100</u> = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Impatiens capensis</u>	<u>60</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>Persicaria virginiana</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30' R</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.)

SOIL

Sampling Point: DP-740

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	2.5Y 3/1	90	7.5YR 3/4	10	C	M	SiL	
10-18	2.5Y 4/3	80	2.5Y 3/1	15	D	M	CL	
			10YR 5/6	5	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: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Hydric soil because it has redox in the matrix of a dark soil.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/7/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-741
 Investigator(s): Ben Virts and Nicole Oehler Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 3-10%
 Subregion (LRR or MLRA): LRR-R Lat: 42.454890 Long: -79.145204 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 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 sample point for PEM/PFO wetland A634. Located on slight hillslope with mature secondary growth forest with little understory growth.</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: <i>hydrology, No hydric indicators observed.</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 741

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Frangula alnus</u>	<u>55</u>	<u>Y</u>	<u>FAC</u>
2. <u>Malus prunifolia</u>	<u>15</u>	<u>N</u>	<u>UPL</u>
3. <u>Fraxinus americana</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Frangula alnus</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus americana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2. <u>Panicum virginiana</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Rubus pensilvanicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4. <u>Fragaria virginiana</u>	<u>5</u>	<u>N</u>	<u>UPL</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

100 = Total Cover

10 = Total Cover

40 = Total Cover

∅ = 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 X No _____

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

SOIL

Sampling Point: DP-741

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 3/4	100%					Sil	
2-17	10YR 4/6	100%					Sil	
17-20	10YR 4/4	90	10YR 4/2	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 (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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/7/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-742
 Investigator(s): Ben Vits and Nicole Oulter Section, Township, Range: Town of Harlow
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 0.3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.455167 Long: -79.145220 Datum: NAD 83
 Soil Map Unit Name: Fremont Silty 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 A634</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>Part of portion of PEM/PFO wetland A634. PEM portion in depression and snowmobile trail.</u></p>	

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 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"</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-742

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5' x 20'</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)
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	\emptyset	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>5' x 15'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	\emptyset	= Total Cover		
Herb Stratum (Plot size: <u>5' x 5'</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 $\leq 3.0^1$ <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>Glyceria melicaria</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Impatiens capensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Symphoricarpon prenanthoides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Muhlenbergia schreberi</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. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>85</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>5' x 20'</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 _____				
Remarks: (Include photo numbers here or on a separate sheet.) <p style="font-size: 1.2em;">Vegetation plot sizes were adjusted to fit within the boundary of the wetland.</p>				

SOIL

Sampling Point: DP-742

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 2.5/1	100%					SL	
6-14	2.5Y 4/2	50%	2.5Y 8/1	40	D	M	CL	
			7.5YR 4/6	10	C	M		

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

- Hydric Soil Indicators:**
- 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: _____

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: 6/7/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-743
 Investigator(s): Bervins and Nicole Dutner Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): 2 linear concave Slope (%): 5-10%
 Subregion (LRR or MLRA): LRR-R Lat: 42.456362 Long: -79.146249 Datum: NAD 83
 Soil Map Unit Name: Ferment 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 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 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-top: 10px;">Upland data point in the middle of snowmobile trail. 50ft. section of trail is a low spot where wetland vegetation and hydric soils are found but no evidence of hydrology.</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; margin-top: 10px;">No hydrology indicators observed.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-743

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Fagus grandifolia</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
3. <u>Acer saccharum</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: 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: 15' R)

Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus racemosa</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
2. <u>Cornus amomum</u>	<u>30</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. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>70</u>	x 1 = <u>70</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>55</u>	x 4 = <u>220</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>185</u> (A)	<u>440</u> (B)

Prevalence Index = B/A = 2.38

Herb Stratum (Plot size: 5' R)

Herb Stratum (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
2. <u>Scirpus cyperinus</u>	<u>45</u>	<u>Y</u>	<u>OBL</u>
3. <u>Muhlenbergia frondosa</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
4. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. <u>Scirpus atrovirens</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>
6. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
7. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
8. _____	<u>25</u>	<u>Y</u>	_____
9. <u>Fragaria virginiana</u>	<u>5</u>	<u>N</u>	<u>OPL</u>
10. <u>Symphotrichum prenanthoides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
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: 30' R)

1. <u>Not Applicable</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

0 = Total Cover

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: **DP- 743**

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)	%				
0-3	2.5Y 3/1	90	2.5Y 5/6	5	C	M	SIL	
			7.5YR 4/6	5	C	M		
3-15	2.5Y 3/1	90 ⁶⁵	2.5Y 5/6	25	C	M	SIL	
			7.5Y 5/8	10	C	M		
15-20	2.5Y 5/2	80	2.5Y 3/1	15	D	M	SIL	
			7.5YR 4/6	5	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"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<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"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<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: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Hydric soils found in low spot of snowmobile trail, surrounded by upland area.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 4/8/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-748
 Investigator(s): Ben Virks and Nicole Outler Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 3-8%
 Subregion (LRR or MLRA): LRR-R Lat: 42.43854 Long: -79.120869 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 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>A-035 B</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PEM wetland in cow/bull pen, along both sides of stream A537.</u></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"/> 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)	<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? 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:
In a depression between two upland/hills - geomorphic position.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-748

Tree Stratum (Plot size: <u>30' R</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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.67? (A/B)

Sapling/Shrub Stratum (Plot size: 15' R)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACW</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: 5' R)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
2. <u>Martha aquatica</u>	<u>15</u>	<u>N</u>	<u>OBL</u>
3. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
4. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
5. <u>Impatiens capensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
6. <u>Acorus calamus</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>
7. <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
8. <u>Lysimachia nummularia</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
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' R)

	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.)

PEM wetland, no trees noted in wetland.

SOIL

Sampling Point: DP-748

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 2.5/1	95	5YR 3/4	5	C	M/PL	S ¹ L	
10-	2.5Y 4/1	90	7.5YR 4/6	10	C	M	S ¹ L	

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):		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: Chautauqua County Sampling Date: 6/7/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-749
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.438175 Long: -79.121298 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 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" style="font-size: 1.2em;">Upland data point to wetland A635B. Data point along edge of hillslope in a cow/bull pen.</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"/> 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: <p align="center" style="font-size: 1.2em;">No hydrology indicators observed, none to be expected due to topography and location on hillslope.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP- 749

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: <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>33,33</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>15'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>Plantago lanceolata</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Trifolium repens</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Carex festucacea</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	
6. <u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7. <u>Daucus carota</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
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.				
<u>∅</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <u>X</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)
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 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: Chautauqua County Sampling Date: 6/8/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-751
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Harver
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 42.444661 Long: -79.122147 Datum: NAD 83
 Soil Map Unit Name: Vetol's gravelly S. H. loam, coll. ng 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 A836</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; margin-top: 10px;">PEM wetland in flood plain of stream AS12. PEM wetland in forest with no trees rooted in wetland.</p>	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; margin-top: 5px;"> <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)		Secondary Indicators (minimum of two required) <table style="width:100%; margin-top: 5px;"> <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 checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)																															
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<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 _____ Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10"</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-751

Tree Stratum (Plot size: <u>10' x 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: _____ (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. _____				
\emptyset = 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 30'</u>)				
1. <u>Not Applicable</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
\emptyset = Total Cover				
Herb Stratum (Plot size: <u>5' x 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 $\leq 3.0^1$ <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>Myosotis stricta</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
3. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Persicaria virginiana</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u>Athyrium angustum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Glyceria megarica</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
7. <u>Boehmeria cylindrica</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>92</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10' x 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. _____				
\emptyset = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-751

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 2.5/1	100?					Si	
4-16	2.5Y 2.5/1	80	2.5Y 3/2	15	D	M	SL	
			7.5YR 4/6	5	C	M		

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: _____
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: 6/8/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-752
 Investigator(s): Benoit and Nicole Dutcher Section, Township, Range: Town of Stanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 25%
 Subregion (LRR or MLRA): LRR-R Lat: 42.114574 Long: -79.122103 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 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 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" style="font-size: 1.2em;">Upland data point for wetland (PEM) A636. Upland on a hillslope with ATV/log road w/in 15' and main access road within 50'.</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 align="center" style="font-size: 1.2em;">No hydrology indicators observed.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-752

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>
2. <u>Betula alleghaniensis</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
3. <u>Tsuga canadensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

90 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

50 = Total Cover

Herb Stratum (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Dryopteris maginialis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
3. <u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4. <u>Chamaepericlymenum canadense</u>	<u>3</u>	<u>N</u>	<u>FAC</u>
5. <u>Acer saccharum</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

30 = Total Cover

Woody Vine Stratum (Plot size: <u>30' R</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: 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 X No _____

SOIL

Sampling Point: DP-752

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 2.5/1	100%					Si	
4-14	10YR 5/6	100%					SiL	
14-20	10YR 4/6	100%					SiL	with gravel

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.

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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/8/10
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-7SS
 Investigator(s): Ben Virts and Nicole Dauter Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.419244 Long: -79.152070 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 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 A635A</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Linear PEM wetland along roadside that discharges to Ditch A507 Wetland borders active farm field with hydric soils but no hydrology or wetland vegetation.</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 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 checked="" 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: <p align="center"><i>Drainage patterns run through wetland linearly and discharge to ditch A507. Microtopographic relief due to drop off from built up road.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-7SS

Tree Stratum (Plot size: <u>5'x5'</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.				
\emptyset = 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' x 5'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
5.				
6.				
7.				
\emptyset = Total Cover				
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <u>Typha angustifolia</u>	<u>45</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Symphytotrichum prenanthoides</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Ranunculus acris</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>Equisetum palustre</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. <u>Trifolium repens</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>5' x 5'</u>)				
1. <u>Not Applicable</u>				
2.				
3.				
4.				
\emptyset = Total Cover				

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

Vegetation plot sizes were adjusted to fit within the wetland boundary.

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: DP-7SS

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	10YR 3/1	100?					SIL	
3-20	10YR 3/1	95?	7.5Y 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"/> 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 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: 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: 6/8/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-756
 Investigator(s): Ben Vitro and Nicole Dutcher Section, Township, Range: Town of Villenova
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.419496 Long: -79.152283 Datum: NAD 83
 Soil Map Unit Name: Bust: Silty 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" style="font-size: 1.2em;">Upland data point for wetland (PCM) A635A</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;">No hydrology indicators observed.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-756

Tree Stratum (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Robinia pseudoacacia</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>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.9%</u> (A/B)	
2. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>20</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>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Malus prunifolia</u>	<u>5</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. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>5</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'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Ranunculus acris</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>		Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u>Dactylis glomerata</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Trifolium 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>Asclepias syriaca</u>	<u>10</u>	<u>N</u>	<u>UPL</u>		
7. <u>Scirpus atrovirens</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>		
8. <u>Muhlenbergia frondosa</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>100</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'R</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.) 					

SOIL

Sampling Point: DP-756

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)	%				
0-3	10YR 4/2	100					SL	
3-8	10YR 4/2	95	7.5YR 5/6	5	C	M/PL	SIL	
8+								Rock + 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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/9/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-758
 Investigator(s): Ben Virts and Nicole Oulter Section, Township, Range: Town of Hamover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.474929 Long: -79.149434 Datum: NAD 83
 Soil Map Unit Name: Foreman 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 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 A638</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em;">PTO wetland in depression of large upland area. Surrounded by upland cultivated hay fields. Drains to ditch ASO along NE edge where wetland boundary is.</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 checked="" 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"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)	<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 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: <p style="font-size: 1.2em;">Drainage patterns no around the western side of the wetland (looks to be an old ditch that normal circumstances have now been border of wetland). Iron deposits were found in significant portions of wetland on top of soil surface. Oxidized rhizospheres on living roots found in hydric soils.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-758

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ulmus americana</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>
2. <u>Fraxinus pennsylvanica</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
3. <u>Rhamnus cathartica</u>	<u>15</u>	<u>N</u>	<u>FACU</u>
4. <u>Lonicera tatarica</u>	<u>10</u>	<u>N</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>Rhamnus cathartica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
2. <u>Lonicera tatarica</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
3. <u>Rosa multiflora</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

55 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Euthamia graminifolia</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2. <u>Ulmus americana</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
3. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
4. <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. <u>Toxicodendron radicans</u>	<u>15</u>	<u>N</u>	<u>FAC</u>
6. _____	_____	_____	_____
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>Toxicodendron radicans</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

10 = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
 Total Number of Dominant Species Across All Strata: 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 _____	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.)

FAC and FACU invasive species grow in all landscape / cover types in this region they are opportunistic and have been seen growing in wetlands as well here in NY.

SOIL

Sampling Point: DP-758

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 3/2	85	5YR 4/6	15	C	M/A	CL	
7-16	2.5Y 4/2	80	10YR 5/8	10	C	M	CL	
			10YR 3/1	10	D	M		

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 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) |
|--|---|--|

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 <input type="checkbox"/>
--	--

Remarks:
 Hydric soils because of redox concentrations in the matrix and along lining pore linings.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/9/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-759
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hunover
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): con none Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 42.475101 Long: -79.149453 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 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 <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.) <p style="font-size: 1.2em; margin-top: 10px;">Upland data point to wetland A638 (PFO). Data point taken on edge of cultivated hay field. Upland field next to ditch A509 that drains field so it can be harvested for hay.</p>	

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%; 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)		<p><u>Secondary Indicators (minimum of two required)</u></p> <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)																															
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<input type="checkbox"/> FAC-Neutral Test (D5)																																
<p>Field Observations:</p> 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: <p style="font-size: 1.2em; margin-top: 10px;">No wetland hydrology indicators observed.</p>																																

VEGETATION – Use scientific names of plants.

Sampling Point: DP-759

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Quercus rubra</u>	<u>20</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>10</u>	<u>Y</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>15</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Euthamia graminifolia</u>	<u>10</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>Muhlenbergia frondosa</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Ranunculus acris</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Trifolium pratense</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. <u>Daucus carota</u>	<u>5</u>	<u>N</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>	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 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-759

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	2.5Y 3/2	90	5YR 4/6	10	C	M	CL	
14-20	2.5Y 5/1	80	5YR 4/6	20	C	M	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:
 Soils are hydric but remnant hydric because they are immediately next to a ditch that ~~is~~ is lowering the water table

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/9/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-703
 Investigator(s): Ben Virts and Nicole Doehr Section, Township, Range: Town of Hamaker
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 1-3%
 Subregion (LRR or MLRA): LRR-R Lat: 42.479556 Long: -79.149194 Datum: NAD 83
 Soil Map Unit Name: Towerville Silt Loam 35 to 50% 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>A639</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>PFO wetland in floodplain of Stream A540. Floodplain wetland is in a ravine/confined valley. Groundwater discharge to the stream where the stream starts to drop off and bedrock is exposed. Receives some groundwater seep from eastern bank of ravine.</i></p>	

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) <input checked="" type="checkbox"/> 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) ___ FAC-Neutral Test (D5)
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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>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:
Iron deposits where groundwater is discharged from wetland to stream. Water stained leaves found throughout wetland and flood plain.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-763

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rana ovata</u>	<u>20</u>	<u>Y</u>	<u>FACU</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. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Fagus grandifolia</u>	<u>10</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>55</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>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Betula alleghaniensis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Lindera benzoin</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Impatiens capensis</u>	<u>20</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>Carex flava</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Betula alleghaniensis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>70</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>∅</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <div style="height: 100px;"></div>				

SOIL

Sampling Point: DP-763

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	Gley 2.5/10Y	100%					SiL	
8-20	2.5Y 3/1	75%	Gley 5/N	15	Rm	M	C	
			7.5YR 4/4	10	C	M		

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 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: 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: 6/9/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-764
 Investigator(s): Ben Virts and Nick D'Amico Section, Township, Range: Down of Hamaker
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 30%
 Subregion (LRR or MLRA): LRR-R Lat: 42.479503 Long: -79.149046 Datum: NAD 83
 Soil Map Unit Name: Towerville Silt Loam, 35 to 50% 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 _____ 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; margin: 0;"><i>Upland data point for PFO wetland A639. Data point located near wetland in confined valley on the hillslope.</i></p>	

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%; border: none;"> <tr> <td style="width:33%;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:33%;"><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)		<p><u>Secondary Indicators (minimum of two required)</u></p> <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)																															
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<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"/> Microtopographic Relief (D4)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
<p>Field Observations:</p> 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)	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks: <p style="font-size: 1.2em; margin: 0;"><i>No hydrology indicators observed.</i></p>																																

VEGETATION – Use scientific names of plants.

Sampling Point: DP-764

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>
3. <u>Tsuga canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

100 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>
2. <u>Betula alleghaniensis</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

55 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Betula alleghaniensis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. <u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
3. <u>Trillium grandiflorum</u>	<u>2</u>	<u>N</u>	<u>UPL</u>
4. <u>Rubus idaeus</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
5. <u>Toxicodendron radicans</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
6. <u>Dyopteris marginalis</u>	<u>2</u>	<u>N</u>	<u>FACU</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

31 = 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: 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)

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>95</u>	x 3 = <u>285</u>
FACU species <u>89</u>	x 4 = <u>356</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>186</u> (A)	<u>651</u> (B)

Prevalence Index = B/A = 3.5

- 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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/10/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-7108
 Investigator(s): Ben Vito and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1-32
 Subregion (LRR or MLRA): LRR-R Lat: 42.484607 Long: -79.149711 Datum: NAD 83
 Soil Map Unit Name: HrB Hornell silt 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>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>A1040</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="font-size: 1.2em; margin-top: 10px;">PEM wetland in concave depression of forest. Wetland extend just beyond study limits and looks to have discharge to ditch outside study area along old railroad bed. Area burned up along old railroad bed, which is causing water to pond during parts of the year.</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 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 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 <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:
 Sparsely vegetated concave surface, area doesn't have surface water now but evidence of ponding/standing water during parts of the year. Geomorphic Position → water being stopped by burn that was built up for the railroad.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-768

Tree Stratum (Plot size: 20'x20')

	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: _____ (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: 15'x15')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lindera benzoin</u>	<u>20</u>	<u>Y</u>	<u>FACW</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: 5'x5')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lindera benzoin</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
2.			
3.			
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: 20'x20')

	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-768

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	2.5Y 3/1	90	7.5YR 3/4	10	C	M	SIL	
7-17	2.5Y 4/2	80	2.5Y 3/1	15	D	M	CL	
			7.5Y 4/6	5	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"/> 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: <u> N/A </u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/10/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-769
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 5-8%
 Subregion (LRR or MLRA): LRR-R Lat: 42.484825 Long: -79.149637 Datum: NAD 83
 Soil Map Unit Name: HvB - Hornell silt 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> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	If yes, optional Wetland Site ID: <u> </u>
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
Upland data point for wetland (PEM in forest) A640. Located near term of old railroad bed.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <p><u> </u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u> </u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u> </u> 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)</p>	<p>Secondary Indicators (minimum of two required)</p> <p><u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>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? (includes capillary fringe) Yes <u> </u> No <u>X</u> Depth (inches): <u> </u></p>	<p>Wetland Hydrology Present? Yes <u> </u> No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology observed.

VEGETATION – Use scientific names of plants.

Sampling Point: DP-709

Tree Stratum (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>95</u>	<u>Y</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

95 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Linden benzoin</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3. <u>Fagus grandifolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

45 = Total Cover

Herb Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Toxicodendron radicans</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
3. <u>Fagus grandifolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
4. <u>Trillium erectum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>
5. <u>Fragaria virginiana</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
6. <u>Lonicera tatarica</u>	<u>3</u>	<u>N</u>	<u>FACU</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

50 = Total Cover

Woody Vine Stratum (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vitis aestivalis</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

10 = 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: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.8 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>—</u>	x 1 = <u>—</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>37</u>	x 3 = <u>111</u>
FACU species <u>143</u>	x 4 = <u>572</u>
UPL species <u>—</u>	x 5 = <u>—</u>
Column Totals: <u>200</u> (A)	<u>723</u> (B)

Prevalence Index = B/A: 3.61

- 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-769

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 5/4	75	2.5Y 4/2	10	D	M	CL	
			10YR 5/8	15	C	M		

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 (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: 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: 6/10/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-773
 Investigator(s): Ben Viter and Nicole Dutcher Section, Township, Range: Town of Honor
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): 0-27
 Subregion (LRR or MLRA): LRR-R Lat: 42.488841 Long: -79.149921 Datum: NAD 83
 Soil Map Unit Name: BrB-Barcelona silt loam, 3-8% 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>A641</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>PEM data point for wetland A641. Starting at stream A546 alluvial fan</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) <input checked="" type="checkbox"/> High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input checked="" type="checkbox"/> 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 ___ No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>7"</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- 773

Tree Stratum (Plot size: 15' R)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Ulmus americana</i>	10	Y	FACW	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. _____	_____	_____	_____		
10 = 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' R)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Ulmus americana</i>	15	Y	FACW		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. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
15 = 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: 5' R)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Onoclea sensibilis</i>	15	N	FACW		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <i>Impatiens capensis</i>	10	N	FACW		
3. <i>Toxicodendron radicans</i>	5	N	FAC		
4. <i>Leersia oryzoides</i>	70	Y	OBL		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
100 = Total Cover					
Woody Vine Stratum (Plot size: 15' R)	Absolute % Cover	Dominant Species?	Indicator Status		
1. Not Applicable	0			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
0 = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) Vegetation plot size adjusted to fit in the confines of the wetland					

SOIL

Sampling Point: **DP- 773**

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 4/1	70	5YR 3/4	30	C	M/PL	Si	
6-20	2.5Y 4/1	95	5YR 3/4	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: 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: 6/10/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-774
 Investigator(s): Ben Vitt and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): concave dep. Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR-R Lat: 42.4898576 Long: -79.1505612 Datum: NAD 83
 Soil Map Unit Name: Barcelona 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 _____ 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>A641</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><u>PSS portion of wetland A641.</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 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 _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> 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: <p><u>Drainage patterns throughout, running towards North end where it pools more and turns into PEM. Western section of wetland along the slope of hillside.</u></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-774

Tree Stratum (Plot size: <u>30'R</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'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix nigra</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>
2. <u>Cornus racemosa</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			
<u>70</u> = Total Cover			
Herb Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Symphoricarpon puniceum</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
2. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
3. <u>Symphoricarpon prenanthoides</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
4. <u>Impatiens capensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
5. <u>Lysimachia nummularia</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
6. <u>Toxicodendron radicans</u>	<u>38</u>	<u>Y</u>	<u>FAC</u>
7.	<u>2</u>	<u>N</u>	
8.			
9.			
10.			
11.			
12.			
<u>100</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30'R</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: 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-774

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	2.5Y 4/2	85	5YR 3/4	15	C	M	SiL		
10-16	2.5Y 4/2	85	2.5Y 4/1	10	D	M	CL		
			7.5YR 4/6	5	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"/> 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: <u>U1D</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/10/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-775
 Investigator(s): Ben Virts and Nicole Dutny Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5-10%
 Subregion (LRR or MLRA): LRR-R Lat: 42.489858 Long: -79.1505612 Datum: NAD 83
 Soil Map Unit Name: N1A - Niagara silt loam, 0-3% slopes, loamy substratum 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 do point to wetland A641. On a hillslope leading down to wetland.</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)	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: <p align="center"><i>No hydrology indicators observed.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-775

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Y</u>	<u>FACW</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>30</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>60</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>Lonicera tartarica</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Solidago canadensis</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) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Lonicera tartarica</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Toxicodendron radicans</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Fragaria virginiana</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u>Pithecellobium quinquefolia</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. _____	_____	_____	_____	
<u>0</u> = 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.				
Hydrophytic Vegetation Present? Yes _____ No <u>Y</u>				

SOIL

Sampling Point: DP-775

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 4/3	100					SIL	
8-20	2.5Y 5/6	75	2.5Y 4/3	5	D	M	CL	
			2.5Y 4/2	10	D	M		
			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"/> 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: N/A
 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: 6/2/11
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-777
 Investigator(s): B. Viets, J. Suderi Section, Township, Range: Town of Harover
 Landform (hillslope, terrace, etc.): Hill slope Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.4993629 Long: -79.1536755 Datum: NAD 83
 Soil Map Unit Name: Niagara Silty loam 10 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 A643</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center; font-size: 1.2em;">Pen Data Station for wetland A643.</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 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 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-777

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>1</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>Impatiens capensis</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Eupatorium perfoliatum</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
3. <u>Zizia aurea</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
4.				
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>				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP-777

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"	2.5g/12	90	5y2 slb	10	C	M	SIL	
8"-16"	2.5g/11	80	2.5g/12	10	D	M	SIL	
			5y2 slb	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"/> 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"/> 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 checked="" 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: _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
Depth (Inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 6/2/11
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-778
 Investigator(s): B. Viets, Jeremy Schwert Section, Township, Range: Town of Hamer
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR-R Lat: 42.4994454 Long: -79.1538008 Datum: NAD 83
 Soil Map Unit Name: Niagara 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 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 A643.</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- 778

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer saccharum</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Carya ovata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

65 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer Saccharum</u>	<u>15</u>	<u>Yes</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>5</u>	x 2 = <u>10</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>90</u>	x 4 = <u>360</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 3.81

15 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Podophyllum peltatum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Euthamia graminifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Fraxinus Pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>FACW</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.

25 = 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.)

SOIL

Sampling Point: DP- 778

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"	2.5y5/3	100					SI	
8"-20"	2.5y6/3	80	2.5y 5/6	20			SIL	

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"/> Black Histic (A3)	<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"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Stratified Layers (A5)	<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"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
		<input type="checkbox"/> Redox Depressions (F8)	<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"/>
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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: 6/21/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-779
 Investigator(s): B. Viets, J. Schuler Section, Township, Range: Town of Hamner
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR-R Lat: 42.5038097 Long: -79.1528564 Datum: NAD 83
 Soil Map Unit Name: Dicgca S; 1 to 10 m, 10 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 A614</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center; font-size: 1.2em;">PFO Data Point.</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 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)	<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 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 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- 779

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Tsuga canadensis</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

60 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Tsuga canadensis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

20 = Total Cover

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Toxicodendron radicans</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Impatiens capensis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Carex intumescens</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

40 = Total Cover

Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

10 = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 89% (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.)

SOIL

Sampling Point: DP- 779

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"	2.5y 3/1	100%					SI	
2"-14"	2.5y 6/1	75%	7.5y 5/6	25%	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:

- 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: _____

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: 6/21/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-780
 Investigator(s): B. Voss, J. Scuderi Section, Township, Range: Dun of Hamover
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.504069 Long: -74.1531048 Datum: NAD 83
 Soil Map Unit Name: Niagara silt loam, 0 to 3% 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.) <p align="center" style="font-size: 1.2em;">Upland Data point for wetland A644.</p>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><u> </u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u> </u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u> </u> 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)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> 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-780

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer Saccharum</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Pinus Serotina</u>	<u>20</u>	<u>Yes</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 Saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Pedophyllum peltatum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</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>Vitis aestivalis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
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: 5 (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>160</u>	x 4 = <u>640</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>160</u> (A)	<u>640</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:

Tree – Woody plants 3 in. (7.6 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: 7/15/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-783
 Investigator(s): Ben Virts and Nicole Dutcher Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR-R Lat: 42.448426 Long: -79.124072 Datum: NAD 83
 Soil Map Unit Name: Fremont silt loam, 3-8% 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 <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 A645</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>PEM data point for wetland A645 - PEM wetland in forest w/ no trees rooted in wetland.</i></p> <p align="center"><i>Region has experienced below average rainfall for year to date.</i></p>	

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 type="checkbox"/> Surface Water (A1)</td> <td><input checked="" 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 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)		<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 checked="" type="checkbox"/> FAC-Neutral Test (D5)</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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
<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)																															
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<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
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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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<input type="checkbox"/> Microtopographic Relief (D4)																																
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)																																
<p>Field Observations:</p> 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 align="center"><i>Evidence of water-stained leaves and drainage patterns found throughout the wetland. No saturation/watertable/surface water observed due to the region receiving below average rainfall year-to-date (NY DEC announced 7/15/16 drought warning).</i></p>																																

VEGETATION – Use scientific names of plants.

Sampling Point: DP-783

Tree Stratum (Plot size: <u>15'</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>1</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				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'</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>Onoclea sensibilis</u>	<u>80</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>Carex flava</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15'</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				
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-783

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 2.5/1	90%	5YR 4/4	10%	C	M	SiL	
4-12	2.5Y 5/2	95%	7.5YR 4/6	5%	C	M		
12+								Rock/gravel 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 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 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:

Soil demonstrates a depleted matrix and redox of dark surface in the first 4" layer. Rock and gravel refusal found at 12" (multiple pits were attempted to get further down).

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ball Hill Wind Project City/County: Chautauqua County Sampling Date: 7/15/16
 Applicant/Owner: Ball Hill Wind Energy, LLC State: NY Sampling Point: DP-784
 Investigator(s): Ben Virts and Nicole Dutber Section, Township, Range: Town of Hanover
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5%
 Subregion (LRR or MLRA): LRR-R Lat: 42.448520 Long: -79.124059 Datum: NAD 83
 Soil Map Unit Name: Fremont Silt loam, 3-8% 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 align="center" style="font-size: 1.2em;">Upland soil data point for Wetland A645</p> <p align="center">Area has received below average rainfall year-to-date, NYS DEC announced drought warnings for all NYS on 7/15/16.</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? (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 align="center" style="font-size: 1.2em;">No hydrology indicators observed.</p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP-784

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Tsuga canadensis</u>	<u>80</u>	<u>Y</u>	<u>FACU</u>
2. <u>Fagus grandifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>100</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</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>10' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Athyrium angustum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. <u>Fagus grandifolia</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>
3. <u>Onoclea sensibilis</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
<u>20</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30' R</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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33% (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 X

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

SOIL

Sampling Point: DP-784

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	10YR 3/4	100%					Si	
2-20	2.5Y 5/4	100%					Si	

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: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No hydric soil indicators were observed.

**APPENDIX B
STREAM DATA FORMS**

STREAM FIELD ID: ST10

Project Name: <u>Ball Hill Wind Project</u>																																																	
Stream Name:	Date: <u>11/04/2015</u>																																																
County: <u>Chautauqui</u>	State: <u>New York</u>																																																
Evaluator(s): <u>DJC, VSM</u>	Data Point ID: <u>DP-54</u>																																																
Stream Characteristics	Bottom Characteristics																																																
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>West to East</u> Width (ft) (water's edge to water's edge): <u>5</u> Width (ft) (bank to bank): <u>25</u>	Substrate Type: <table style="display: inline-table; vertical-align: top;"> <tr><td><input type="checkbox"/></td><td>Bedrock</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Cobble</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Gravel</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Sand</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Silt/Clay</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td></tr> </table> Probed Stream Depth (if water present): <table style="display: inline-table; vertical-align: top;"> <tr><td><input checked="" type="checkbox"/></td><td>0 - 6"</td></tr> <tr><td><input type="checkbox"/></td><td>7 - 12"</td></tr> <tr><td><input type="checkbox"/></td><td>13 - 24"</td></tr> <tr><td><input type="checkbox"/></td><td>25 - 36"</td></tr> <tr><td><input type="checkbox"/></td><td>37" +</td></tr> <tr><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>	<input type="checkbox"/>	Bedrock	<input checked="" type="checkbox"/>	Cobble	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>	Sand	<input checked="" type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	0 - 6"	<input type="checkbox"/>	7 - 12"	<input type="checkbox"/>	13 - 24"	<input type="checkbox"/>	25 - 36"	<input type="checkbox"/>	37" +	<input type="checkbox"/>	No Perceptible Depth																								
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<input type="checkbox"/>	No Perceptible Depth																																																
Bank Height and Slope	Associated Habitat																																																
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Left Bank*</th> <th style="width: 40%;">Bank Height and Slope</th> <th style="width: 30%;">Right Bank*</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"><u>0-3' High</u></td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">0 - 20% (0-11°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">21 - 50% (12-27°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">51 - 100% + (38-45°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">100%+ (46°+)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"><u>3-6' High</u></td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">0 - 20% (0-11°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">21 - 50% (12-27°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">51 - 100% (38-45°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">100% (46°+)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"><u>6' + High</u></td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">0 - 20% (0-11°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">21 - 50% (12-27°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">51 - 100% (38-45°)</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">100% (46°+)</td> <td style="text-align: center;"> </td> </tr> </tbody> </table> Provide Detail of any Evidence of Erosion: <u>No evidence of erosion observed</u>	Left Bank*	Bank Height and Slope	Right Bank*		<u>0-3' High</u>			0 - 20% (0-11°)			21 - 50% (12-27°)			51 - 100% + (38-45°)			100%+ (46°+)			<u>3-6' High</u>			0 - 20% (0-11°)			21 - 50% (12-27°)			51 - 100% (38-45°)			100% (46°+)			<u>6' + High</u>			0 - 20% (0-11°)			21 - 50% (12-27°)			51 - 100% (38-45°)			100% (46°+)		Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Hamamelis</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID: Aquatic Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Macroinvertebrates</u> Riparian/Terrestrial Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Small mammals</u> T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Stream Photos Collected ID, Direction, and Description: <u>Photo # 70 Right to left north</u> <u>Photo # 71 upstream west</u> <u>Photo # 72 downstream east</u>
Left Bank*	Bank Height and Slope	Right Bank*																																															
	<u>0-3' High</u>																																																
	0 - 20% (0-11°)																																																
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	100% (46°+)																																																

STREAM FIELD ID: ST-11

Project Name: <u>Ball Hill Wind Project</u>																																						
Stream Name:	Date: <u>11/05/2015</u>																																					
County: <u>Chautauqua</u>	State: <u>New York</u>																																					
Evaluator(s): <u>DJL, KSM</u>	Data Point ID: <u>DP-63</u>																																					
Stream Characteristics		Bottom Characteristics																																				
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction <u>South to North</u> Width (ft) (water's edge to water's edge) <u>2 feet</u> Width (ft) (bank to bank) <u>4</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input type="checkbox"/> 0 - 6" <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> 7 - 12" <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> 13 - 24" <input checked="" type="checkbox"/> Sand <input type="checkbox"/> 25 - 36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37" + <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth																																				
Bank Height and Slope		Associated Habitat																																				
Left Bank* <div style="text-align: center;"><u>0-3' High</u></div> <table style="width:100%; border: none;"> <tr> <td style="width: 10%; text-align: center;">[]</td> <td style="width: 80%;">0 - 20% (0-11°)</td> <td style="width: 10%; text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[x]</td> <td>21 - 50% (12-27°)</td> <td style="text-align: center;">[x]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>51 - 100% + (38-45°)</td> <td style="text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>100%+(46°+)</td> <td style="text-align: center;">[]</td> </tr> </table> <div style="text-align: center;"><u>3-6' High</u></div> <table style="width:100%; border: none;"> <tr> <td style="width: 10%; text-align: center;">[]</td> <td style="width: 80%;">0 - 20% (0-11°)</td> <td style="width: 10%; text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>21 - 50% (12-27°)</td> <td style="text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>51 - 100% (38-45°)</td> <td style="text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>100% (46°+)</td> <td style="text-align: center;">[]</td> </tr> </table> <div style="text-align: center;"><u>6' + High</u></div> <table style="width:100%; border: none;"> <tr> <td style="width: 10%; text-align: center;">[]</td> <td style="width: 80%;">0 - 20% (0-11°)</td> <td style="width: 10%; text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>21 - 50% (12-27°)</td> <td style="text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>51 - 100% (38-45°)</td> <td style="text-align: center;">[]</td> </tr> <tr> <td style="text-align: center;">[]</td> <td>100% (46°+)</td> <td style="text-align: center;">[]</td> </tr> </table> Provide Detail of any Evidence of Erosion: _____ <u>Unpaved Trail by West Passway</u> _____ _____	[]	0 - 20% (0-11°)	[]	[x]	21 - 50% (12-27°)	[x]	[]	51 - 100% + (38-45°)	[]	[]	100%+(46°+)	[]	[]	0 - 20% (0-11°)	[]	[]	21 - 50% (12-27°)	[]	[]	51 - 100% (38-45°)	[]	[]	100% (46°+)	[]	[]	0 - 20% (0-11°)	[]	[]	21 - 50% (12-27°)	[]	[]	51 - 100% (38-45°)	[]	[]	100% (46°+)	[]	Right Bank* Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>WL-VI</u> Aquatic Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Macroinvertebrates</u> Riparian/Terrestrial Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>deer, Rabbits</u> T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:	Size Class <input type="checkbox"/> Major >100 ft <input type="checkbox"/> Intermediate >10 ft, <100ft <input checked="" type="checkbox"/> Minor <10 ft
[]	0 - 20% (0-11°)	[]																																				
[x]	21 - 50% (12-27°)	[x]																																				
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[]	51 - 100% (38-45°)	[]																																				
[]	100% (46°+)	[]																																				
		Stream Photos Collected ID, Direction, and Description: <u>Photo B1 Riparian to West</u> <u>Photo B2 upstream South</u> <u>Photo B3 downstream North</u>																																				

STREAM FIELD ID: ST 13

Project Name: Ball Hill Wind Project																																																		
Stream Name:	Date: <u>11/05/2015</u>																																																	
County: <u>Chautauqua</u>	State: <u>New York</u>																																																	
Evaluator(s): <u>DJR, VSW</u>	Data Point ID: <u>69</u>																																																	
Stream Characteristics	Bottom Characteristics																																																	
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>South to north</u> Width (ft) (water's edge to water's edge): <u>5</u> Width (ft) (bank to bank): <u>10</u>	Substrate Type: <table style="display: inline-table; vertical-align: top; margin-right: 20px;"> <tr><td><input checked="" type="checkbox"/></td><td>Bedrock</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Cobble</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Gravel</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Sand</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Silt/Clay</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td></tr> </table> Probed Stream Depth (if water present): <table style="display: inline-table; vertical-align: top;"> <tr><td><input type="checkbox"/></td><td>0 - 6"</td></tr> <tr><td><input type="checkbox"/></td><td>7 - 12"</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>13 - 24"</td></tr> <tr><td><input type="checkbox"/></td><td>25 - 36"</td></tr> <tr><td><input type="checkbox"/></td><td>37" +</td></tr> <tr><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>		<input checked="" type="checkbox"/>	Bedrock	<input checked="" type="checkbox"/>	Cobble	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>	Sand	<input checked="" type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	Other	<input type="checkbox"/>	0 - 6"	<input type="checkbox"/>	7 - 12"	<input checked="" type="checkbox"/>	13 - 24"	<input type="checkbox"/>	25 - 36"	<input type="checkbox"/>	37" +	<input type="checkbox"/>	No Perceptible Depth																								
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Left Bank*		Right Bank*																																																
<u>0-3' High</u>																																																		
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<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>																																																
	Stream Photos Collected ID, Direction, and Description: <u>Photo 88 Photo 89 + west</u> <u>Photo 89 upstream south</u> <u>Photo 90 upstream north</u>																																																	

STREAM FIELD ID: ST-14

Project Name: <u>Ball Hill Wind Project</u>																							
Stream Name:	Date: <u>11/06/2015</u>																						
County: <u>Chautauque</u>	State: <u>New York</u>																						
Evaluator(s): <u>DJK, VSM</u>	Data Point ID: <u>DP-72</u>	<u>11</u>																					
Stream Characteristics	Bottom Characteristics																						
Perceptible Flow: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Substrate Type:	Probed Stream Depth (if water present):																					
Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	<input type="checkbox"/> Bedrock	<input checked="" type="checkbox"/> 0-6"																					
Stream Flow Direction: <u>South to North</u>	<input checked="" type="checkbox"/> Cobble	<input type="checkbox"/> 7-12"																					
Width (ft) (water's edge to water's edge): <u>1</u>	<input checked="" type="checkbox"/> Gravel	<input type="checkbox"/> 13-24"																					
Width (ft) (bank to bank): <u>1</u>	<input checked="" type="checkbox"/> Sand	<input type="checkbox"/> 25-36"																					
	<input checked="" type="checkbox"/> Silt/Clay	<input type="checkbox"/> 37"+																					
	<input type="checkbox"/> Other	<input type="checkbox"/> No Perceptible Depth																					
Bank Height and Slope	Associated Habitat	Size Class																					
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Provide Detail of any Evidence of Erosion: <u>No erosion observed</u>	Stream Photos Collected ID, Direction, and Description: <u>Photo 96 Right to left</u> <u>Photo 97 upstream south</u> <u>Photo 98 down stream north</u>																						

STREAM FIELD ID:

DP-73/ST-15

Project Name: Ball Hill Wind Project																										
Stream Name:		Date: <u>11/6/15</u>																								
County: <u>Chautauqua</u>		State: <u>New York</u>																								
Evaluator(s): <u>DSC, WSM</u>		Data Point ID: <u>DP-73</u>																								
Stream Characteristics		Bottom Characteristics																								
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>East</u> Width (ft) (water's edge to water's edge): <u>3.1</u> Width (ft) (bank to bank): <u>3.1</u>		Substrate Type: <table style="display: inline-table; vertical-align: top;"> <tr><td><input type="checkbox"/></td><td>Bedrock</td></tr> <tr><td><input type="checkbox"/></td><td>Cobble</td></tr> <tr><td><input type="checkbox"/></td><td>Gravel</td></tr> <tr><td><input type="checkbox"/></td><td>Sand</td></tr> <tr><td><input type="checkbox"/></td><td>Silt/Clay</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td></tr> </table> Probed Stream Depth (if water present): <table style="display: inline-table; vertical-align: top;"> <tr><td><input type="checkbox"/></td><td>0 - 6"</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>7 - 12"</td></tr> <tr><td><input type="checkbox"/></td><td>13 - 24"</td></tr> <tr><td><input type="checkbox"/></td><td>25 - 36"</td></tr> <tr><td><input type="checkbox"/></td><td>37" +</td></tr> <tr><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>	<input type="checkbox"/>	Bedrock	<input type="checkbox"/>	Cobble	<input type="checkbox"/>	Gravel	<input type="checkbox"/>	Sand	<input type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	Other	<input type="checkbox"/>	0 - 6"	<input checked="" type="checkbox"/>	7 - 12"	<input type="checkbox"/>	13 - 24"	<input type="checkbox"/>	25 - 36"	<input type="checkbox"/>	37" +	<input type="checkbox"/>	No Perceptible Depth
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<input type="checkbox"/>	No Perceptible Depth																									
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Left Bank*	Right Bank*																									
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<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>																								
Provide Detail of any Evidence of Erosion: _____		Riparian Vegetation <input type="checkbox"/> yes <input type="checkbox"/> no If yes, list: _____ Aquatic Vegetation <input type="checkbox"/> yes <input type="checkbox"/> no If yes, list: _____ Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>W1-V3</u> Aquatic Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: _____ Riparian/Terrestrial Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>W1-V3</u> T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____																								
		Stream Photos Collected ID, Direction, and Description: <u>PH-99 Right to Left Bank (W)</u> <u>PH-100 Upstream (W) PH-101 Downstream (D)</u> <u>View/Stream nr.</u>																								

STREAM FIELD ID: ST-18

Project Name: <u>Ball Hill Wind Project</u>																																																		
Stream Name: <u>unnamed Tributary</u>	Date: <u>11/12/15</u>																																																	
County: <u>Chautauqua</u>	State: <u>New York</u>																																																	
Evaluator(s): <u>M. Robert O. LACKWOOD</u>	Data Point ID: <u>90</u>																																																	
Stream Characteristics	Bottom Characteristics																																																	
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction <u>EAST</u> Width (ft) (water's edge to water's edge) <u>2-5'</u> Width (ft) (bank to bank) <u>5-6'</u>	Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> 0-6" <input type="checkbox"/> Cobble <input type="checkbox"/> 7-12" <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> 13-24" <input type="checkbox"/> Sand <input type="checkbox"/> 25-36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37"+ <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth																																																	
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Left Bank*		Right Bank*																																																
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<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>																																																
Provide Detail of any Evidence of Erosion: <u>minor erosion on banks</u> <u>from cow's crossing.</u>	Stream Photos Collected ID, Direction, and Description: <u>PHOTO 119 US/W</u> <u>PHOTO 120 DS/E</u> <u>PHOTO 118 RTL/N</u>																																																	

STREAM FIELD ID: ST-19

Project Name: Ball Hill Wind Project																																							
Stream Name:	Date: <u>11/3/2015</u>																																						
County: Chautauque	State: New York																																						
Evaluator(s): <u>DT, MAB</u>	Data Point ID: <u>DP-75</u>																																						
Stream Characteristics		Bottom Characteristics																																					
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	Substrate Type: <input type="checkbox"/> Bedrock <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Other																																					
Stream Flow Direction: <u>East to West</u>	Width (ft) (water's edge to water's edge): <u>3</u>	Probed Stream Depth (if water present): <input checked="" type="checkbox"/> 0 - 6" <input type="checkbox"/> 7 - 12" <input type="checkbox"/> 13 - 24" <input type="checkbox"/> 25 - 36" <input type="checkbox"/> 37" + <input type="checkbox"/> No Perceptible Depth																																					
Width (ft) (bank to bank): <u>5</u>																																							
Bank Height and Slope		Associated Habitat																																					
Left Bank*	Right Bank*	Size Class																																					
<p><u>0-3 High</u></p> <table border="0"> <tr><td><input type="checkbox"/></td><td>0 - 20% (0-11°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% + (38-45°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>100%+(46°+)</td><td><input type="checkbox"/></td></tr> </table> <p><u>3-6 High</u></p> <table border="0"> <tr><td><input checked="" type="checkbox"/></td><td>0 - 20% (0-11°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% (38-45°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>100% (46°+)</td><td><input type="checkbox"/></td></tr> </table> <p><u>6+ High</u></p> <table border="0"> <tr><td><input type="checkbox"/></td><td>0 - 20% (0-11°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% (38-45°)</td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td>100% (46°+)</td><td><input type="checkbox"/></td></tr> </table>		<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	51 - 100% + (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	100%+(46°+)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	21 - 50% (12-27°)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>	<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>	<p>Riparian Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: <u>Actinidia</u></p> <p>Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:</p> <p>Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID:</p> <p>Aquatic Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>poecilia</u></p> <p>Riparian/Terrestrial Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>small insects</u></p> <p>T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:</p>	<p><input type="checkbox"/> Major >100 ft</p> <p><input type="checkbox"/> Intermediate >10 ft, <100ft</p> <p><input checked="" type="checkbox"/> Minor <10 ft</p>
<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>																																					
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<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>																																					
Provide Detail of any Evidence of Erosion: <u>NO EROSION OBSERVED</u>		Stream Photos Collected ID, Direction, and Description: <u>Photo 1 - Right to Left North</u> <u>Photo 2 - Right to Left West</u> <u>Photo 3 - Right to Left West</u>																																					

Stream Data Form

Stream Field ID: SI-A200(EPH)
 Data Point ID: DP-210 Date: 5/30/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): J. ZSIAOS & S. BUCKENMEYER
 County: Chautauqua State: NY
 Stream Name: N/A
 State Classified: Yes No Not Applicable
 If Yes, Classification: C-C
 Lat: 42.417696 Long: -79.136144

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: N/A Wetted Perimeter Width: N/A
 Flow/Gradient Direction: NW

Geomorphologic Characteristics

Primary Substrate Class: Medium Sand/Gravel; Secondary: Cobble

		Width	
		at DP	Max
OHWM	Top of Bank	3'	3'
		7.5'	7.5'
Bank Slope (H:V)	Left	1:1	1:1
	Right	1:1	1:1

Bank Stability Summary

Left Bank: Down eroded
 Right Bank: Down & eroded

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: Impatiens capensis in stream channel
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-210

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: P. pensylvanicus, Nyctalus spp. 2 americana
Crooked stem red cedar

Left: S. rugosa, J. canadensis, Crooked stem red cedar

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	E	
Downstream	NW	
Cross Channel	SE	

Jurisdictional Connectivity Notes:

Likely originates from drain tiles from edge of
ag field. Transitions into an intermittent

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: ST-A200(INT)
 Data Point ID: DP-211 Date: 5/25/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): J. STARR & S. BUCKENMEYER
 County: Chautauqua State: NY
 Stream Name: N/C
 State Classified: Yes No Not Applicable
 If Yes, Classification: C, C
 Lat: 43.917081 Long: -79.137323

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 3" Wetted Perimeter Width: 3'
 Flow/Gradient Direction: N

Geomorphologic Characteristics

Primary Substrate Class: Sand/Silt Secondary: Cobble

		Width	
		at DP	Max
OHWM Top of Bank		<u>5'</u>	<u>10'</u>
		<u>6'</u>	<u>20'</u>
Bank Slope (H:V)		Left	Right
		<u>1:4</u>	<u>1:2</u>

Bank Stability Summary

Left Bank: Slightly
 Right Bank: Down & eroded

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: In patches across stream channel
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 211

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: I canadensis, B. alleghaniensis, A. saccharinum,
A. intermedia

Left: Same

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	NE	
Downstream	SE	
Cross Channel	E	R to L

Jurisdictional Connectivity Notes:

Extends outside of stream banks. Stream
appears to contain sub-surface flow. Similar
flow on ephemeral to intermittent. Whole
region from drain tiles is hydrologically
supplemented from these tiles

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: ST-A202
 Data Point ID: DP-222 Date: 5/29/10
 Project Name: Ball Hill Wind Project
 Evaluator(s): Salma Z and Nicole Ostry
 County: Chautauqua State: NY
 Stream Name: N/A
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.42006 Long: -79.135808

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 2 in Wetted Perimeter Width: 2 ft
 Flow/Gradient Direction: West

Geomorphologic Characteristics

Primary Substrate Class: Silt some cobbles

		Width	
		at DP	Max
OHWM Top of Bank		<u>2 in</u>	<u>8 in</u>
		<u>2.5 ft</u>	<u>7 ft</u>
Bank Slope (H:V)		Left	Right
		<u>1:3</u>	<u>1:1</u>

Bank Stability Summary

Left Bank: Mostly stable by herbaceous plants
Some erosion where it meanders
 Right Bank: Very stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: tadpoles in deep parts
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 222

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-150' - herbaceous/field cover

Left: 0-100' - herbaceous plants

100-150' - cultivated crop field

Associated Wetland Present: Yes No

If Yes, Describe: NL-A209

Associated Artificial Drain Present: Yes No

If Yes, ID: ~~DP-A200~~

Photos

	Direction	Notes/Additional Description
Upstream	E	
Downstream	W	
Cross Channel	N	LTR

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream located in active hayfield. Likely modified in the past.

Stream Data Form

Stream Field ID: ST-A203
 Data Point ID: DP-243 Date: 5/26/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): John Zupano
 County: Chautauqua State: NY
 Stream Name: N/A
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.396578 Long: -79.151477

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 0.5" Wetted Perimeter Width: 2'
 Flow/Gradient Direction: N

Geomorphologic Characteristics

Primary Substrate Class: Gravel / Sand; Secondary cobble, silt

	Width	
	at DP	Max
OHWB	7'	6'
Top of Bank	5'	7'
Bank Slope (H:V)	Left	Right
	1:1	1:1

Bank Stability Summary

Left Bank: Incised channel - moderate stability
 Right Bank: Incised channel - moderate stability

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 243

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: WL-A330 Upland P. tremuloides
P. angustifolia

Left: P. pensylvanica, A. saccharum, P. gracillima

Associated Wetland Present: Yes No

If Yes, Describe: WL-A330

Associated Artificial Drain Present: Yes No

If Yes, ID: AO-203 (4" drain tile)

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	L to R

Jurisdictional Connectivity Notes:

Extends outside of delineation area

Supplemental Notes & Comments:

Stream begins from an agricultural field
just outside of delineation area. Increased channel,
sorted sediment, sinuosity so I further
search area

Stream Data Form

Stream Field ID: SI-A204
 Data Point ID: DP-249 Date: 5/26/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Jaime Zayas
 County: Chautauqua State: NY
 Stream Name: N/A
 State Classified: Yes No Not Applicable
 If Yes, Classification: C1
 Lat: 42.393235 Long: -79.141472

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 7' Wetted Perimeter Width: 8
 Flow/Gradient Direction: SE

Geomorphologic Characteristics

Primary Substrate Class: _____

		Width	
		at DP	Max
OHWM Top of Bank		8	9
		9	10
		Left	Right
Bank Slope (H:V)		1:1	1:1

Bank Stability Summary

Left Bank: Incised channel - moderate stability

Right Bank: Incised channel - moderate stability

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: minnow (unidentified), water shrews, Stoneflies, mayflies

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-349

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: WL-A222, 5 ponderosa

Left: Pasture with nubble wood, 3 almonsters, 1 official

Associated Wetland Present: Yes No

If Yes, Describe: WL-A222

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	NW	
Downstream	SE	
Cross Channel	SW	L-R

Jurisdictional Connectivity Notes:

WL-A222 & DP-A201 extends outside of reach area

Supplemental Notes & Comments:

Small ripple/pool complexes. Incised channel. Low sinuosity.

Stream Data Form

Stream Field ID: ST-A207
 Data Point ID: DP-261 Date: 5/31/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Jim Jones
 County: Chautauqua State: NY
 Stream Name: N/A
 State Classified: Yes No Not Applicable
 If Yes, Classification: Stream not state classified
 Lat: 42.388510 Long: -79.145813

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 1" Wetted Perimeter Width: 24
 Flow/Gradient Direction: NF

Geomorphologic Characteristics

Primary Substrate Class: Cobble/ Sand/Gravel

		Width	
		at DP	Max
OHWM		<u>3'4"</u>	<u>4'</u>
	Top of Bank	<u>3'5"</u>	<u>5.5'</u>
Bank Slope (H:V)		Left	Right
		<u>1:1</u>	<u>1:1</u>

Bank Stability Summary

Left Bank: Stable
 Right Bank: Stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: Water shrews, Galaxias
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____



Stream Data Form

Data Point ID: DP-261

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: S grandifolia forest

Left: S canadensis forest

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	<u>S</u>	
Downstream	<u>NE</u>	
Cross Channel	<u>W</u>	<u>A 201</u>

Jurisdictional Connectivity Notes:

Flows into ST-A509 a NY state listed stream

Supplemental Notes & Comments:

steeper gradient stream outside boundary of delineation area

Stream Data Form

Stream Field ID: 57-A005
 Data Point ID: DP-272 Date: 6/1/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): James Z...
 County: Chautauqua State: NY
 Stream Name: ?
 State Classified: Yes No Not Applicable
 If Yes, Classification: AA
 Lat: 42.451975 Long: -79.111869

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: _____ Wetted Perimeter Width: _____
 Flow/Gradient Direction: E

Geomorphologic Characteristics

Primary Substrate Class: Sand/Gravel; Secondary cob, silt, boulders

	Width	
	at DP	Max
OHWB	9'	15'
Top of Bank	16'	20'

Bank Slope (H:V)	Left	Right
		1:1

Bank Stability Summary

Left Bank: Moderately stable
 Right Bank: Moderately stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: A. riparia (scattered)
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: Water skippers, damselflies
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 272

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous upland forest - I consider
A. saccharum, Rubus alleghaniensis

Left: Same

Associated Wetland Present: Yes No

If Yes, Describe: WL-A2311

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	W	
Downstream	E	
Cross Channel	S	L to R

Jurisdictional Connectivity Notes:

Extends outside of delineation area

Supplemental Notes & Comments:

Small riffle pool complexes left bank
with incised channels. Right bank slope
ranges between 1:3 to 1:1. Streamway is ~2:5
within delineation area.

Stream Data Form

Stream Field ID: SI-A206
 Data Point ID: DP-275 Date: 6/1/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Joanne Ryan
 County: Chautauqua State: NY
 Stream Name: UNT
 State Classified: Yes No Not Applicable
 If Yes, Classification: Connects to a P.A. designated stream
 Lat: 42.452330 Long: -79.114053

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: N/A Wetted Perimeter Width: N/A
 Flow/Gradient Direction: S

Geomorphologic Characteristics

Primary Substrate Class: Clay transitioning to sand & gravel

	Width	
	at DP	Max
OHWB	<u>2'</u>	<u>2'</u>
Top of Bank	<u>2.5'</u>	<u>2.5'</u>
Bank Slope (H:V)	Left	Right
	<u>1:1</u>	<u>1:1</u>

Bank Stability Summary

Left Bank: Stable
 Right Bank: Stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 275

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Open field transitioning to forested

Left: Open field transitioning to forested

Associated Wetland Present: Yes No

If Yes, Describe: Connects with a wetland outside of search area

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	<u>N</u>	
Downstream	<u>S</u>	
Cross Channel	<u>E</u>	

Jurisdictional Connectivity Notes:

Connects with a state classified stream and a wetland outside of delineation area

Supplemental Notes & Comments:

Stream appears to have formed from old field drainage. No evidence of artificial tile

Stream Data Form

Stream Field ID: SI-A207
 Data Point ID: DP-278 Date: 6/1/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): James Z. Rosconi Nicole D'Amico
 County: Chautauqua State: NY
 Stream Name: unnamed trib of
 State Classified: Yes No Not Applicable
 If Yes, Classification: N/A
 Lat: 42.452641 Long: -79.115992

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 1in Wetted Perimeter Width: 3'
 Flow/Gradient Direction: _____

Geomorphologic Characteristics

Primary Substrate Class: silt/sand

	Width	
	at DP	Max
OHWB	3'	5'
Top of Bank	3'	8'
Bank Slope (H:V)	Left	Right
	2:1	2:1

Bank Stability Summary

Left Bank: very stable, vegetated, some undercutting

Right Bank: stable, vegetated to bank, undercutting at meandering points

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: water spiders/strikes
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: frogs, snails

Stream Data Form

Data Point ID: DP-278

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-20 ft PSM/PSS wetland
20-150 ft Upland vegetated field

Left: 0-30 ft PSM/PSS wetland
30-50 ft Upland bordering crop field, 50-150: cultivated crop

Associated Wetland Present: Yes No

If Yes, Describe: WL-A236

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-205

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	E	River

Jurisdictional Connectivity Notes:

On lands outside of delineation area

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: SI-A209
 Data Point ID: DP-225 Date: 6/2/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Gene Jones
 County: Chautauqua State: NY
 Stream Name: UNT
 State Classified: Yes No Not Applicable
 If Yes, Classification: Connects to a c / state classified stream
 Lat: _____ Long: _____

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: N/A Wetted Perimeter Width: N/A
 Flow/Gradient Direction: NW

Geomorphologic Characteristics

Primary Substrate Class: Clay / Secondary cobble

		Width	
		at DP	Max
OHWM	Top of Bank	<u>20"</u>	<u>25"</u>
		<u>30"</u>	<u>40"</u>
Bank Slope (H:V)		Left	Right

Bank Stability Summary

Left Bank: Stable

Right Bank: Stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-285

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous forest (S americana, a saccharum)

Left: Deciduous forest (S americana, a saccharum)

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	E	
Downstream	NW	
Cross Channel	S	Photo 1

Jurisdictional Connectivity Notes:

Flows into ST-Adax (PPA). Ultimately connects with a state listed stream.

Supplemental Notes & Comments:

High gradient ephemeral leaf litter disturbance noted

Stream Data Form

Stream Field ID: ST-A-208
 Data Point ID: DP-286 Date: 6/2/10
 Project Name: Ball Hill Wind Project
 Evaluator(s): Jim Zeman
 County: Chautauqua State: NY
 Stream Name: UNT
 State Classified: Yes No Not Applicable
 If Yes, Classification: Flows into a state classified (i.e.)
 Lat: 42.467262 Long: -79.148979

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: N/A Wetted Perimeter Width: N/A
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Bedrock; Secondary sand/gravel/silt

		Width	
		at DP	Max
OHWM	Top of Bank	28"	28"
		5'	6'
		Left	Right
Bank Slope (H:V)		1:1	2:1

Bank Stability Summary

Left Bank: Stable
 Right Bank: Stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: Chironomid

Stream Data Form

Data Point ID: DP-286

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous forest

Left: Deciduous forest

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	Photo

Jurisdictional Connectivity Notes:

Connects with SI-0211 (TWS) a state classified stream (C, I)

Supplemental Notes & Comments:

Stream is gravel with incised channels
High gradient stream

Stream Data Form

Stream Field ID: ST-A310
 Data Point ID: DP-287 Date: 6/2/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Jane Zissos
 County: Chautauqua State: NY
 Stream Name: Unknown
 State Classified: Yes No Not Applicable
 If Yes, Classification: C,C
 Lat: 42.467741 Long: -79.149329

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 2' Wetted Perimeter Width: 3'
 Flow/Gradient Direction: W

Geomorphologic Characteristics

Primary Substrate Class: Bedrock/Boulders/Sand/gravel/Cobble

		Width	
		at DP	Max
OHWM Top of Bank		<u>8'</u>	<u>15'</u>
		<u>20.5'</u>	<u>25'</u>
Bank Slope (H:V)		Left	Right
		<u>1:1</u>	<u>2:1</u>

Bank Stability Summary

Left Bank: Bank eroded
 Right Bank: Bank is eroding

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: Water penny, Megaloptera
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-287

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous forest

Left: Deciduous forest

Associated Wetland Present: Yes No

If Yes, Describe: WL-A237

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	<u>E</u>	
Downstream	<u>W</u>	
Cross Channel	<u>S</u>	<u>A to L</u>

Jurisdictional Connectivity Notes:

Flows outside of delineation area

Supplemental Notes & Comments:

Incised channel, some eroded banks

Stream Data Form

Stream Field ID: ST-A211
 Data Point ID: DP-233 Date: 6/3/10
 Project Name: Ball Hill Wind Project
 Evaluator(s): John Ginos
 County: Chautauqua State: NY
 Stream Name: UNT
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.467250 Long: -79.149374

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: Dry Wetted Perimeter Width: Dry
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Gravel / Clay / Silt / Secondary Cobble

	Width	
	at DP	Max
OHWB	<u>2.5'</u>	<u>2.5'</u>
Top of Bank	<u>5'</u>	<u>5'</u>
Bank Slope (H:V)	Left	Right
	<u>2:1</u>	<u>2:1</u>

Bank Stability Summary

Left Bank: Moderately stable

Right Bank: Moderately stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 288

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous forest

Left: Deciduous forest

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-209

Photos

	Direction	Notes/Additional Description
Upstream	<u>S</u>	
Downstream	<u>N</u>	
Cross Channel	<u>W</u>	<u>R to L</u>

Jurisdictional Connectivity Notes:

Connects to St. Anna, a state designated
GLD stream

Supplemental Notes & Comments:

Highly intermittent headwater stream. Long buffer
disturbance noted

Stream Data Form

Stream Field ID: SI-A212
 Data Point ID: DP-293 Date: 6/3/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): James Quinn
 County: Chautauqua State: NY
 Stream Name: UNT
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.469657 Long: -79.149371

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: None Wetted Perimeter Width: None
 Flow/Gradient Direction: West

Geomorphologic Characteristics

Primary Substrate Class: Sand / Gravel / Clay; Secondary silt

		Width	
		at DP	Max
OHWM		2.5'	2.5'
	Top of Bank	6'	6'
		Left	Right
Bank Slope (H:V)		1:1	1:1

Bank Stability Summary

Left Bank: Relatively stable
 Right Bank: Relatively stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-293

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous forest

Left: Deciduous forest

Associated Wetland Present: Yes No

If Yes, Describe: W1-A238 - maintain hydrologic connection

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-211

Photos

	Direction	Notes/Additional Description
Upstream	<u>E</u>	
Downstream	<u>W</u>	
Cross Channel	<u>S</u>	<u>R to L</u>

Jurisdictional Connectivity Notes:

Stream is in a state designated C & D stream
outside of PSD. Stream was previously
mapped as SI-A210 within another portion
of the PSD.

Supplemental Notes & Comments:

Stream commences at AD-211 and has formed
from W1-A238 drainage. Stream exhibits
bedrock and leaf litter structure. High gradient
headwater stream. Stream width ranges from
2' to 6'.

Stream Data Form

Stream Field ID: ST-A213
 Data Point ID: DP-294 Date: 6/3/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Jim Green
 County: Chautauqua State: NY
 Stream Name: UNT
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.469299 Long: -79.149667

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: trout channel Wetted Perimeter Width: trout channel
 Flow/Gradient Direction: west

Geomorphologic Characteristics

Primary Substrate Class: sand / gravel / clay / leaf litter disturbance

	Width	
	at DP	Max
OHWB	2'	3'
Top of Bank	3'	4'
Bank Slope (H:V)	Left	Right
	1:1	1:1

Bank Stability Summary

Left Bank: stable
 Right Bank: stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: Insects / Amphibians

Stream Data Form

Data Point ID: DP-294

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Deciduous forest

Left: Deciduous forest

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	<u>E</u>	
Downstream	<u>W</u>	
Cross Channel	<u>S</u>	<u>A to L</u>

Jurisdictional Connectivity Notes:

Comments to state designated (S, C) stream outside of PSI

Supplemental Notes & Comments:

Stream exhibits headcuts and deep gutter disturbance. High grade headwater stream.

STREAM FIELD ID: A500

Project Name: Ball Hill Wind Project		
Stream Name:		Date: <u>10/26/15</u>
County: <u>Chautauque</u>		State: <u>New York</u>
Evaluator(s): <u>B. V. ... m. ...</u>		Data Point ID: <u>DP-502</u>
Stream Characteristics		Bottom Characteristics
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>South</u> Width (ft) (water's edge to water's edge): <u>10' - 12'</u> Width (ft) (bank to bank): <u>12' - 14'</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input type="checkbox"/> 0 - 6" <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> 7 - 12" <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> 13 - 24" <input type="checkbox"/> Sand <input type="checkbox"/> 25 - 36" <input type="checkbox"/> Silt/Clay <input type="checkbox"/> 37" + <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth <u>Plastic Substrate</u> <u>1/2" - 2" Wires up to 2.5' in Depth</u>
Bank Height and Slope		Associated Habitat
Left Bank*	Right Bank*	Size Class
<u>0-3' High</u>		Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>wetlands along creek</u> Aquatic Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Fish (trout)</u> Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<u>3-6' High</u>		
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<u>6' + High</u>		
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
Provide Detail of any Evidence of Erosion: <u>Right and left banks have alternating areas of stable and unstable banks. Vertical erosion is present in areas of instability.</u>		Stream Photos Collected ID, Direction, and Description: <u>502 W5/W</u> <u>503 D5/E</u> <u>504 RT6/N</u>

STREAM FIELD ID: ST-8501

Project Name: <u>Bail Hill Wind Project</u>		
Stream Name: <u>unnamed Tributary</u>	Date: <u>10/26/2015</u>	
County: <u>Chautauqua</u>	State: <u>New York</u>	
Evaluator(s): <u>M. Boberg B. Vitis</u>	Data Point ID: <u>DP-504</u>	
Stream Characteristics		
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input type="checkbox"/> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction <u>South</u> Width (ft) (water's edge to water's edge) <u>2'</u> Width (ft) (bank to bank) <u>4'</u>		
Bottom Characteristics		
Substrate Type: <input type="checkbox"/> Bedrock <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Other _____ Probed Stream Depth (if water present): <input checked="" type="checkbox"/> 0-6" <input type="checkbox"/> 7-12" <input type="checkbox"/> 13-24" <input type="checkbox"/> 25-36" <input type="checkbox"/> 37"+ <input type="checkbox"/> No Perceptible Depth		
Bank Height and Slope		
Left Bank*		Right Bank*
<u>0-3' High</u>		
<input type="checkbox"/>	0-20% (0-11°)	<input type="checkbox"/>
<input type="checkbox"/>	21-50% (12-27°)	<input type="checkbox"/>
<input type="checkbox"/>	51-100%+ (38-45°)	<input type="checkbox"/>
<input type="checkbox"/>	100%+(46°+)	<input type="checkbox"/>
<u>3-6' High</u>		
<input type="checkbox"/>	0-20% (0-11°)	<input type="checkbox"/>
<input type="checkbox"/>	21-50% (12-27°)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	51-100% (38-45°)	<input checked="" type="checkbox"/>
<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>
<u>6'+ High</u>		
<input type="checkbox"/>	0-20% (0-11°)	<input type="checkbox"/>
<input type="checkbox"/>	21-50% (12-27°)	<input type="checkbox"/>
<input type="checkbox"/>	51-100% (38-45°)	<input type="checkbox"/>
<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>
Provide Detail of any Evidence of Erosion: _____		
<u>Vehicle banks with minor areas of erosion present.</u>		
Associated Habitat		
Riparian Vegetation <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: <u>Ferns, shrubs, Erigeron</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Associated Wetland <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID: <u>Wetland - 8501</u> Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____		
Size Class		
<input type="checkbox"/> Major >100 ft		
<input type="checkbox"/> Intermediate >10 ft, <100 ft		
<input checked="" type="checkbox"/> Minor <10 ft		
Stream Photos Collected ID, Direction, and Description:		
<u>Photo 504 US (N)</u>		
<u>Photo 807 DS (S)</u>		
<u>Photo 508 RTL (E)</u>		

* Stream is relocated as a roadside ditch.

STREAM FIELD ID: ST-1502

Project Name: Ball Hill Wind Project

Stream Name: unnamed Tributary Date: 10/28/2015

County: Chautauque State: New York

Evaluator(s): M. BOBERG B. VIRTIS Data Point ID: DP-520

Stream Characteristics	Bottom Characteristics																								
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction <u>WEST</u> Width (ft) (water's edge to water's edge) <u>6'-8'</u> Width (ft) (bank to bank) <u>8'-12'</u>	Substrate Type: <table border="0"> <tr><td><input type="checkbox"/></td><td>Bedrock</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Cobble</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Gravel</td></tr> <tr><td><input type="checkbox"/></td><td>Sand</td></tr> <tr><td><input type="checkbox"/></td><td>Silt/Clay</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td></tr> </table> Probed Stream Depth (if water present): <table border="0"> <tr><td><input checked="" type="checkbox"/></td><td>0-6"</td></tr> <tr><td><input type="checkbox"/></td><td>7-12"</td></tr> <tr><td><input type="checkbox"/></td><td>13-24"</td></tr> <tr><td><input type="checkbox"/></td><td>25-36"</td></tr> <tr><td><input type="checkbox"/></td><td>37"+</td></tr> <tr><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>	<input type="checkbox"/>	Bedrock	<input checked="" type="checkbox"/>	Cobble	<input checked="" type="checkbox"/>	Gravel	<input type="checkbox"/>	Sand	<input type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	0-6"	<input type="checkbox"/>	7-12"	<input type="checkbox"/>	13-24"	<input type="checkbox"/>	25-36"	<input type="checkbox"/>	37"+	<input type="checkbox"/>	No Perceptible Depth
<input type="checkbox"/>	Bedrock																								
<input checked="" type="checkbox"/>	Cobble																								
<input checked="" type="checkbox"/>	Gravel																								
<input type="checkbox"/>	Sand																								
<input type="checkbox"/>	Silt/Clay																								
<input type="checkbox"/>	Other																								
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<input type="checkbox"/>	7-12"																								
<input type="checkbox"/>	13-24"																								
<input type="checkbox"/>	25-36"																								
<input type="checkbox"/>	37"+																								
<input type="checkbox"/>	No Perceptible Depth																								

Bank Height and Slope		Associated Habitat	Size Class
Left Bank* <u>0-3' High</u> <input type="checkbox"/> 0-20% (0-11°) <input checked="" type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100%+ (38-45°) <input type="checkbox"/> 100%+ (46°+)	Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>mixed hardwoods</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID: Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: T&F Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:	<input type="checkbox"/> Major >100 ft <input checked="" type="checkbox"/> Intermediate >10 ft, <100 ft <input checked="" type="checkbox"/> Minor <10 ft
<u>3-6' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
<u>6'+ High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		

Provide Detail of any Evidence of Erosion: Localized erosion throughout reach.

Stream Photos Collected ID, Direction, and Description:
Photo 525 (US) E
Photo 526 (DS) W
Photo 527 (RTU) S

STREAM FIELD ID: Stream A503

Project Name: Ball Hill Wind Project

Stream Name: _____ Date: 10/29/15

County: Chautauq State: New York

Evaluator(s): B.V. ... M. Buberg Data Point ID: DP-522

Stream Characteristics **Bottom Characteristics**

Perceptible Flow yes | | no
 Flow Regime: Perennial | | Intermittent | | Ephemeral
 Stream Flow Direction: EAST
 Width (ft) (water's edge to water's edge) 4'
 Width (ft) (bank to bank) 12'-15'

Substrate Type: Bedrock Probed Stream Depth (if water present):
 Cobble 0-6"
 Gravel 7-12"
 Sand 13-24"
 Silt/Clay 25-36"
 Other 37"+
 No Perceptible Depth

Bank Height and Slope **Associated Habitat**

Left Bank*	Right Bank*	Associated Habitat	Size Class
<u>0-3' High</u>		Riparian Vegetation <input checked="" type="checkbox"/> yes no If yes, list: <u>Fragaria, Hebecladus</u>	<input type="checkbox"/> Major >100 ft
<input checked="" type="checkbox"/> 0-20% (0-11°)	<input checked="" type="checkbox"/>	Aquatic Vegetation yes <input checked="" type="checkbox"/> no If yes, list:	<input type="checkbox"/> Intermediate >10 ft, <100ft
<input type="checkbox"/> 21-50% (12-27°)	<input type="checkbox"/>	Associated Wetland yes <input checked="" type="checkbox"/> no If yes, list ID:	<input checked="" type="checkbox"/> Minor <10 ft
<input type="checkbox"/> 51-100%+ (38-45°)	<input type="checkbox"/>	Aquatic Organisms yes <input checked="" type="checkbox"/> no If yes, list:	
<input type="checkbox"/> 100%+ (46°+)	<input type="checkbox"/>	Riparian/Terrestrial Organisms If yes, list: yes <input checked="" type="checkbox"/> no	
<u>3-6' High</u>		T&E Species yes <input checked="" type="checkbox"/> no If yes, list:	
<input type="checkbox"/> 0-20% (0-11°)	<input type="checkbox"/>		
<input type="checkbox"/> 21-50% (12-27°)	<input type="checkbox"/>		
<input type="checkbox"/> 51-100% (38-45°)	<input type="checkbox"/>		
<input type="checkbox"/> 100% (46°+)	<input type="checkbox"/>		
<u>6'+ High</u>			
<input type="checkbox"/> 0-20% (0-11°)	<input type="checkbox"/>		
<input type="checkbox"/> 21-50% (12-27°)	<input type="checkbox"/>		
<input type="checkbox"/> 51-100% (38-45°)	<input type="checkbox"/>		
<input type="checkbox"/> 100% (46°+)	<input type="checkbox"/>		

Provide Detail of any Evidence of Erosion: Stream
channel is stable with ve little
evidence of erosion

Stream Photos Collected ID, Direction, and Description:
photo 539 us/w
540 OS/E
541 RTL/N

STREAM FIELD ID: A504

Project Name: Ball Hill Wind Project																																																		
Stream Name: <u>unnamed Tributary</u>	Date: <u>10/29/15</u>																																																	
County: <u>Chautauq</u>	State: <u>New York</u>																																																	
Evaluator(s): <u>B. V. 205, M. Bobory</u>	Data Point ID: <u>DP-525</u>																																																	
Stream Characteristics	Bottom Characteristics																																																	
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Substrate Type:																																																	
Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	<table style="width:100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Bedrock</td> <td style="width: 50%; border: none;"><input type="checkbox"/> 0-6"</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Cobble</td> <td style="border: none;"><input type="checkbox"/> 7-12"</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Gravel</td> <td style="border: none;"><input checked="" type="checkbox"/> 13-24"</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sand</td> <td style="border: none;"><input type="checkbox"/> 25-36"</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Silt/Clay</td> <td style="border: none;"><input type="checkbox"/> 37"+</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Other</td> <td style="border: none;"><input type="checkbox"/> No Perceptible Depth</td> </tr> </table>		<input type="checkbox"/> Bedrock	<input type="checkbox"/> 0-6"	<input checked="" type="checkbox"/> Cobble	<input type="checkbox"/> 7-12"	<input checked="" type="checkbox"/> Gravel	<input checked="" type="checkbox"/> 13-24"	<input type="checkbox"/> Sand	<input type="checkbox"/> 25-36"	<input type="checkbox"/> Silt/Clay	<input type="checkbox"/> 37"+	<input type="checkbox"/> Other	<input type="checkbox"/> No Perceptible Depth																																				
<input type="checkbox"/> Bedrock	<input type="checkbox"/> 0-6"																																																	
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<input type="checkbox"/> Silt/Clay	<input type="checkbox"/> 37"+																																																	
<input type="checkbox"/> Other	<input type="checkbox"/> No Perceptible Depth																																																	
Stream Flow Direction: <u>down</u>	Probed Stream Depth (if water present):																																																	
Width (ft) (water's edge to water's edge): <u>15'</u>																																																		
Width (ft) (bank to bank): <u>20'</u>																																																		
Bank Height and Slope	Associated Habitat	Size Class																																																
<table style="width:100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">Left Bank*</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">Right Bank*</td> </tr> <tr> <td colspan="3" style="text-align: center;"><u>0-3' High</u></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">0-20% (0-11°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">21-50% (12-27°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">51-100%+ (38-45°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">100%+(46°+)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td colspan="3" style="text-align: center;"><u>3-6' High</u></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">0-20% (0-11°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">21-50% (12-27°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/></td> <td style="border: none;">51-100% (38-45°)</td> <td style="border: none;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">100% (46°+)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td colspan="3" style="text-align: center;"><u>6'+ High</u></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">0-20% (0-11°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">21-50% (12-27°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">51-100% (38-45°)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/></td> <td style="border: none;">100% (46°+)</td> <td style="border: none;"><input type="checkbox"/></td> </tr> </table>	Left Bank*		Right Bank*	<u>0-3' High</u>			<input type="checkbox"/>	0-20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	21-50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	51-100%+ (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	100%+(46°+)	<input type="checkbox"/>	<u>3-6' High</u>			<input type="checkbox"/>	0-20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	21-50% (12-27°)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	51-100% (38-45°)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>	<u>6'+ High</u>			<input type="checkbox"/>	0-20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	21-50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	51-100% (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>FRAXINUS</u> <u>HERBACEOUS</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>WETLAND R/S</u> Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:	<input type="checkbox"/> Major >100 ft <input checked="" type="checkbox"/> Intermediate >10 ft, <100ft <input type="checkbox"/> Minor <10 ft
Left Bank*		Right Bank*																																																
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<input type="checkbox"/>	51-100% (38-45°)	<input type="checkbox"/>																																																
<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>																																																
Provide Detail of any Evidence of Erosion: <u>Visible</u> <u>erosion and bank undercutting</u> <u>on outside meander banks of</u> <u>channel</u>	Stream Photos Collected ID, Direction, and Description: <u>545 WS/W</u> <u>546 OS/E</u> <u>547 LTR/S</u>																																																	

STREAM FIELD ID: 1505

Project Name: Ball Hill Wind Project																																						
Stream Name: unnamed T.C. Runway		Date: 10/29/15																																				
County: Chautauque		State: New York																																				
Evaluator(s): B. Viers, M. Bobory		Data Point ID: DP-526																																				
Stream Characteristics		Bottom Characteristics																																				
Perceptible Flow <input checked="" type="checkbox"/> yes no Flow Regime: <input checked="" type="checkbox"/> Perennial Intermittent Ephemeral Stream Flow Direction <u>EAST</u> Width (ft) (water's edge to water's edge) <u>2'-3'</u> Width (ft) (bank to bank) <u>3'-5'</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> 0 - 6" <input type="checkbox"/> Cobble <input type="checkbox"/> 7 - 12" <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> 13 - 24" <input type="checkbox"/> Sand <input type="checkbox"/> 25 - 36" <input type="checkbox"/> Silt/Clay <input type="checkbox"/> 37" + <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth																																				
Bank Height and Slope		Associated Habitat																																				
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Provide Detail of any Evidence of Erosion: <u>Stream is</u> <u>Stable with little to no</u> <u>erosion present</u>		Stream Photos Collected ID, Direction, and Description: <u>548 WSW</u> <u>549 DSE</u> <u>550 RTLN</u>																																				

STREAM FIELD ID: A506

Project Name: Ball Hill Wind Project		
Stream Name: <u>Unnamed Tributary</u>		Date: <u>10/29/15</u>
County: <u>Chautauque</u>		State: <u>New York</u>
Evaluator(s): <u>B. V. 215, M. Bobing</u>		Data Point ID: <u>DP-527</u>
Stream Characteristics		Bottom Characteristics
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input type="checkbox"/> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>Northern</u> Width (ft) (water's edge to water's edge): <u>1'-2'</u> Width (ft) (bank to bank): <u>2'-4'</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> 0-6" <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> 7-12" <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> 13-24" <input type="checkbox"/> Sand <input type="checkbox"/> 25-36" <input type="checkbox"/> Silt/Clay <input type="checkbox"/> 37"+ <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth
Bank Height and Slope		Associated Habitat
Left Bank* <u>0-3' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100%+ (38-45°) <input type="checkbox"/> 100%+ (46°+)	Right Bank* <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <u>3-6' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+)	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Fraxinus</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>Wetlands A515</u> Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: T&F Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:
Provide Detail of any Evidence of Erosion: <u>high</u> <u>gradient channel with</u> <u>minor area of erosion</u>		Stream Photos Collected ID, Direction, and Description: <u>SS1 S/W</u> <u>SS2 N/W</u> <u>SS3 W/E</u>

STREAM FIELD ID: A508

Project Name: Ball Hill Wind Project																																															
Stream Name: <u>Unnamed Tributary</u>		Date: <u>10/30/15</u>																																													
County: <u>Chautauqua</u>		State: <u>New York</u>																																													
Evaluator(s): <u>B. V. Pitts, M. Sobry</u>		Data Point ID: <u>DA532</u>																																													
Stream Characteristics		Bottom Characteristics																																													
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>South</u> Width (ft) (water's edge to water's edge) <u>4'-5"</u> Width (ft) (bank to bank) <u>5'-6"</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input type="checkbox"/> 0-6" <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> 7-12" <input type="checkbox"/> Gravel <input type="checkbox"/> 13-24" <input type="checkbox"/> Sand <input type="checkbox"/> 25-36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37"+ <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth																																													
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T&H Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:																																															
Provide Detail of any Evidence of Erosion: _____ <u>Stream channel has little to no erosion present</u>		Stream Photos Collected ID, Direction, and Description: <u>561 US / N</u> <u>562 DS / S</u> <u>563 R/L / E</u>																																													

STREAM FIELD ID: ST-AS07

Project Name: Ball Hill Wind Project								
Stream Name: <u>Unnamed Tributary</u>	Date: <u>11/03/2015</u>							
County: <u>Chautauqua</u>	State: <u>New York</u>							
Evaluator(s): <u>M. Biber, S. Buckenmeyer</u>	Data Point ID: <u>DP-547</u>							
Stream Characteristics	Bottom Characteristics							
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Substrate Type:							
Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	<input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Other							
Stream Flow Direction: <u>East</u>	Probed Stream Depth (if water present):							
Width (ft) (water's edge to water's edge): <u>10-8'</u>	<input checked="" type="checkbox"/> 0-6" <input type="checkbox"/> 7-12" <input type="checkbox"/> 13-24" <input type="checkbox"/> 25-36" <input type="checkbox"/> 37"+ <input type="checkbox"/> No Perceptible Depth							
Width (ft) (bank to bank): <u>10-12'</u>								
Bank Height and Slope	Associated Habitat	Size Class						
<table style="width:100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> Left Bank* <u>0-3' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% + (38-45°) <input type="checkbox"/> 100%+ (46°+) </td> <td style="width: 50%; vertical-align: top;"> Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> </tr> <tr> <td style="vertical-align: top;"> <u>3-6' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+) </td> <td style="vertical-align: top;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> </tr> <tr> <td style="vertical-align: top;"> <u>6'+ High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input checked="" type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+) </td> <td style="vertical-align: top;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> </tr> </table>	Left Bank* <u>0-3' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% + (38-45°) <input type="checkbox"/> 100%+ (46°+)	Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<u>3-6' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<u>6'+ High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input checked="" type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Mixed Hardwoods, Hemlock</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID: Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:	<input type="checkbox"/> Major >100 ft <input type="checkbox"/> Intermediate >10 ft, <100ft <input checked="" type="checkbox"/> Minor <10 ft
Left Bank* <u>0-3' High</u> <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% + (38-45°) <input type="checkbox"/> 100%+ (46°+)	Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>							
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Provide Detail of any Evidence of Erosion: <u>minor cutting under left bank</u>	Stream Photos Collected ID, Direction, and Description: <u>Photo 579 W/W</u> <u>Photo 580 DS/E</u> <u>Photo 581 RTL/N</u>							

STREAM FIELD ID: ST-AS11

Project Name: Ball Hill Wind Project			
Stream Name: <u>unnamed Tributary</u>	Date: <u>11/05/2015</u>		
County: Chautauqua	State: New York		
Evaluator(s): <u>M. Boberg & Buekenmyer</u>	Data Point ID: <u>573</u>		
Stream Characteristics	Bottom Characteristics		
Perceptible Flow <input checked="" type="checkbox"/> yes [] no Flow Regime: <input checked="" type="checkbox"/> Perennial [] Intermittent [] Ephemeral Stream Flow Direction <u>South</u> Width (ft) (water's edge to water's edge) <u>2-5'</u> Width (ft) (bank to bank) <u>6-8'</u>	Substrate Type: Probed Stream Depth (if water present): [] Bedrock <input checked="" type="checkbox"/> 0 - 6" <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> 7 - 12" [] Gravel <input type="checkbox"/> 13 - 24" [] Sand <input type="checkbox"/> 25 - 36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37" + [] Other <input type="checkbox"/> No Perceptible Depth		
Bank Height and Slope	Associated Habitat		
<table border="0" style="width:100%;"> <tr> <td style="width:50%; vertical-align: top;"> Left Bank* <div style="text-align: center;"><u>0-3' High</u></div> <input checked="" type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) <input checked="" type="checkbox"/> <input type="checkbox"/> 51 - 100% + (38-45°) [] <input type="checkbox"/> 100%+(46°+) [] <div style="text-align: center;"><u>3-6' High</u></div> <input type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) [] <input type="checkbox"/> 51 - 100% (38-45°) [] <input type="checkbox"/> 100% (46°+) [] <div style="text-align: center;"><u>6' + High</u></div> <input type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) [] <input type="checkbox"/> 51 - 100% (38-45°) [] <input type="checkbox"/> 100% (46°+) [] </td> <td style="width:50%; vertical-align: top;"> Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> </tr> </table>	Left Bank* <div style="text-align: center;"><u>0-3' High</u></div> <input checked="" type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) <input checked="" type="checkbox"/> <input type="checkbox"/> 51 - 100% + (38-45°) [] <input type="checkbox"/> 100%+(46°+) [] <div style="text-align: center;"><u>3-6' High</u></div> <input type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) [] <input type="checkbox"/> 51 - 100% (38-45°) [] <input type="checkbox"/> 100% (46°+) [] <div style="text-align: center;"><u>6' + High</u></div> <input type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) [] <input type="checkbox"/> 51 - 100% (38-45°) [] <input type="checkbox"/> 100% (46°+) []	Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 	Riparian Vegetation <input checked="" type="checkbox"/> yes [] no If yes, list: <u>mixed Hardwoods</u> Aquatic Vegetation [] yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input checked="" type="checkbox"/> yes [] no If yes, list ID: Aquatic Organisms [] yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms [] yes <input checked="" type="checkbox"/> no If yes, list: T&E Species [] yes <input checked="" type="checkbox"/> no If yes, list:
Left Bank* <div style="text-align: center;"><u>0-3' High</u></div> <input checked="" type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) <input checked="" type="checkbox"/> <input type="checkbox"/> 51 - 100% + (38-45°) [] <input type="checkbox"/> 100%+(46°+) [] <div style="text-align: center;"><u>3-6' High</u></div> <input type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) [] <input type="checkbox"/> 51 - 100% (38-45°) [] <input type="checkbox"/> 100% (46°+) [] <div style="text-align: center;"><u>6' + High</u></div> <input type="checkbox"/> 0 - 20% (0-11°) [] <input type="checkbox"/> 21 - 50% (12-27°) [] <input type="checkbox"/> 51 - 100% (38-45°) [] <input type="checkbox"/> 100% (46°+) []	Right Bank* <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 		
Provide Detail of any Evidence of Erosion: <u>minor erosion on banks</u>	Size Class [] Major >100 ft [] Intermediate >10 ft, <100ft <input checked="" type="checkbox"/> Minor <10 ft Stream Photos Collected ID, Direction, and Description: <u>Photo 611 US/N</u> <u>Photo 612 DS/S</u> <u>Photo 613 RTU/W</u>		

STREAM FIELD ID: ST-A512

Project Name: <u>Ball Hill Wind Project</u>																																																								
Stream Name: <u>unnamed Tributary</u>		Date: <u>11/05/2015</u>																																																						
County: <u>Chautauqua</u>		State: <u>New York</u>																																																						
Evaluator(s): <u>M. Boberg S. Buckenmeyer</u>		Data Point ID: <u>574</u>																																																						
Stream Characteristics		Bottom Characteristics																																																						
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction <u>South</u> Width (ft) (water's edge to water's edge) <u>2-4'</u> Width (ft) (bank to bank) <u>6-7'</u>		Substrate Type: <table style="margin-left: 20px;"> <tr><td><input type="checkbox"/></td><td>Bedrock</td><td><input checked="" type="checkbox"/></td><td>0 - 6"</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Cobble</td><td><input type="checkbox"/></td><td>7 - 12"</td></tr> <tr><td><input type="checkbox"/></td><td>Gravel</td><td><input type="checkbox"/></td><td>13 - 24"</td></tr> <tr><td><input type="checkbox"/></td><td>Sand</td><td><input type="checkbox"/></td><td>25 - 36"</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Silt/Clay</td><td><input type="checkbox"/></td><td>37" +</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>	<input type="checkbox"/>	Bedrock	<input checked="" type="checkbox"/>	0 - 6"	<input checked="" type="checkbox"/>	Cobble	<input type="checkbox"/>	7 - 12"	<input type="checkbox"/>	Gravel	<input type="checkbox"/>	13 - 24"	<input type="checkbox"/>	Sand	<input type="checkbox"/>	25 - 36"	<input checked="" type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	37" +	<input type="checkbox"/>	Other	<input type="checkbox"/>	No Perceptible Depth																														
<input type="checkbox"/>	Bedrock	<input checked="" type="checkbox"/>	0 - 6"																																																					
<input checked="" type="checkbox"/>	Cobble	<input type="checkbox"/>	7 - 12"																																																					
<input type="checkbox"/>	Gravel	<input type="checkbox"/>	13 - 24"																																																					
<input type="checkbox"/>	Sand	<input type="checkbox"/>	25 - 36"																																																					
<input checked="" type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	37" +																																																					
<input type="checkbox"/>	Other	<input type="checkbox"/>	No Perceptible Depth																																																					
Bank Height and Slope		Associated Habitat																																																						
Left Bank*	Right Bank*	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>mixed Hardwoods</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms If yes, list: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:																																																						
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 15%;">0-3' High</th> <th style="width: 15%;"></th> <th style="width: 15%;">3-6' High</th> <th style="width: 15%;"></th> <th style="width: 15%;">6' + High</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>0 - 20% (0-11°)</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>21 - 50% (12-27°)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>51 - 100% + (38-45°)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>100%+ (46°+)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>0 - 20% (0-11°)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>21 - 50% (12-27°)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>51 - 100% (38-45°)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>100% (46°+)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>			0-3' High		3-6' High		6' + High	<input checked="" type="checkbox"/>	0 - 20% (0-11°)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51 - 100% + (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100%+ (46°+)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size Class <input type="checkbox"/> Major >100 ft <input type="checkbox"/> Intermediate >10 ft, <100ft <input checked="" type="checkbox"/> Minor <10 ft
	0-3' High		3-6' High		6' + High																																																			
<input checked="" type="checkbox"/>	0 - 20% (0-11°)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																			
<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																			
<input type="checkbox"/>	51 - 100% + (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																			
<input type="checkbox"/>	100%+ (46°+)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																			
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<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																			
<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																			
Provide Detail of any Evidence of Erosion: _____ _____ _____ _____		Stream Photos Collected ID, Direction, and Description: <u>PHOTO U14 US/N</u> <u>PHOTO U15 DS/S</u> <u>PHOTO U16 RTL/W</u>																																																						

STREAM FIELD ID: ST-AS18

Project Name: <u>Ball Hill Wind Project</u>																																								
Stream Name: <u>unnamed Tributary</u>		Date: <u>11/11/15</u>																																						
County: <u>Chautauqua</u>		State: <u>New York</u>																																						
Evaluator(s): <u>M. Boberg B. Virts</u>		Data Point ID: <u>603</u>																																						
Stream Characteristics		Bottom Characteristics																																						
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>North</u> Width (ft) (water's edge to water's edge): <u>2-5'</u> Width (ft) (bank to bank): <u>5-6'</u>		Substrate Type: <table style="margin-left: 20px;"> <tr><td><input type="checkbox"/></td><td>Bedrock</td></tr> <tr><td><input type="checkbox"/></td><td>Cobble</td></tr> <tr><td><input type="checkbox"/></td><td>Gravel</td></tr> <tr><td><input type="checkbox"/></td><td>Sand</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Silt/Clay</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td></tr> </table> Probed Stream Depth (if water present): <table style="margin-left: 20px;"> <tr><td><input checked="" type="checkbox"/></td><td>0 - 6"</td></tr> <tr><td><input type="checkbox"/></td><td>7 - 12"</td></tr> <tr><td><input type="checkbox"/></td><td>13 - 24"</td></tr> <tr><td><input type="checkbox"/></td><td>25 - 36"</td></tr> <tr><td><input type="checkbox"/></td><td>37" +</td></tr> <tr><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>	<input type="checkbox"/>	Bedrock	<input type="checkbox"/>	Cobble	<input type="checkbox"/>	Gravel	<input type="checkbox"/>	Sand	<input checked="" type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	0 - 6"	<input type="checkbox"/>	7 - 12"	<input type="checkbox"/>	13 - 24"	<input type="checkbox"/>	25 - 36"	<input type="checkbox"/>	37" +	<input type="checkbox"/>	No Perceptible Depth														
<input type="checkbox"/>	Bedrock																																							
<input type="checkbox"/>	Cobble																																							
<input type="checkbox"/>	Gravel																																							
<input type="checkbox"/>	Sand																																							
<input checked="" type="checkbox"/>	Silt/Clay																																							
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<input checked="" type="checkbox"/>	0 - 6"																																							
<input type="checkbox"/>	7 - 12"																																							
<input type="checkbox"/>	13 - 24"																																							
<input type="checkbox"/>	25 - 36"																																							
<input type="checkbox"/>	37" +																																							
<input type="checkbox"/>	No Perceptible Depth																																							
Bank Height and Slope		Associated Habitat																																						
Left Bank* <table style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: center;"><u>0-3' High</u></td></tr> <tr><td><input checked="" type="checkbox"/></td><td>0 - 20% (0-11°)</td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% + (38-45°)</td></tr> <tr><td><input type="checkbox"/></td><td>100%+ (46°+)</td></tr> <tr><td colspan="2" style="text-align: center;"><u>3-6' High</u></td></tr> <tr><td><input type="checkbox"/></td><td>0 - 20% (0-11°)</td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% (38-45°)</td></tr> <tr><td><input type="checkbox"/></td><td>100% (46°+)</td></tr> <tr><td colspan="2" style="text-align: center;"><u>6' + High</u></td></tr> <tr><td><input type="checkbox"/></td><td>0 - 20% (0-11°)</td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% (38-45°)</td></tr> <tr><td><input type="checkbox"/></td><td>100% (46°+)</td></tr> </table>	<u>0-3' High</u>		<input checked="" type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	51 - 100% + (38-45°)	<input type="checkbox"/>	100%+ (46°+)	<u>3-6' High</u>		<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	100% (46°+)	<u>6' + High</u>		<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	100% (46°+)	Right Bank* <table style="margin-left: 20px;"> <tr><td><input checked="" type="checkbox"/></td><td>0 - 20% (0-11°)</td></tr> <tr><td><input type="checkbox"/></td><td>21 - 50% (12-27°)</td></tr> <tr><td><input type="checkbox"/></td><td>51 - 100% (38-45°)</td></tr> <tr><td><input type="checkbox"/></td><td>100% (46°+)</td></tr> </table>	<input checked="" type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>	100% (46°+)	Riparian Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>106A562</u> Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____
<u>0-3' High</u>																																								
<input checked="" type="checkbox"/>	0 - 20% (0-11°)																																							
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<input type="checkbox"/>	21 - 50% (12-27°)																																							
<input type="checkbox"/>	51 - 100% (38-45°)																																							
<input type="checkbox"/>	100% (46°+)																																							
Provide Detail of any Evidence of Erosion: _____ <u>minor erosion to banks.</u> _____ _____		Stream Photos Collected ID, Direction, and Description: <u>Photo 602 US/S</u> <u>Photo 603 DS/N</u> <u>Photo 604 RTL/W</u> <u>Photo</u>																																						

STREAM FIELD ID: A519

Project Name: Ball Hill Wind Project		
Stream Name:	Date: <u>11/12/2015</u>	
County: Chautauqua	State: New York	
Evaluator(s): <u>B. Virts, S. Buckenmeyer</u>	Data Point ID: <u>608</u>	
Stream Characteristics	Bottom Characteristics	
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Substrate Type:	Probed Stream Depth (if water present):
Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	<input type="checkbox"/> Bedrock	<input type="checkbox"/> 0-6"
Stream Flow Direction: <u>East</u>	<input type="checkbox"/> Cobble	<input checked="" type="checkbox"/> 7-12"
Width (ft) (water's edge to water's edge) <u>2 foot</u>	<input checked="" type="checkbox"/> Gravel	<input type="checkbox"/> 13-24"
Width (ft) (bank to bank) <u>3-4 foot</u>	<input type="checkbox"/> Sand	<input type="checkbox"/> 25-36"
	<input checked="" type="checkbox"/> Silt/Clay	<input type="checkbox"/> 37"+
	<input type="checkbox"/> Other	<input type="checkbox"/> No Perceptible Depth
Bank Height and Slope	Associated Habitat	Size Class
Left Bank*	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> Major >100 ft
<u>0-3' High</u>	If yes, list: <u>FACULIATM Emergent Herbaceous species</u>	<input type="checkbox"/> Intermediate >10 ft, <100ft
<input checked="" type="checkbox"/> 0-20% (0-11°)	Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> Minor <10 ft
<input type="checkbox"/> 21-50% (12-27°)	If yes, list:	
<input type="checkbox"/> 51-100% (38-45°)	Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	
<input type="checkbox"/> 100% (46°+)	If yes, list ID:	
<u>3-6' High</u>	Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	
<input type="checkbox"/> 0-20% (0-11°)	If yes, list: <u>Not observed.</u>	
<input type="checkbox"/> 21-50% (12-27°)	Riparian/Terrestrial Organisms	
<input type="checkbox"/> 51-100% (38-45°)	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	
<input type="checkbox"/> 100% (46°+)	If yes, list: <u>Cattle</u>	
<u>6'+ High</u>	T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	
<input type="checkbox"/> 0-20% (0-11°)	If yes, list: <u>None observed</u>	
<input type="checkbox"/> 21-50% (12-27°)		
<input type="checkbox"/> 51-100% (38-45°)		
<input type="checkbox"/> 100% (46°+)		
Provide Detail of any Evidence of Erosion: <u>Minor erosion related to livestock access.</u>	Stream Photos Collected ID, Direction, and Description: <u>670 W/US, 671 E/DS, 672 N/RTL</u>	

STREAM FIELD ID: A520

Project Name: Ball Hill Wind Project		
Stream Name:		Date: <u>11/12/2015</u>
County: Chautauqua		State: New York
Evaluator(s): <u>B. Virts, S. Buckenmeyer</u>		Data Point ID: <u>609</u>
Stream Characteristics		Bottom Characteristics
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>North^{SB} East</u> Width (ft) (water's edge to water's edge): <u>2-8 feet</u> Width (ft) (bank to bank): <u>4-10 feet</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input type="checkbox"/> 0-6" <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> 7-12" <input type="checkbox"/> Gravel <input type="checkbox"/> 13-24" <input type="checkbox"/> Sand <input type="checkbox"/> 25-36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37"+ <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth
Bank Height and Slope		Associated Habitat
Left Bank* <div style="text-align: center;"><u>0-3' High</u></div> <input checked="" type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100%+ (38-45°) <input type="checkbox"/> 100%+ (46°+)	Right Bank* <input checked="" type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100% (38-45°) <input type="checkbox"/> 100% (46°+)	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Facultative Emergent Herbaceous</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Associated Wetland <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list ID: <u>A565</u> Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: <u>None observed</u> Riparian/Terrestrial Organisms <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>Cattle</u> T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: <u>None observed</u>
Provide Detail of any Evidence of Erosion: <u>Erosion from livestock. Severe stream instability in upper stream reach. Stable in the lower stream reach.</u>		Stream Photos Collected ID, Direction, and Description: <u>673 W/US, 674 E/US, 675 N/RT</u>

STREAM FIELD ID: A521

Project Name: Ball Hill Wind Project

Stream Name: NORTH Branch

Date: 11/12/15

County: Chautauq

State: New York

Evaluator(s): B. V. V. S. Buckenmeyer

Data Point ID: 617
DP-6273V ~~DP-6273V~~ (SV)

Stream Characteristics

Bottom Characteristics

Perceptible Flow yes no
Flow Regime: Perennial Intermittent Ephemeral

Substrate Type: Bedrock Cobble Gravel Sand Silt/Clay Other

Probed Stream Depth (if water present):
 0-6"
 7-12"
 13-24"
 25-36"
 37"+
 No Perceptible Depth

Stream Flow Direction: North
Width (ft) (water's edge to water's edge): 10 = 8', 20 = 6'
Width (ft) (bank to bank): 10 = 10'-12', 20 = 8'-10'

Bank Height and Slope

Associated Habitat

Size Class

Left Bank*

Right Bank*

0-3' High

0-20% (0-11°)
 21-50% (12-27°)
 51-100%+ (38-45°)
 100%+(46°+)

3-6' High

0-20% (0-11°)
 21-50% (12-27°)
 51-100% (38-45°)
 100% (46°+)

6'+ High

0-20% (0-11°)
 21-50% (12-27°)
 51-100% (38-45°)
 100% (46°+)

Riparian Vegetation yes no
If yes, list: Fraxinus, Pterocarya, Juniperus
Aquatic Vegetation yes no
If yes, list:

Major >100 ft
 Intermediate >10 ft, <100 ft
 Minor <10 ft

Associated Wetland yes no
If yes, list ID: Wetland A567

Aquatic Organisms yes no
If yes, list: none observed

Riparian/Terrestrial Organisms yes no
If yes, list: not observed

T&E Species yes no
If yes, list: none observed

Stream Photos Collected ID, Direction, and Description:

680 US/W

681 DS/E

682 RTU/N

Provide Detail of any Evidence of Erosion:

Erosion noted in bank cut areas
Both Primary and Secondary
channels have headcutting
upstream of their confluence

STREAM FIELD ID: AS22

Project Name: Ball Hill Wind Project

Stream Name: UNNAMED TRIBUTARY

Date: 11/13/15

County: Chautauque

State: New York

Evaluator(s): B. V. JTS

Data Point ID: DP-619

Stream Characteristics

Perceptible Flow yes no
 Flow Regime: Perennial Intermittent Ephemeral
 Stream Flow Direction North
 Width (ft) (water's edge to water's edge) 2'
 Width (ft) (bank to bank) 6'-8'

Bottom Characteristics

Substrate Type: Bedrock Cobble Gravel Sand Silt/Clay Other _____

Probed Stream Depth (if water present):
 0-6"
 7-12"
 13-24"
 25-36"
 37"+
 No Perceptible Depth

Bank Height and Slope

Left Bank*

Right Bank*

0-3' High

<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>
<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	51 - 100% + (38-45°)	<input checked="" type="checkbox"/>
<input type="checkbox"/>	100%+ (46°+)	<input type="checkbox"/>

3-6' High

<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>
<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>
<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>
<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>

6'+ High

<input type="checkbox"/>	0 - 20% (0-11°)	<input type="checkbox"/>
<input type="checkbox"/>	21 - 50% (12-27°)	<input type="checkbox"/>
<input type="checkbox"/>	51 - 100% (38-45°)	<input type="checkbox"/>
<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>

Provide Detail of any Evidence of Erosion:

Channel is a high gradient stream that is impacted by cattle. The channel is generally unstable throughout the reach.

Associated Habitat

Size Class

Riparian Vegetation yes no
 If yes, list: R1 Brn + Pasture + T. Bank Apple Trees
 Aquatic Vegetation yes no
 If yes, list: _____

Major >100 ft
 Intermediate >10 ft, <100ft
 Minor <10 ft

Associated Wetland yes no
 If yes, list ID: Wetland A1570

Aquatic Organisms yes no
 If yes, list: none observed

Riparian/Terrestrial Organisms yes no
 If yes, list: none observed

T&E Species yes no
 If yes, list: none observed

Stream Photos Collected ID, Direction, and Description:

610 - S/US

611 - N/DS

612 - W/RTL

STREAM FIELD ID: ST-A523

Project Name: <u>Ball Hill Wind Project</u>																																																				
Stream Name: <u>unnamed tributary</u>	Date: <u>11/16/2015</u>																																																			
County: <u>Chautauque</u>	State: <u>New York</u>																																																			
Evaluator(s): <u>M. Coberg</u> <u>S. Buckenmeyer</u>	Data Point ID: <u>DP 024</u>																																																			
Stream Characteristics	Bottom Characteristics																																																			
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Substrate Type:																																																			
Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	<table style="width:100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Bedrock</td> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> 0-6"</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Cobble</td> <td style="border: none;"><input type="checkbox"/> 7-12"</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Gravel</td> <td style="border: none;"><input type="checkbox"/> 13-24"</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sand</td> <td style="border: none;"><input type="checkbox"/> 25-36"</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Silt/Clay</td> <td style="border: none;"><input type="checkbox"/> 37"+</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Other</td> <td style="border: none;"><input type="checkbox"/> No Perceptible Depth</td> </tr> </table>		<input type="checkbox"/> Bedrock	<input checked="" type="checkbox"/> 0-6"	<input type="checkbox"/> Cobble	<input type="checkbox"/> 7-12"	<input type="checkbox"/> Gravel	<input type="checkbox"/> 13-24"	<input type="checkbox"/> Sand	<input type="checkbox"/> 25-36"	<input checked="" type="checkbox"/> Silt/Clay	<input type="checkbox"/> 37"+	<input type="checkbox"/> Other	<input type="checkbox"/> No Perceptible Depth																																						
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Provide Detail of any Evidence of Erosion: _____ <u>MINOR EROSION</u> _____ _____ _____	Stream Photos Collected ID, Direction, and Description: <u>PHOTO 097 US/E</u> _____ <u>PHOTO 098 DS/W</u> _____ <u>PHOTO 099 RT/E</u> _____																																																			

STREAM FIELD ID: ST-AS210

Project Name: <u>Ball Hill Wind Project</u>																																																	
Stream Name: <u>unnamed Tributary</u>	Date: <u>11/20/2015</u>																																																
County: <u>Chautauqua</u>	State: <u>New York</u>																																																
Evaluator(s): <u>M. Boberg & Buckenmeyer</u>	Data Point ID: <u>WSL</u>																																																
Stream Characteristics	Bottom Characteristics																																																
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>North</u> Width (ft) (water's edge to water's edge): <u>8-10'</u> Width (ft) (bank to bank): <u>15-20'</u>	Substrate Type: <table style="display: inline-table; vertical-align: top;"> <tr><td><input type="checkbox"/></td><td>Bedrock</td></tr> <tr><td><input type="checkbox"/></td><td>Cobble</td></tr> <tr><td><input type="checkbox"/></td><td>Gravel</td></tr> <tr><td><input type="checkbox"/></td><td>Sand</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Silt/Clay</td></tr> <tr><td><input type="checkbox"/></td><td>Other</td></tr> </table> Probed Stream Depth (if water present): <table style="display: inline-table; vertical-align: top;"> <tr><td><input type="checkbox"/></td><td>0 - 6"</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>7 - 12"</td></tr> <tr><td><input type="checkbox"/></td><td>13 - 24"</td></tr> <tr><td><input type="checkbox"/></td><td>25 - 36"</td></tr> <tr><td><input type="checkbox"/></td><td>37" +</td></tr> <tr><td><input type="checkbox"/></td><td>No Perceptible Depth</td></tr> </table>	<input type="checkbox"/>	Bedrock	<input type="checkbox"/>	Cobble	<input type="checkbox"/>	Gravel	<input type="checkbox"/>	Sand	<input checked="" type="checkbox"/>	Silt/Clay	<input type="checkbox"/>	Other	<input type="checkbox"/>	0 - 6"	<input checked="" type="checkbox"/>	7 - 12"	<input type="checkbox"/>	13 - 24"	<input type="checkbox"/>	25 - 36"	<input type="checkbox"/>	37" +	<input type="checkbox"/>	No Perceptible Depth																								
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Left Bank*	Bank Height	Right Bank*																																															
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<input type="checkbox"/>	100% (46°+)	<input type="checkbox"/>																																															

STREAM FIELD ID: ST-A527

Project Name: <u>Ball Hill Wind Project</u>		
Stream Name: <u>unnamed Tributary</u>		Date: <u>11/20/15</u>
County: <u>Chautauqua</u>		State: <u>New York</u>
Evaluator(s): <u>M. Badger S. Buellon Meyer</u>		Data Point ID: <u>657</u>
Stream Characteristics		Bottom Characteristics
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction: <u>East</u> Width (ft) (water's edge to water's edge): <u>10-15</u> Width (ft) (bank to bank): <u>20-210'</u>		Substrate Type: Probed Stream Depth (if water present): <input type="checkbox"/> Bedrock <input type="checkbox"/> 0-6" <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> 7-12" <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> 13-24" <input type="checkbox"/> Sand <input type="checkbox"/> 25-36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37"+ <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth
Bank Height and Slope		Associated Habitat
Left Bank* <input checked="" type="checkbox"/> 0-3' High <input type="checkbox"/> 0-20% (0-11°) <input type="checkbox"/> 21-50% (12-27°) <input type="checkbox"/> 51-100%+ (38-45°) <input type="checkbox"/> 100%+(46°+)	Right Bank* <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>mixed hardwoods</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID: Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: T&H Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list:
Provide Detail of any Evidence of Erosion: <u>No apparent erosion</u>		Stream Photos Collected ID, Direction, and Description: <u>Photo 739 US/W</u> <u>Photo 740 DS/E</u> <u>Photo 741 RL/S</u>

STREAM FIELD ID: ST-A528

Project Name: <u>Ball Hill Wind Project</u>																																		
Stream Name: <u>unnamed tributary</u>	Date: <u>11/20/15</u>																																	
County: <u>Chautauqua</u>	State: <u>New York</u>																																	
Evaluator(s): <u>M. Bodeig S. Buckenmeyer</u>	Data Point ID: <u>658</u>																																	
Stream Characteristics	Bottom Characteristics																																	
Perceptible Flow <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Flow Regime: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral Stream Flow Direction <u>W/E</u> Width (ft) (water's edge to water's edge) <u>4-8'</u> Width (ft) (bank to bank) <u>8-10'</u>	Substrate Type: <input type="checkbox"/> Bedrock <input type="checkbox"/> 0-6" <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> 7-12" <input type="checkbox"/> Gravel <input type="checkbox"/> 13-24" <input type="checkbox"/> Sand <input type="checkbox"/> 25-36" <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> 37"+ <input type="checkbox"/> Other <input type="checkbox"/> No Perceptible Depth																																	
Bank Height and Slope	Associated Habitat	Size Class																																
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Left Bank*</th> <th style="width:40%;">Right Bank*</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center;"><u>0-3' High</u></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="2" style="text-align: center;"><u>3-6' High</u></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="2" style="text-align: center;"><u>6'+ High</u></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	Left Bank*	Right Bank*	<u>0-3' High</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>3-6' High</u>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>6'+ High</u>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riparian Vegetation <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If yes, list: <u>mixed hardwoods</u> Aquatic Vegetation <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Associated Wetland <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list ID: _____ Aquatic Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ Riparian/Terrestrial Organisms <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____ T&E Species <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, list: _____	<input type="checkbox"/> Major >100 ft <input checked="" type="checkbox"/> Intermediate >10 ft, <100ft <input checked="" type="checkbox"/> Minor <10 ft
Left Bank*	Right Bank*																																	
<u>0-3' High</u>																																		
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<input type="checkbox"/>	<input type="checkbox"/>																																	
Provide Detail of any Evidence of Erosion: _____ <u>Minor erosion on banks</u> <u>evidence of recent flood</u> <u>downstream</u>	Stream Photos Collected ID, Direction, and Description: <u>Photo 743 US/E</u> <u>Photo 744 DS/W</u> <u>Photo 745 RTL/S</u>																																	

Stream Data Form

Stream Field ID: Stream A529
Data Point ID: DP-1616 **Date:** 5/20/16
Project Name: Ball Hill Wind Project
Evaluator(s): Ben Urts, Nicole Dutcher
County: Chautauqua **State:** NY
Stream Name: Unnamed trib to Branch Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: _____
Lat: 42.407665 **Long:** -79.114551

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 4" **Wetted Perimeter Width:** 1.0'
Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Silt/Clay

		Width	
		at DP	Max
OHWM		5.0'	5.0'
Top of Bank		10.0'	10.0'
		Left	Right
Bank Slope (H:V)		3/2.5	3/2.5

Bank Stability Summary

Left Bank: No areas of bank instability / fully vegetated
Right Bank: No areas of bank instability / fully vegetated

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 6666

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-2' - FAC/Emergent veg.
2'-150' - Cultivated row crops (wheat)

Left: 0-5' - FAC/Emergent veg.
5'-150' - Cultivated row crops (wheat)

Associated Wetland Present: Yes No

If Yes, Describe: Wetland A597

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-AS10

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	RTL

Jurisdictional Connectivity Notes:

Receives hydrology from gradient wetland and discharges to
unnamed tributary of Branch Creek

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: ST-A530
Data Point ID: DP-667 **Date:** 5/23/16
Project Name: Ball Hill Wind Project
Evaluator(s): Ben Virts and Nicole Dutzy
County: Chautauqua **State:** NY
Stream Name: Unnamed trib to Branch Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: _____
Lat: 42.408745 **Long:** -79.110409

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 2 in **Wetted Perimeter Width:** 4ft
Flow/Gradient Direction: East

Geomorphologic Characteristics

Primary Substrate Class: silt/clay

		Width	
		at DP	Max
OHWM Top of Bank	5ft	5ft	
	8ft	10ft	
		Left	Right
		3/4	1/0.5

Bank Stability Summary

Left Bank: Moderate erosion w/in channel, muc scree @ outside meander bends
Right Bank: Minor erosion, stream has good access to flood plain

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 1067

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Hardwood forest w/ selective timberharvest (beech)

Left: 0-80 + 90-150 = Hardwood forest

~~90-150~~ 80-90: dirt access road

Associated Wetland Present: Yes No

If Yes, Describe: Wetland A598

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	RTL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: Stream A531
 Data Point ID: DP-685 Date: 5/24/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): B. Vietz
 County: Chautauqua State: NY
 Stream Name: Unnamed tributary of Silver Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.433901 Long: -79.130705

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 2"-4" Wetted Perimeter Width: 4'
 Flow/Gradient Direction: EAST

Geomorphologic Characteristics

Primary Substrate Class: Gravel

		Width	
		at DP	Max
OHWM Top of Bank	7'	16'	
	12'	18'	
		Left	Right
		1:1	1:1

Bank Stability Summary

Left Bank: Bank is stable with very minor examples of minor erosion present
 Right Bank: Bank is stable with very minor examples of erosion present

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: Minnows
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 685

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0'-150' Hardwood Forest - mature hemlocks

Left: 0'-150' Hardwood Forest - mature hemlocks

Associated Wetland Present: Yes No

If Yes, Describe: Wetland A608

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	W	
Downstream	E	
Cross Channel	N	RTL

Jurisdictional Connectivity Notes:

Tributary of Silver Creek

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: Stream A532
Data Point ID: DP-686 **Date:** 5/24/16
Project Name: Ball Hill Wind Project
Evaluator(s): B. Virts
County: Chautauqua **State:** NY
Stream Name: unnamed tributary of Silver Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: _____
Lat: 42.434037 **Long:** -79.130850

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 4" **Wetted Perimeter Width:** 4'
Flow/Gradient Direction: EAST

Geomorphologic Characteristics

Primary Substrate Class: Gravel

		Width	
		at DP	Max
OHWM Top of Bank	OHWM	6'	8'
	Top of Bank	8'	10'
Bank Slope (H:V)		Left	Right
		1:1	1:1

Bank Stability Summary

Left Bank: Bank stable, no erosion present

Right Bank: Bank stable, no erosion present

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 686

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0'-150' Mature Hemlock Forest

Left: 0'-150' mature Hemlock Forest

Associated Wetland Present: Yes No

If Yes, Describe: Wetland A608

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	W	
Downstream	E	
Cross Channel	N	RTL

Jurisdictional Connectivity Notes:

Tributary of Silver Creek

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: Stream AS33
Data Point ID: DP- 707 **Date:** 5/26/16
Project Name: Ball Hill Wind Project
Evaluator(s): B. Virts, S. Buckenmeyer
County: Chautauqua **State:** NY
Stream Name: Silver Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: A
Lat: 42.451881 **Long:** -79.103028

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 2.05' **Wetted Perimeter Width:** 7'
Flow/Gradient Direction: EAST

Geomorphologic Characteristics

Primary Substrate Class: Gravel (Large)

		Width	
		at DP	Max
OHWM		21'	30'
Top of Bank		23'	30'
		Left	Right
Bank Slope (H:V)		2:1	2:1

Bank Stability Summary

Left Bank: minor Bank erosion with significant disturbance near stream crossing
Right Bank: minor Bank erosion with significant disturbance near stream crossing

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
Aquatic Organisms Observed: Yes No
 If Yes, Describe: Caddis fly, Stonefly, Mayfly, Red backed Salamander, minnows
Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 707

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Forested and shrub Riparian 0'-150'

Left: Forested and shrub Riparian species 0'-150'

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-514

Photos

	Direction	Notes/Additional Description
Upstream	W	
Downstream	E	
Cross Channel	N	RTL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream appears to have regular maintenance dredging
upstream of the culvert crossing and has a large
concrete apron within the stream down gradient
of the culvert crossing.

Stream Data Form

Stream Field ID: STREAM A534
Data Point ID: DP- 712 **Date:** 5/26/16
Project Name: Ball Hill Wind Project
Evaluator(s): B. V. RITS, S. Buckenmeyer
County: Chautauqua **State:** NY
Stream Name: Unnamed Tributary of Silver Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: A
Lat: 42.456515 **Long:** -79.104645

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 6" **Wetted Perimeter Width:** 7'
Flow/Gradient Direction: EAST

Geomorphologic Characteristics

Primary Substrate Class: Gravel / Cobble

		Width	
		at DP	Max
OHWM		13'	15'
Top of Bank		9'	25'
		Left	Right
Bank Slope (H:V)		2:2.5'	2':1.5'

Bank Stability Summary

Left Bank: Left bank is stable upstream of existing culvert and unstable/incised below
Right Bank: Right Bank is stable upstream of existing culvert and unstable/incised below

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
Aquatic Organisms Observed: Yes No
 If Yes, Describe: Caddis flies, Stone flies
Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-712

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0'-25' shrub riparian species vegetation and 75'-150' hay field

Left: 0'-75' shrub and forest buffer area with an area mowed for beehives, 75'-150' hay field

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-517

Photos

	Direction	Notes/Additional Description
Upstream	W	
Downstream	E	
Cross Channel	N	RTL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: STREAM A535
Data Point ID: DP- 719 **Date:** 5/27/16
Project Name: Ball Hill Wind Project
Evaluator(s): B. Virts N. Dutcher
County: Chautauqua **State:** NY
Stream Name: U.T. of Silver Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: _____
Lat: 42.439573 **Long:** -79.130699

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 46" **Wetted Perimeter Width:** 1'
Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Silt

		Width	
		at DP	Max
OHWM		2'	3'
Top of Bank		4'	5'
		Left	Right
Bank Slope (H:V)		6":5'	6":5'

Bank Stability Summary

Left Bank: Bank is vegetated and very stable
Right Bank: Bank is vegetated and very stable

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP - 719

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: within Power Row - herbaceous FACultative and
wetter plants - within forest, shrub and tree species

Left: ↓

Associated Wetland Present: Yes No

If Yes, Describe: wetland A623 (PFO, PSM within ROW)

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	RTL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: Stream A537
 Data Point ID: DP-747 Date: 6/8/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): B. Viers, N. Dutcher
 County: Chautauqua State: NY
 Stream Name: W. of Silver Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.437886 Long: -79.121326

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): 26"
 Wetted Perimeter Width (ft.): 2'
 Flow/Gradient Direction: EAST / Northeast

Geomorphologic Characteristics

Primary Substrate Class: Gravel | Silt

	Width (ft.)	
	at DP	Max
OHWB	2'	5'
Top of Bank	4'	12'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:

Left: 1' : 2.5'

Right: 1' : 2.5'

Bank Stability Summary

Right: Stream banks are heavily impacted by livestock, have vertical eroding banks, and are nearly void of vegetation

Left: Both left and right banks are very unstable throughout the reach

Stream Data Form

Data Point ID: DP-747

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0'-150' Actively grazed Pasture

Left: 0'-50' Actively grazed pasture

50'-70' Dirt Access Road

70'-150' Actively grazed Pasture

Associated Wetland Present: Yes No

If Yes, ID: Wetland A635

Associated Artificial Drain Present: Yes No

If Yes, ID: AD-521

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	RTL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: ST-A538
 Data Point ID: DP-750 Date: 6/8/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Lits and Nicole Dutcher
 County: Chautauque State: NY
 Stream Name: unnamed tributary to Silver Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.447305 Long: -79.122743

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 4" Wetted Perimeter Width: 2'
 Flow/Gradient Direction: East

Geomorphologic Characteristics

Primary Substrate Class: silt / gravel / cobbles

		Width	
		at DP	Max
OHWM		7'	8'
	Top of Bank	9'	10'
		Left	Right
Bank Slope (H:V)		2:1	2:1

Bank Stability Summary

Left Bank: Moderately stable, some ferns stabilizing bank but some erosion during highflow periods
 Right Bank: ↑ same

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Stream Data Form

Data Point ID: DP-750

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-10' Floodplain wetland

10-150' Upland mixed deciduous/coniferous forest with understory

Left: 0-5' Floodplain wetland

5'-150' Upland mixed deciduous/Coniferous Forest w/ understory

Associated Wetland Present: Yes No

If Yes, Describe: Wetland A548

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	W	
Downstream	E	
Cross Channel	N	R+L

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream starts within wetland A548 and is outlet for groundwater discharge (water present year round).

Stream Data Form

Stream Field ID: ST-A 539
 Data Point ID: DP-761 Date: 6/9/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Vits and Nicole Dutcher
 County: Chautauqua State: NY
 Stream Name: U.T. of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.478907 Long: -79.149567

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): N/A
 Wetted Perimeter Width (ft.): N/A
 Flow/Gradient Direction: Northwest

Geomorphologic Characteristics

Primary Substrate Class: Silt Some cobbles

	Width (ft.)	
	at DP	Max
OHWM	<u>N/A</u>	<u>N/A</u>
Top of Bank	<u>3'</u>	<u>10'</u>

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 1:1
 Right: 1:1

Bank Stability Summary

Right: Somewhat stable, some nests but evidence of erosion and undercutting during high flow

 Left: Same as above ↑

Stream Data Form

Data Point ID: DP-761

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____

Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-150' : Deciduous forest / secondary growth,
no shrub/scrub layer, little herbaceous layer

Left: 0-80' Deciduous / secondary growth forest, little understory
80-150' - cultivated / mowed hay field

Associated Wetland Present: Yes No
 If Yes, ID: _____

Associated Artificial Drain Present: Yes No
 If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	E	
Downstream	W	
Cross Channel	S	Rtbl

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: Stream ST-A540
 Data Point ID: DP-762 Date: 0/9/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Virts and Nicole Dutcher
 County: Chautauqua State: NY
 Stream Name: W. of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.479320 Long: -79.149120

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): 3"
 Wetted Perimeter Width (ft.): 6"
 Flow/Gradient Direction: West

Geomorphologic Characteristics

Primary Substrate Class: Bedrock

	Width (ft.)	
	at DP	Max
OHWB	3'	6'
Top of Bank	20'	40'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 90%
 Right: 90%

Bank Stability Summary

Right: Moderately stable, deep channel and very steep drop off but being held up by bedrock layers and roots of trees growing on edge of top of bank and on sides of bank
 Left: Same as right side ↑

Stream Data Form

Data Point ID: 762

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: Birds

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
 Right: 0'-150' - Upland deciduous forest a few conifers, little understory and ground cover
 Left: 0'-150' - Upland deciduous forest a few conifers (Hemlock) mixed in, little understory and ground cover

Associated Wetland Present: Yes No
 If Yes, ID: _____
 Associated Artificial Drain Present: Yes No
 If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	E	
Downstream	W	
Cross Channel	S	RTL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

- Very large perennial channel with some upland islands throughout.
 During flow events water scours bedrock on banks.
 - Stream has ~~an~~ eroded large area, bank is about 20' wide but gorges/runne area is a total of about 60' including flood plain
 - 90% bank slope at data point, slope turns into more of 45% slope up and down stream of data point but bank vertical height is still about 20'-30' 2
 - about 60' drop just ~~inside~~ about 10' inside of study area, w/ waterfall

Stream Data Form

Stream Field ID: ST-AS41
 Data Point ID: DP-765 Date: 6/9/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Virts and Nicole Dutcher
 County: Chautauqua State: NY
 Stream Name: h.t. of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.481276 Long: -79.149353

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): N/A
 Wetted Perimeter Width (ft.): N/A
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: silt, gravel, cobble

	Width (ft.)	
	at DP	Max
OHWM	10'	7'
Top of Bank	7'	9'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:

Left: 1:1
 Right: 1:1

Bank Stability Summary

Right: evidence of erosion, sloughing and undercutting at meander points, little ground tree vegetation to stabilize bank
 Left: Same as above

Stream Data Form

Data Point ID: 765

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-150' - Upland deciduous secondary growth
Forest - mostly Acer Saccharum

Left: 0-150' - Upland mixed conifers (E. Hemlock)
and deciduous (Yellow Birch)

Associated Wetland Present: Yes No

If Yes, ID: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	E	
Downstream	W	
Cross Channel	S	Rtbl

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: ST-A542
 Data Point ID: DP-766 Date: 6/9/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Virts and Nicole Dutcher
 County: Chautauqua State: NY
 Stream Name: h.t. of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.482581 Long: -79.149368

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): N/A
 Wetted Perimeter Width (ft.): N/A
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: silt / rock

	Width (ft.)	
	at DP	Max
OHWM	3'	3'
Top of Bank	5'	7'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 1:1
 Right: 1:1

Bank Stability Summary

Right: Stable at data point and upstream, becomes very steep / large vertical banks downstream and off site.
 Left: Same as above T

Stream Data Form

Data Point ID: 746

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-150' - Deciduous hardwood forest,
sugar maple, yellow birch and shag bark hickory

Left: Same as above ↑

Associated Wetland Present: Yes No

If Yes, ID: _____

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	E	R to L

Jurisdictional Connectivity Notes:

Ephemeral stream within study area, turns into intermittent
channel off-site, & flowing toward stream AS40.

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: ST-A543
 Data Point ID: DP-7107 Date: 6/10/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Vito and Nicole Dierker
 County: Chautauqua State: NY
 Stream Name: Unnamed Tributary of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.483904 Long: -79.149354

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): N/A
 Wetted Perimeter Width (ft.): N/A
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Rock

	Width (ft.)	
	at DP	Max
OHWB	4'	5'
Top of Bank	6'	10'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:

Left: 1:1
 Right: 1:1

Bank Stability Summary

Right: ~~Stable~~ Slightly stable, bedrock and roots holding it up but major scarring and undercutting at meandering points

 Left: Same as above.

Stream Data Form

Data Point ID: 767

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: Birds, chipmunks

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
 Right: 0-150' - Deciduous hardwood forest, about 80% canopy cover w/ little understory and ground cover
 Left: Same as above ↑
steep slope up starting around 100'

Associated Wetland Present: Yes No
 If Yes, ID: _____
 Associated Artificial Drain Present: Yes No
 If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	RDL

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Deep channel up stream, alluvial fans where major turns are w/ large sediment deposit
About 3 (sinuosity) bends in 100'

Stream Data Form

Stream Field ID: AS44
Data Point ID: DP-770 **Date:** 6/10/16
Project Name: Ball Hill Wind Project
Evaluator(s): Ben Vins and Nicole Dutcher
County: Chautauqua **State:** NY
Stream Name: Unnamed Tributary of Walnut Creek
State Classified: Yes No Not Applicable
 If Yes, Classification: _____
Lat: 42.484673 **Long:** -79.149581

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg (ft.): N/A
Wetted Perimeter Width (ft.): N/A
Flow/Gradient Direction: West

Geomorphologic Characteristics

Primary Substrate Class: Silt

	Width (ft.)	
	at DP	Max
OHWM	1'	2'
Top of Bank	2'	3'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:

Left: 1:1
 Right: 1:1

Bank Stability Summary

Right: Very Steep, bank slope about 45% with not a high bank, bank stabilized by herbaceous vegetation

Left: Same as above ↑

Stream Data Form

Data Point ID: 770

Habitat Characteristics

Aquatic Vegetation Present: Yes No
If Yes, Describe: _____

Aquatic Organisms Observed: Yes No
If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No
If Yes, Describe: Birds, chipmunks

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
Right: 0-150' Deciduous hardwood forest, with little shrub/scrub layer but 100% ground cover

Left: Same as above ↑

Associated Wetland Present: Yes No
If Yes, ID: A640

Associated Artificial Drain Present: Yes No
If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	<u>S</u>	
Downstream	<u>N</u>	
Cross Channel	<u>W</u>	<u>R to L</u>

Jurisdictional Connectivity Notes:

Ephemeral drain runs to wetland A640 that then drains off site to dike along railroad which offsite most likely drains to perennial stream to the west.

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: A 545
 Data Point ID: DP-771 Date: 10/15/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Virtz and Nicole Dutcher
 County: Chautauqua State: NY
 Stream Name: Unnamed tributary of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.485990 Long: -79.149661

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): 6" (0.5 ft)
 Wetted Perimeter Width (ft.): 3'
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Silt / cobbles / gravel

	Width (ft.)	
	at DP	Max
OHWB	3'	4'
Top of Bank	4'	6'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 1:2
 Right: 1:3

Bank Stability Summary

Right: Moderately stable, some erosion due to bank slope and height, no real herbaceous veg holding substrate evidence of undercutting at meander points
 Left: _____

Stream Data Form

Data Point ID: 771

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____

Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No
 If Yes, Describe: Birds + chipmunks

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
 Right: 0'-150' - Deciduous hardwood forest

Left: 0'-150' - Deciduous hardwood forest

Associated Wetland Present: Yes No
 If Yes, ID: _____

Associated Artificial Drain Present: Yes No
 If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	R to L

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Ephemeral upstream from datapoint and
intermittent downstream.

Stream Data Form

Stream Field ID: A546
 Data Point ID: DP-772 Date: 6/10/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Virts and Nicole Dutcher
 County: Chautauqua State: NY
 Stream Name: Unnamed tributary of Walnut Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: _____
 Lat: 42.487339 Long: -79.149348

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): 0.25'
 Wetted Perimeter Width (ft.): 2'
 Flow/Gradient Direction: North

Geomorphologic Characteristics

Primary Substrate Class: Silt/Clay + cobbles/gravel

		Width (ft.)	
		at DP	Max
OHWM		4'	6'
	Top of Bank	5'	8'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:

Left: 1:3
 Right: 1:3

Bank Stability Summary

Right: Moderately stable, mostly rock layers and some
roots preventing erosion, serious undercutting @
meander points due to steep gradient
 Left: Same as above

Stream Data Form

Data Point ID: 772

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____
 Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____
 Terrestrial Organisms Observed: Yes No
 If Yes, Describe: birds

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
 Right: Deciduous hardwood forest

 Left: Deciduous hardwood forest

Associated Wetland Present: Yes No
 If Yes, ID: A 641
 Associated Artificial Drain Present: Yes No
 If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	S	
Downstream	N	
Cross Channel	W	202

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

Stream Data Form

Stream Field ID: STREAM A547
 Data Point ID: DP-781 Date: 6/22/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): B. Virts, J. Sanders
 County: Chautauqua State: NY
 Stream Name: U.T. of Silver Creek
 State Classified: Yes No Not Applicable
 If Yes, Classification: C
 Lat: 42.5083579 Long: -79.1580228

Hydrologic Characteristics

Flow Regime: Perennial Intermittent Ephemeral
 Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): NA
 Wetted Perimeter Width (ft.): NA
 Flow/Gradient Direction: South

Geomorphologic Characteristics

Primary Substrate Class: Silt/clay

		Width (ft.)	
		at DP	Max
OHWM		5'	6'
Top of Bank		11'	13'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 3:2
 Right: 3:2

Bank Stability Summary

Right: Bank is fully vegetated and stable

 Left: Same as Right Bank

Stream Data Form

Data Point ID: DP-781

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0'-5' facultative and facultative wet
shrubs and herbaceous layers
5'-150' cultivated vineyard

Left: same as Right Bank

Associated Wetland Present: Yes No

If Yes, ID: Wetland AS93 connects to stream off-site

Associated Artificial Drain Present: Yes No

If Yes, ID: _____

Photos

	Direction	Notes/Additional Description
Upstream	N	
Downstream	S	
Cross Channel	E	LTP

Jurisdictional Connectivity Notes:

Supplemental Notes & Comments:

**APPENDIX C
DITCH DATA FORMS**

Ditch Data Form

Ditch Field ID: OT-A200
Data Point ID: DP-323 **Date:** 5/24/16
Project Name: Ball Hill Wind Project
Evaluator(s): J. J. 257603
County: Chautauqua **State:** NY
Jurisdictional: Yes No
Lat: 42.420247 **Long:** -79.135834

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
<input type="checkbox"/>	<input type="checkbox"/>	4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: N/A **Wetted Perimeter Width:** N/A
Flow/Gradient Direction: South

Geomorphologic Characteristics

Primary Substrate Class: _____

	Width	
	at DP	Max
OHWM	<u>2.5'</u>	<u>2.5'</u>
Top of Bank	<u>3'</u>	<u>4.5'</u>
	Left	Right
Bank Slope (H:V)	<u>1:3</u>	<u>1:3</u>

Bank Stability Summary

Left Bank: not stabilized
Right Bank: not stabilized

Ditch Data Form

Data Point ID: DP- 203

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Phalaris arundinacea, Yellow roset
Trifolium repens, Taraxacum officinale

Left: Distylichis glomerata, Taraxacum officinale

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	N	
Downstream	S	
Cross Channel	W	to be

Supplemental Notes & Comments:

Ditch is cut through an agricultural field
to drain adjacent crop fields. Connects with
ST A202. Relatively defined channel 80ft x 10ft.

Ditch Data Form

Ditch Field ID: Ditch-61
 Data Point ID: DP-237 Date: 5/26/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Joanne Janas
 County: Chautauq State: NY
 Jurisdictional: Yes No
 Lat: 42.410551 Long: -79.169061

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
		b) A Natural Stream That Has Been Altered
		c) Excavated in a Jurisdictional WOTUS
		d) Connects Two or More Jurisdictional WOTUS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 1" Wetted Perimeter Width: 16-20'
 Flow/Gradient Direction: N

Geomorphologic Characteristics

Primary Substrate Class:

	Width	
	at DP	Max
OHWM	<u>7'</u>	<u>7'</u>
Top of Bank	<u>9'</u>	<u>9'</u>
Bank Slope (H:V)	Left	Right
	<u>1:3</u>	<u>1:1</u>

Bank Stability Summary

Left Bank: Stable
 Right Bank: Stable

Ditch Data Form

Data Point ID: DP- 237

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: scattered *T. latifolia* (1%) and *C. arvensis* (1%)

Aquatic Organisms Observed: Yes No
 If Yes, Describe: Tadpoles

Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
 Right: *P. lanceolata*, *D. glomerata*, *T. officinalis*
 Left: *artemisia*, *o. line*, *P. arvensis*, *D. glomerata*

Associated Wetland Present: Yes No
 If Yes, Describe: Wetland 01 to south

Associated Artificial Drain(s) Present: Yes No
 If Yes, ID: Culvert 200

Photos

	Direction	Description
Upstream	<u>S</u>	
Downstream	<u>N</u>	
Cross Channel	<u>W</u>	<u>R. to 1 bank</u>

Supplemental Notes & Comments:

Extension of previously documented ditch into new search area

Ditch Data Form

Ditch Field ID: DT-A201
 Data Point ID: DP-251 Date: 5/26/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): James Zervas
 County: Chautauqua State: NY
 Jurisdictional: Yes No
 Lat: 42.393015 Long: -79.141955

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
<input type="checkbox"/>	<input type="checkbox"/>	4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: N/A Wetted Perimeter Width: N/A
 Flow/Gradient Direction: N

Geomorphologic Characteristics

Primary Substrate Class: Clay / sand / gravel / cobble

	Width	
	at DP	Max
OHWL	1'	1'
Top of Bank	27"	27"
Bank Slope (H:V)	Left	Right
	1:1	1:1

Bank Stability Summary

Left Bank: stable
 Right Bank: stable

Ditch Data Form

Data Point ID: DP- 251

Habitat Characteristics

Aquatic Vegetation Present: Yes No
 If Yes, Describe: _____

Aquatic Organisms Observed: Yes No
 If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No
 If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):
 Right: *S. racemosa, T. canadensis, P. alleghaniensis*
 Left: *None*

Associated Wetland Present: Yes No
 If Yes, Describe: _____

Associated Artificial Drain(s) Present: Yes No
 If Yes, ID: _____

Photos		
	Direction	Description
Upstream	W	
Downstream	E	
Cross Channel	N	R 10 L

Supplemental Notes & Comments:

Flow into ST-A304

Ditch Data Form

Ditch Field ID: 07-E1 EXT
Data Point ID: DP-267 **Date:** 5/31/16
Project Name: Ball Hill Wind Project
Evaluator(s): Jane Jones
County: Chautauque **State:** NY
Jurisdictional: Yes No
Lat: 42.407138 **Long:** -79.139979

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
/		1) Defined Bed and Bank Present
x		2) Ordinary High Water Mark Present
x		3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
x		a) Presence of Relatively Permanent Flowing or Standing Water
		b) A Natural Stream That Has Been Altered
		c) Excavated in a Jurisdictional WOTUS
		d) Connects Two or More Jurisdictional WOTUS
		e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics			
Surface Water:	Present	<input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Perceptible Flow:	Present	<input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Water Depth at Thalweg:	<u>N/A</u>	Wetted Perimeter Width:	<u>N/A</u>
Flow/Gradient Direction:	<u>S</u>		

Geomorphologic Characteristics

Primary Substrate Class: _____

	Width	
	at DP	Max
OHWM	<u>13</u>	<u>2'</u>
Top of Bank	<u>30</u>	<u>3'</u>
Bank Slope (H:V)	Left	Right
	<u>1:1</u>	<u>1:1</u>

Bank Stability Summary

Left Bank: Relatively stable

Right Bank: Relatively stable

Ditch Data Form

Data Point ID: DP- 2264

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: WL - 24 & fallow corn field

Left: Roadway & fallow field / Residential

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	<u>N</u>	
Downstream	<u>S</u>	
Cross Channel	<u>E</u>	<u>R to L</u>

Supplemental Notes & Comments:

Channel is dry from below normal precipitation. It flows into a stream outside of ditch area.

Ditch Data Form

Ditch Field ID: NI-A201
Data Point ID: DP-280 **Date:** 6/1/16
Project Name: Ball Hill Wind Project
Evaluator(s): James Santos
County: Chautauqua **State:** NY
Jurisdictional: Yes No
Lat: 42.452183 **Long:** -79.112639

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
<input type="checkbox"/>	<input type="checkbox"/>	4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics			
Surface Water:	Present <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>	
Perceptible Flow:	Present <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>	
Water Depth at Thalweg:	<u>N/A</u>		Wetted Perimeter Width: <u>N/A</u>
Flow/Gradient Direction:	<u>S</u>		

Geomorphologic Characteristics			
Primary Substrate Class: _____			
	Width		
	at DP	Max	
OHWM	1'	1'	
Top of Bank	1.5'	1.5'	
	Left		Right
	1:1	1:1	

Bank Stability Summary	
Left Bank:	<u>Stable</u>
Right Bank:	<u>Stable</u>

Ditch Data Form

Data Point ID: DP- 280

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 1 American beech

Left: None

Associated Wetland Present: Yes No

If Yes, Describe: Outside of search area

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	N	
Downstream	S	
Cross Channel	W	L to R

Supplemental Notes & Comments:

Drone imagery shows 2 fields to a wetland and state mapped trees outside of delineation area.

Ditch Data Form

Ditch Field ID: DT-A203
 Data Point ID: DP-283 Date: 6/2/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Joanne Santos
 County: Chautauqua State: NY
 Jurisdictional: Yes No
 Lat: 42.460336 Long: -79.118835

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: 2" Wetted Perimeter Width: 20"
 Flow/Gradient Direction: West

Geomorphologic Characteristics

Primary Substrate Class: Concrete

	Width	
	at DP	Max
OHWM	<u>30"</u>	<u>20"</u>
Top of Bank	<u>41"</u>	<u>41"</u>
Bank Slope (H:V)	Left	Right
	<u>1:1</u>	<u>1:1</u>

Bank Stability Summary

Left Bank: Stable

Right Bank: Stable

Ditch Data Form

Data Point ID: DP- 282

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: C. racemosa, J. latifolia

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Rt. 39, Shrub field

Left: 9 down field

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	E	
Downstream	W	
Cross Channel	N	R to L

Supplemental Notes & Comments:

Ditch parallels Rt. 39. Most of the area located within 150' of the ditch is composed of concrete. Ditch likely connects to a water's and would be considered jurisdictional. Water levels are down and flow is stagnant.



Ditch Data Form

Ditch Field ID: 01-A204
 Data Point ID: DP-283 Date: 6/2/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): James Jones
 County: Chautauqua State: NY
 Jurisdictional: Yes No
 Lat: 42.460459 Long: -79.148818

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: n/a Wetted Perimeter Width: n/a
 Flow/Gradient Direction: W

Geomorphologic Characteristics

Primary Substrate Class: Concrete

		Width	
		at DP	Max
OHWM		1'	1'
Top of Bank		42"	42"
		Left	Right
Bank Slope (H:V)		1:1	1:1

Bank Stability Summary

Left Bank: Stable
 Right Bank: Stable

Ditch Data Form

Data Point ID: DP-283

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Shrubby field

Left: At 39, DT-1203, a hayfield

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	<u>E</u>	
Downstream	<u>W</u>	
Cross Channel	<u>N</u>	<u>L to R</u>

Supplemental Notes & Comments:

Ditch is concrete within delineation area
upstream and downstream, est. have in place
Since location the ditch likely connects
ditches 40143.

Ditch Data Form

Ditch Field ID: DI-A205
Data Point ID: DP-284 **Date:** 6/2/16
Project Name: Ball Hill Wind Project
Evaluator(s): Jaime Bonan
County: Chautauqua **State:** NY
Jurisdictional: Yes No
Lat: 42.463673 **Long:** -79.149544

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
x		1) Defined Bed and Bank Present
x		2) Ordinary High Water Mark Present
x		3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
x		a) Presence of Relatively Permanent Flowing or Standing Water
		b) A Natural Stream That Has Been Altered
		c) Excavated in a Jurisdictional WOTUS
		d) Connects Two or More Jurisdictional WOTUS
		e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics			
Surface Water:	Present <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>	
Perceptible Flow:	Present <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>	
Water Depth at Thalweg:	<u>n/a</u>	Wetted Perimeter Width:	<u>n/a</u>
Flow/Gradient Direction:	<u>W</u>		

Geomorphologic Characteristics

Primary Substrate Class: _____

		Width	
		at DP	Max
OHWM		21"	21"
Top of Bank		4.5'	4.5'
		Left	Right
Bank Slope (H:V)		1:1	1:1

Bank Stability Summary

Left Bank: Stable

Right Bank: Stable

Ditch Data Form

Data Point ID: DP- 384

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: dropper road, single family residential, ag fields

Left: shrub brush, single family residential

Associated Wetland Present: Yes No

If Yes, Describe: _____

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	E	
Downstream	W	
Cross Channel	S	A to L

Supplemental Notes & Comments:

Ditch likely flows into a wetland and drains a wetland and is considered to be jurisdictional

Ditch Data Form

Ditch Field ID: 1 - Ditch-A501
Data Point ID: DP-665 **Date:** 5/20/16
Project Name: Ball Hill Wind Project
Evaluator(s): Ben Virts, Nicole Dutcher
County: Chautauqua **State:** NY
Jurisdictional: Yes No
Lat: 42.407788 **Long:** -79.113959

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
X		1) Defined Bed and Bank Present
X		2) Ordinary High Water Mark Present
	X	3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
X		a) Presence of Relatively Permanent Flowing or <u>Standing</u> Water
	X	b) A Natural Stream That Has Been Altered
	X	c) Excavated in a Jurisdictional WOTUS
	X	d) Connects Two or More Jurisdictional WOTUS
	X	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg: 3" **Wetted Perimeter Width:** 1.0'
Flow/Gradient Direction: 102° N

Geomorphologic Characteristics

Primary Substrate Class: Silt/Clay

	Width	
	at DP	Max
OHWM	4.0'	6.0'
Top of Bank	9.0'	12.0'
	Left	Right
Bank Slope (H:V)	2' / 3'	2' : 3'

Bank Stability Summary

Left Bank: bank is stable, no erosion present
Right Bank: bank is stable, no erosion present

Ditch Data Form

Data Point ID: DP-665

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-5' maintained FAC herbaceous
5'-150' cultivated row crops (wheat)

Left: 0-40' FAC/FACw herbaceous veg.
40'-50' Access road
50'-150' Cultivated row crops (wheat)

Associated Wetland Present: Yes No

If Yes, Describe: Wetland A597

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: AD-A509

Photos

	Direction	Description
Upstream	S	
Dowstream	N	
Cross Channel	W	RTL

Supplemental Notes & Comments:

Ditch Data Form

Ditch Field ID: Ditch A504
 Data Point ID: DP-720 Date: 5/27/16
 Project Name: Poll Hill
 Evaluator(s): Ben Virts and Nicole Dutcher
 County: Chautauque State: NY
 Jurisdictional: Yes No
 Lat: 42.439850 Long: -79.129355

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
<input type="checkbox"/>	<input type="checkbox"/>	4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input checked="" type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input checked="" type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg: N/A Wetted Perimeter Width: _____
 Flow/Gradient Direction: East

Geomorphologic Characteristics

Primary Substrate Class: Silt

	Width	
	at DP	Max
OHWM	<u>1.5ft</u>	<u>2.5ft</u>
Top of Bank	<u>2ft</u>	<u>3ft</u>
Bank Slope (H:V)	Left	Right
	<u>0.5/0.5</u>	<u>1/0.5</u>

Bank Stability Summary

Left Bank: Stable

Right Bank: Stable

Ditch Data Form

Data Point ID: DP 720

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-3' herbaceous cover
3-100' Road, 100-150' Upland/

Left: 0-150' PSS wetland WL-A624

Associated Wetland Present: Yes No

If Yes, Describe: Wetland WL-A624

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	W	
Downstream	E	
Cross Channel	N	L to R

Supplemental Notes & Comments:

Road side ditch dug in original boundary of wetlands.

Ditch Data Form

Ditch Field ID: DI-A507
Data Point ID: DP-754 **Date:** 6/8/10
Project Name: Ball Hill Wind Project
Evaluator(s): Ben Virrs and Nicole Dutcher
County: Chautauqua **State:** NY
Jurisdictional: Yes No
Lat: 42.419441 **Long:** -79.152273

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2) Ordinary High Water Mark Present
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input type="checkbox"/>	<input checked="" type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input type="checkbox"/>	<input checked="" type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg (ft.): N/A
Wetted Perimeter Width (ft.): N/A
Flow/Gradient Direction: _____

Geomorphologic Characteristics

Primary Substrate Class: Silt

	Width (ft.)	
	at DP	Max
OHWM	N/A	N/A
Top of Bank		

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
Left: 1:1
Right: 1:1

Ditch Data Form

Data Point ID: DP-754

Bank Stability Summary

Left Bank: Stable vegetation well established, no evidence of undercutting or erosion

Right Bank: ↑ Same as Left ↑

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-3' - upland herbaceous vegetation
3'-150' - cultivated crop field

Left: 0-2' - upland herbaceous vegetation
2'-25' - Asphalt Road

Associated Wetland Present: Yes No

If Yes, ID: Wetland A587

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: AD-S23

Photos

	Direction	Description
Upstream	S	
Downstream	N	
Cross Channel	W	P-to-L

Supplemental Notes & Comments:

Non-jurisdictional roadside ditch along Pope Hill Road

Ditch Data Form

Ditch Field ID: DI-AS09
 Data Point ID: DP-760 Date: 6/9/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Virts and Nicole Dunbar
 County: Chautauqua State: NY
 Jurisdictional: Yes No
 Lat: 42.475060 Long: -79.149393

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>		1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>		2) Ordinary High Water Mark Present
	<input checked="" type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
	<input checked="" type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
	<input checked="" type="checkbox"/>	b) A Natural Stream That Has Been Altered
	<input checked="" type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input checked="" type="checkbox"/>		d) Connects Two or More Jurisdictional WOTUS
<input checked="" type="checkbox"/>		e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): N/A
 Wetted Perimeter Width (ft.): N/A
 Flow/Gradient Direction: NW

Geomorphologic Characteristics

Primary Substrate Class: Silt/Clay

		Width (ft.)	
		at DP	Max
OHWM		N/A	N/A
Top of Bank		3'	3'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 1:1
 Right: 1:1

Ditch Data Form

Data Point ID: DP-760

Bank Stability Summary

Left Bank: Very Stable, vegetation growing on bank, no
evidence of undercutting or sloughing

Right Bank: ↑ same as above ↑

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-5' Upland/FAC plants (not mowed)
5'-150' cultivated/mowed hay field

Left: 0-150' PFD wetland on ditch part flowing E to W
and Upland forest on section of ditch flowing S to N

Associated Wetland Present: Yes No

If Yes, ID: Wetland A638

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: Artificial Drain AD 524

Photos

	Direction	Description
Upstream	E	
Downstream	W	
Cross Channel	S	R to L

Supplemental Notes & Comments:

Drains wetland A638 to agricultural pond outside study area

Ditch Data Form

Ditch Field ID: DI - AS10
 Data Point ID: DP- 776 Date: 6/10/16
 Project Name: Ball Hill Wind Project
 Evaluator(s): Ben Vires and Nicole Dwyer
 County: Chautauqua State: NY
 Jurisdictional: Yes No
 Lat: 42.4900502 Long: -79.151437

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1) Defined Bed and Bank Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2) Ordinary High Water Mark Present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Direct or Indirect Connection to a Traditional Navigable Water
4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a) Presence of Relatively Permanent Flowing or Standing Water
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b) A Natural Stream That Has Been Altered
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c) Excavated in a Jurisdictional WOTUS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d) Connects Two or More Jurisdictional WOTUS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
 Perceptible Flow: Present Absent
 Water Depth at Thalweg (ft.): N/A
 Wetted Perimeter Width (ft.): N/A
 Flow/Gradient Direction: West

Geomorphologic Characteristics

Primary Substrate Class: S. H

	Width (ft.)	
	at DP	Max
OHWM	1'	2'
Top of Bank	2'	3'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 1:3
 Right: 1:1

Ditch Data Form

Data Point ID: 775

Bank Stability Summary

Left Bank: Stable - well vegetated

Right Bank: Stable - well vegetated

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: 0-150' - P_{SS} Wetland

Left: 0-5' - roadside bank

5'-30' - Asphalt main road

30'-35' - Ditch 35'-150' - Upland

Associated Wetland Present: Yes No

If Yes, ID: A641

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: AD-526

Photos

	Direction	Description
Upstream	S	
Downstream	N	
Cross Channel	W	R to L

Supplemental Notes & Comments:

Ditch Data Form

Ditch Field ID: Ditch #511
Data Point ID: DP-782 **Date:** 6/22/16
Project Name: Ball Hill Wind Project
Evaluator(s): B. Viers, J. Sunder
County: Chautauqua **State:** NY
Jurisdictional: Yes No
Lat: 42.5083498 **Long:** -79.1573107

Jurisdictional Determination Criteria		
Yes	No	Jurisdictional Attribute
x		1) Defined Bed and Bank Present
x		2) Ordinary High Water Mark Present
x		3) Direct or Indirect Connection to a Traditional Navigable Water
		4) Supplementing Attributes (Must Satisfy At Least 1 of 5 Below)
	x	a) Presence of Relatively Permanent Flowing or Standing Water
	x	b) A Natural Stream That Has Been Altered
	x	c) Excavated in a Jurisdictional WOTUS
x		d) Connects Two or More Jurisdictional WOTUS
	x	e) Drains Natural Water Bodies (including wetlands) into the tributary system of a TNW

Hydrologic Characteristics

Surface Water: Present Absent
Perceptible Flow: Present Absent
Water Depth at Thalweg (ft.): NA
Wetted Perimeter Width (ft.): NA
Flow/Gradient Direction: west

Geomorphologic Characteristics

Primary Substrate Class: Silt / Clay

	Width (ft.)	
	at DP	Max
OHWM	2'	3'
Top of Bank	9'	9'

Bank Slope [Reported as % or Horizontal:Vertical(H:V)]:
 Left: 1:1
 Right: 1:1

Ditch Data Form

Data Point ID: DP-782

Bank Stability Summary

Left Bank: Banks are fully vegetated with no
erosion present

Right Bank: Same as Left Bank

Habitat Characteristics

Aquatic Vegetation Present: Yes No

If Yes, Describe: _____

Aquatic Organisms Observed: Yes No

If Yes, Describe: _____

Terrestrial Organisms Observed: Yes No

If Yes, Describe: _____

Riparian Characteristics

Riparian Vegetation Description (0' to 150' from TOB):

Right: Forest 0'-150'

Left: 0'-10' facultative shrubs and herbaceous buffer
10'-150' Plowed Row crop field

Associated Wetland Present: Yes No

If Yes, ID: offset to East, no ID.

Associated Artificial Drain(s) Present: Yes No

If Yes, ID: _____

Photos

	Direction	Description
Upstream	E	
Dowstream	W	
Cross Channel	S	RTL

Supplemental Notes & Comments:

APPENDIX D
REPRESENTATIVE SITE PHOTOGRAPHS

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 1	
Facing West	
Description: Data Point 1 PEM Wetland Data Point for Wetland A1	

Photo No. 2	
Facing East	
Description: Data Point 2 Upland Data Point for Wetland A1	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 3	
Facing North/Upstream	
Description: Data Point 6 Stream Data Point for Stream 1	

Photo No. 4	
Facing East/Right to Left	
Description: Data Point 7 Stream Data Point for Stream 2	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 5	
Facing South/Downstream	
Description: Data Point 10 Stream Data Point for Stream 3	

Photo No. 6	
Facing Upstream	
Description: Data Point 11 Stream Data Point for Stream 4	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 7	
Facing North/Right to Left	
Description: Data Point 12 Stream Data Point for Stream 5	

Photo No. 8	
Facing East	
Description: Data Point 13 PEM wetland Data Point for Wetland C1	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 9	
Facing West	
Description: Data Point 14 Upland Data Point for Wetland C1	

Photo No. 10	
Facing North	
Description: Ditch C1 Ditch between two agricultural fields	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 11	
Facing East	
Description: Data Point 16 Upland Data Point for Wetland D1	

Photo No. 12	
Facing West	
Description: Data Point 15 PEM Wetland Data Point for Wetland D1	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 13	
Facing North	
Description: Ditch D1 Ditch between two agricultural fields	

Photo No. 14	
Facing North	
Description: Data Point 24 PEM Wetland Data Point for Wetlands I1 and I2	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 15

Facing East

Description:
Data Point 30
PEM Wetland Data
Point for Wetland J3



Photo No. 16

Facing West

Description:
Data Point 31
Upland Data Point for
Wetland J3



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 17

Facing North

Description:
Data Point 46
PEM Wetland Data
Point for Wetland N1



Photo No. 18

Facing South

Description:
Data Point 47
Upland Data Point for
Wetland N1



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 19

Facing North

Description:
Data Point 50
PSS Wetland Data
Point for Wetland P1



Photo No. 20

Facing South

Description:
Data Point 51
Upland Data Point for
Wetland P1



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 21	
Facing West	
Description: Data Point 55 PEM Wetland Data Point for Wetland R1	

Photo No. 22	
Facing East	
Description: Data Point 56 Upland Data Point for Wetland R1	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 23

Facing
North/Downstream

Description:
Data Point 63
Stream Data Point for
Stream 11



Photo No. 24

Facing East

Description:
Data Point 64
Wetland Data Point for
Wetland V1



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 25	
Facing West	
Description: Data Point 65 Upland Data Point for Wetland V1	

Photo No. 26	
Facing East/Right to Left	
Description: Data Point 69 Stream Data Point for Stream 13	

Project Name:
Ball Hill Wind Project

Site Location:
Chautauqua County, NY

Project No.
150001

Photo No. 27

Facing
East/Downstream

Description:

Data Point 68
Stream Data Point for
Stream 12



Photo No. 28

Facing
East/Downstream

Description:

Data Point 73
Stream Data Point for
Stream 15



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 29	
Facing East/Downstream	
Description: Data Point 76 Stream Data Point for Stream 16	

Photo No. 30	
Facing South	
Description: Data Point 77 PFO Wetland Data Point for Wetland W1	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 31	
Facing North	
Description: Data Point 78 Upland Data Point for Wetland W1	

Photo No. 32	
Facing Northwest	
Description: Data Point 81 PEM Wetland Data Point for Wetland X1	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 33	
Facing Southeast	
Description: Data Point 82 Upland Data Point for Wetland X1	

Photo No. 34	
Facing East/Downstream	
Description: Data Point 83 Stream Data Point for Stream 17	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 35	
Facing East/Downstream	
Description: Data Point 90 Stream Data Point for Stream 18	

Photo No. 36	
Facing North	
Description: Data Point 91 PEM Wetland Data Point for Wetland A5	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 37	
Facing South	
Description: Data Point 92 Upland Data Point for Wetland A5	

Photo No. 38	
Facing West/Upstream	
Description: Data Point 95 Stream Data Point for Stream 19	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 39	
Facing Southeast	
Description: Data Point 97 PEM Wetland Data Point for Wetland A7	

Photo No. 40	
Facing Northwest	
Description: Data Point 98 Upland Data Point for Wetland A7	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 41

Facing Southeast

Description:

Data Point 99
PEM Wetland Data
Point for Wetland A8



Photo No. 42

Facing South

Description:

Data Point 100
Upland Data Point for
Wetland A8



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 43	
Facing South	
Description: Data Point 500 PEM Wetland Data Point for Wetland A500	

Photo No. 44	
Facing North	
Description: Data Point 501 Upland Data Point for Wetland A500	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 45	
Facing North/Right to Left	
Description: Data Point 502 Stream Data Point for Stream A500	

Photo No. 46	
Facing North	
Description: Data Point 503 PSS/PEM Wetland Data Point for Wetland A501	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 47	
Facing North	
Description: Data Point 505 PEM Wetland Data Point for Wetland A502	

Photo No. 48	
Facing West	
Description: Data Point 506 Upland Data Point for Wetland A503	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 49

Facing East

Description:
Data Point 509
PEM Wetland Data
Point for Wetland A504



Photo No. 50

Facing West

Description:
Data Point 510
Upland Data Point for
Wetland A504



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 51

Facing West

Description:
Overview of Pond A500



Photo No. 52

Facing West

Description:
Data Point 511
PEM Wetland Data
Point for Wetland A505



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 53

Facing North

Description:
Data Point 513
PEM Wetland Data
Point for Wetland A507



Photo No. 54

Facing South

Description:
Data Point 516
PFO Wetland Data
Point for Wetland A509



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 55	
Facing West	
Description: Data Point 517 Upland Data Point for Wetland A509	

Photo No. 56	
Facing West/Downstream	
Description: Data Point 520 Stream Data Point for Stream A502	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 57

Facing North

Description:
Artificial Drain A500
6" steel drain tile outlet



Photo No. 58

Facing West

Description:
Ditch A500
Connection ditch for
associated Artificial
Drains/drain tiles



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 59	
Facing East	
Description: Artificial Drain A503 10" clay drain tile connects to and shown within Ditch A500	

Photo No. 60	
Facing North	
Description: Artificial Drain A505 10" steel drain tile outlet	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 61	
Facing North	
Description: Data Point 521 PEM Wetland Data Point for Wetland A511	

Photo No. 62	
Facing West	
Description: Data Point 523 PEM Wetland Data Point for Wetland A512	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 63	
Facing East	
Description: Data Point 524 Upland Data Point for Wetland A512	

Photo No. 64	
Facing West/Upstream	
Description: Data Point 525 Stream Data Point for Stream A504	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 65	
Facing West/Upstream	
Description: Data Point 526 Stream Data Point for Stream A505	

Photo No. 66	
Facing South	
Description: Data Point 528 PEM wetland Data Point for Wetland A515	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 67	
Facing South	
Description: Data Point 529 Upland Data Point for Wetland A516	

Photo No. 68	
Facing South/Downstream	
Description: Data Point 530 Stream Data Point for Stream A507	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 69	
Facing South	
Description: Data Point 539 PFO wetland Data Point for Wetland A521	

Photo No. 70	
Facing North	
Description: Data Point 540 Upland Data Point for Wetland A521	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 71	
Facing East/Downstream	
Description: Data Point 547 Stream Data Point for Stream A509	

Photo No. 72	
Facing North	
Description: Data Point 555 PEM Wetland Data Point for Wetland A532	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 73	
Facing North	
Description: Data Point 556 Upland Data Point for Wetland A532 and A533	

Photo No. 74	
Facing South	
Description: Data Point 561 PFO Wetland Data Point for Wetland A535	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 75	
Facing South	
Description: Data Point 562 Upland Data Point for Wetland A535	

Photo No. 76	
Facing North/Upstream	
Description: Data Point 563 Stream Data Point for Stream A510	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 77	
Facing North	
Description: Data Point 569 PEM Wetland Data Point for Wetland A540	

Photo No. 78	
Facing South	
Description: Data Point 570 Upland Data Point for Wetland A540	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 79	
Facing North/Upstream	
Description: Data Point 573 Stream Data Point for Stream A511	

Photo No. 80	
Facing South/Downstream	
Description: Data Point 574 Stream Data Point for Stream A512	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 81	
Facing North	
Description: Data Point 575 PEM Wetland Data Point for Wetland A543	

Photo No. 82	
Facing South	
Description: Data Point 576 Upland Data Point for Wetland A543	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 83	
Facing South	
Description: Data Point 577 PEM Wetland Data Point for Wetland A544	

Photo No. 84	
Facing North	
Description: Data Point 578 Upland Data Point for Wetland A544	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 85	
Facing West/Right to Left	
Description: Data Point 588 Stream Data Point for Stream A516	

Photo No. 86	
Facing West	
Description: Data Point 589 PFO Wetland Data Point for Wetland A553	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 87	
Facing North	
Description: Data Point 590 Upland Data Point for Wetland A553	

Photo No. 88	
Facing West/Upstream	
Description: Data Point 591 Stream Data Point for Stream A517	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 89	
Facing East	
Description: Photo of Wetland A556	

Photo No. 90	
Facing North	
Description: Data Point 595 PEM Wetland Data Point for Wetland A552	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 91	
Facing North	
Description: Data Point 601 PEM Wetland Data Point for Wetland A557	

Photo No. 92	
Facing North	
Description: Data Point 602 Upland Data Point for Wetland A557	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 93	
Facing South/Upstream	
Description: Data Point 603 Stream Data Point for Stream A518	

Photo No. 94	
Facing North	
Description: Data Point 604 PEM Wetland Data Point for Wetland A562	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 95	
Facing West	
Description: Data Point 605 Upland Data Point for Wetland A562	

Photo No. 96	
Facing East/Downstream	
Description: Data Point 608 Stream Data Point for Stream A519	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 97	
Facing West/Upstream	
Description: Data Point 609 Stream Data Point for Stream A520	

Photo No. 98	
Facing South	
Description: Data Point 610 PEM Wetland Data Point for Wetland A565	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 99	
Facing North	
Description: Data Point 611 Upland Data Point for Wetland A565	

Photo No. 100	
Facing West	
Description: Photo of Wetland A566 This wetland is a purpose-built treatment wetland for manure management servicing the adjacent livestock feedlot and associated structures.	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 101	
Facing West	
Description: Photo of portion of Wetland A566 down gradient of the treatment wetland area shown in the photo above. This portion of the wetland is located within an active livestock feedlot and provides a downstream connection to a roadside ditch.	

Photo No. 102	
Facing West/Upstream	
Description: Data Point 612 Stream Data Point for Stream A521	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 103	
Facing South/Upstream	
Description: Data Point 619 Stream Data Point for Stream A522	

Photo No. 104	
Facing North	
Description: Data Point 620 PEM Wetland Data Point for Wetland A573	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 105

Facing East

Description:

Data Point 621
Upland Data Point for
Wetland A573



Photo No. 106

Facing South

Description:

Data Point 622
PSS Wetland Data
Point for Wetland A578



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 107	
Facing North	
Description: Data Point 623 Upland Data Point for Wetland A578	

Photo No. 108	
Facing West	
Description: Data Point 636 PFO/PSS Wetland Data Point for Wetland A585	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 109	
Facing East	
Description: Data Point 637 Upland Data Point for Wetland A585	

Photo No. 110	
Facing North	
Description: Data Point 638 PFO Wetland Data Point for Wetland A586	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 111	
Facing South	
Description: Data Point 639 Upland Data Point for Wetland A586	

Photo No. 112	
Facing North/Upstream	
Description: Data Point 642 Stream Data Point for Stream A524	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 113	
Facing North	
Description: Data Point 645 PSS/PEM Wetland Data Point for Wetland A589	

Photo No. 114	
Facing West	
Description: Data Point 646 Upland Data Point for Wetland A589	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 115	
Facing South	
Description: Data Point 652 PFO Wetland Data Point for Wetland A593	

Photo No. 116	
Facing North	
Description: Data Point 653 Upland Data Point for Wetlands A593 and A594	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 117	
Facing West	
Description: Data Point 654 PFO Wetland Data Point for Wetland A594	

Photo No. 118	
Facing West/Downstream	
Description: Data Point 655 Stream Data Point for Stream A525	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 119	
Facing North/Downstream	
Description: Data Point 656 Stream Data Point for Stream A526	

Photo No. 120	
Facing East/Downstream	
Description: Data Point 657 Stream Data Point for Stream A527	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 121	
Facing East/Upstream	
Description: Data Point 658 Stream Data Point for Stream A528	

Photo No. 122	
Facing South	
Description: Overview of Expansion of PEM Wetland A519 from Photo Point 1	

Project Name:
Ball Hill Wind Project

Site Location:
Chautauqua County, NY

Project No.
150001

Photo No. 123

Facing East

Description:

Overview of Wetland
A597 from PSS Data
Point 663



Photo No. 124

Facing South

Description:

Overview of Uplands
Adjacent to Wetland
A597 from Data Point
664



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 125	
Facing Downstream/ North	
Description: Data Point 666 Data Point for Stream A529	

Photo No. 126	
Facing Upstream/South	
Description: Data Point 667 Data Point for Stream A530	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 127	
Facing Downstream/North	
Description: Data Point 667 Data Point for Stream A530	

Photo No. 128	
Facing East	
Description: Overview of Wetland A600 from PEM Data Point 672	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 129	
Facing East	
Description: Overview of Wetland A602 from PEM Data Point 675	

Photo No. 130	
Facing East	
Description: Data Point 676 Upland Data Point Adjacent to Wetland A602	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 131	
Facing Upstream/ West	
Description: Data Point 686 Data Point for Stream A532	

Photo No. 132	
Facing Downstream/ East	
Description: Data Point 843 Data Point for Stream A532	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 133	
Facing South	
Description: Overview of Wetland A609 from PFO Data Point 689	

Photo No. 134	
Facing South	
Description: Overview of Uplands Adjacent to Wetland A609 from Data Point 690	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 135	
Facing East	
Description: Overview of Wetland A615 from PEM Data Point 699	

Photo No. 136	
Facing East	
Description: Overview of Uplands Adjacent to Wetland A615 from Data Point 700	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 137

Facing West

Description:
Overview of Wetland A616 from PEM Data Point 701



Photo No. 138

Facing South

Description:
Overview of Uplands Adjacent to Wetland A616 from Data Point 702



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 139

Facing South

Description:
Overview of Wetland A618 from PFO Data Point 704



Photo No. 140

Facing South

Description:
Overview of Wetland A618 from PEM Data Point 705



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 141	
Facing East	
Description: Overview of Uplands Adjacent to Wetland A618 from Data Point 706	

Photo No. 142	
Facing Upstream/ West	
Description: Data Point 707 Data Point for Stream A533	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 143	
Facing Right to Left Bank/ North	
Description: Data Point 707 Data Point for Stream A533	

Photo No. 144	
Facing West	
Description: Overview of Wetland A620 from PEM Data Point 710	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 145

Facing West

Description:
Overview of Uplands
Adjacent to Wetland
A620 from Data Point
711



Photo No. 146

Facing Upstream/
West

Description:
Data Point 712
Data Point for
Stream A534



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 147

Facing North

Description:
Overview of Wetland
A627 from PFO Data
Point 728



Photo No. 148

Facing West

Description:
Overview of Uplands
Adjacent to Wetland
A627 from Data Point
729



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 149	
Facing West	
Description: Overview of Wetland A632 from PEM Data Point 735	

Photo No. 150	
Facing South	
Description: Overview of Uplands Adjacent to wetland A632 from Data Point 737	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 151	
Facing West	
Description: Overview of Wetland A634 from PFO Data Point 740	

Photo No. 152	
Facing West	
Description: Overview of Uplands Adjacent to Wetland A634 from Data Point 741	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 153	
Facing Downstream/ North	
Description: Data Point 747 Data Point for Stream A537	

Photo No. 154	
Facing East	
Description: Overview of Wetland A635 from PEM Data Point 748	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 155	
Facing South	
Description: Overview of Uplands Adjacent to Wetland A635 from Data Point 749	

Photo No. 156	
Facing Downstream/ West	
Description: Data Point 762 Data Point for Stream A540	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 157	
Facing North	
Description: Data Point 763 PFO Data Point Wetland A639	

Photo No. 158	
Facing North	
Description: Overview of Uplands Adjacent to Wetland A639 from Data Point 769	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 159	
Facing North	
Description: Overview of Wetland A641 from PEM Data Point 773	

Photo No. 160	
Facing North	
Description: Data Point 774 PSS Data Point Wetland A641	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 161	
Facing West	
Description: Overview of Uplands Adjacent to Wetland A641 from Data Point 775	

Photo No. 162	
Facing North	
Description: Overview of PEM Portion of Wetland A200 from PEM Data Point 200	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 163	
Facing Southeast	
Description: Overview of PFO Portion of Wetland A200 from PFO Data Point 202	

Photo No. 164	
Facing Southwest	
Description: Overview of Wetland A202 from PEM Data Point 206	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 165	
Facing Southeast	
Description: Overview of Uplands Adjacent to Wetlands A202 and A203 from Data Point 207	

Photo No. 166	
Facing Northwest	
Description: Overview of Wetland A203 from PEM Data Point 208	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 167	
Facing Upstream/ Northeast	
Description: Data Point 211 Data Point for Stream A200	

Photo No. 168	
Facing Southwest	
Description: Overview of Wetland A206 from PEM Data Point 216	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 169	
Facing South	
Description: Overview of Wetland A207 from PSS Data Point 217	

Photo No. 170	
Facing North	
Description: Overview of Wetland A208 from PSS Data Point 221	

Project Name:
Ball Hill Wind Project

Site Location:
Chautauqua County, NY

Project No.
150001

Photo No. 171

Facing Upstream/
East

Description:

Data Point 222
Data Point for
Stream A202



Photo No. 172

Facing East

Description:

Overview of Uplands
Adjacent to Wetland
A209 from Data Point
225



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 173	
Facing West	
Description: Overview of Wetland A10 from PEM Data Point 227	

Photo No. 174	
Facing East	
Description: Overview of Wetland A212 from PEM Data Point 229	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 175	
Facing West	
Description: Overview of Wetland A213 from PSS Data Point 230	

Photo No. 176	
Facing North	
Description: Overview of Uplands Adjacent to Wetland A213 from Data Point 231	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 177	
Facing Downstream/ North	
Description: Data Point 243 Data Point for Stream A203	

Photo No. 178	
Facing West	
Description: Overview of Wetland A220 from PEM Data Point 244	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 179	
Facing East	
Description: Overview of Uplands Adjacent to Wetland A220 from Data Point 245	

Photo No. 180	
Facing South	
Description: Overview of Wetland A221 from PEM Data Point 247	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 181	
Facing Downstream/ Southeast	
Description: Data Point 249 Data Point for Stream A204	

Photo No. 182	
Facing East	
Description: Overview of Wetland A232 from PEM Data Point 269	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 183

Facing East

Description:
Overview of Uplands
Adjacent to Wetlands
A232 and A233 from
Data Point 271



Photo No. 184

Facing Downstream/
East

Description:
Data Point 272
Data Point for
Stream A205



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 185	
Facing South	
Description: Overview of Wetland A236 from PSS Data Point 277	

Photo No. 186	
Facing Upstream/ South	
Description: Data Point 278 Data Point for Stream A207	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 187	
Facing Upstream/ East	
Description: Data Point 287 Data Point for Stream A210	

Photo No. 188	
Facing Downstream/ North	
Description: Data Point 288 Data Point for Stream A211	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 189	
Facing East	
Description: Overview of Wetland A238 from PSS Data Point 292	

Photo No. 190	
Facing Upstream/ East	
Description: Data Point 293 Data Point for Stream A212	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 191	
Facing East	
Description: Overview of Wetland A239 from PEM Data Point 295	

Photo No. 192	
Facing West	
Description: Overview of Uplands Adjacent to Wetlands A238 and A239 from Data Point 297	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 193	
Facing East	
Description: Overview of Wetland A643 from PEM Data Point 777	

Photo No. 194	
Facing West	
Description: Overview of Uplands Adjacent to Wetland A643 from Data Point 778	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 195	
Facing West	
Description: Overview of PEM portion of Wetland A643 and associated Pond A643	

Photo No. 196	
Facing East	
Description: Overview of Pond A643	

Project Name:
Ball Hill Wind Project

Site Location:
Chautauqua County, NY

Project No.
150001

Photo No. 197

Facing West

Description:

Overview of PEM
portion of Wetland A643



Photo No. 198

Facing West

Description:

Overview of PEM
portion of Wetland A643



Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No.: 150001
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Photo No. 199	
Facing West	
Description: Overview of PEM portion of Wetland A643 located within active hay field	

Photo No. 200	
Facing North	
Description: Overview of PEM portion of Wetland A643 located within active hay field	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 201	
Facing West	
Description: Overview of PFO within Wetland A593	

Photo No. 202	
Facing West	
Description: Overview of PFO within Wetland A593	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 203	
Facing South	
Description: Overview of PFO from within Wetland A594	

Photo No. 204	
Facing East	
Description: Overview of PFO from within Wetland A594	

Project Name: Ball Hill Wind Project	Site Location: Chautauqua County, NY	Project No. 150001
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Photo No. 205	
Facing South	
Description: Overview of PEM from within Wetland A594	

Photo No. 206	
Facing East	
Description: Overview of PEM from within Wetland A594	