

Turbine Location	Field Delineated Pond
Survey	Proposed Collection Line
Upland Datapoint	Proposed Access Road -
Wetland Datapoint	Proposed Access Road - Public
Field Delineated Wetland	ODNR Wetland
Delineated Wetland, Outside Current Survey Area	NWI Wetland
Field Delineated Stream/Ditch	Local Road
Delineated Waterbody, Outside Current Survey Area	State Road
	US Highway

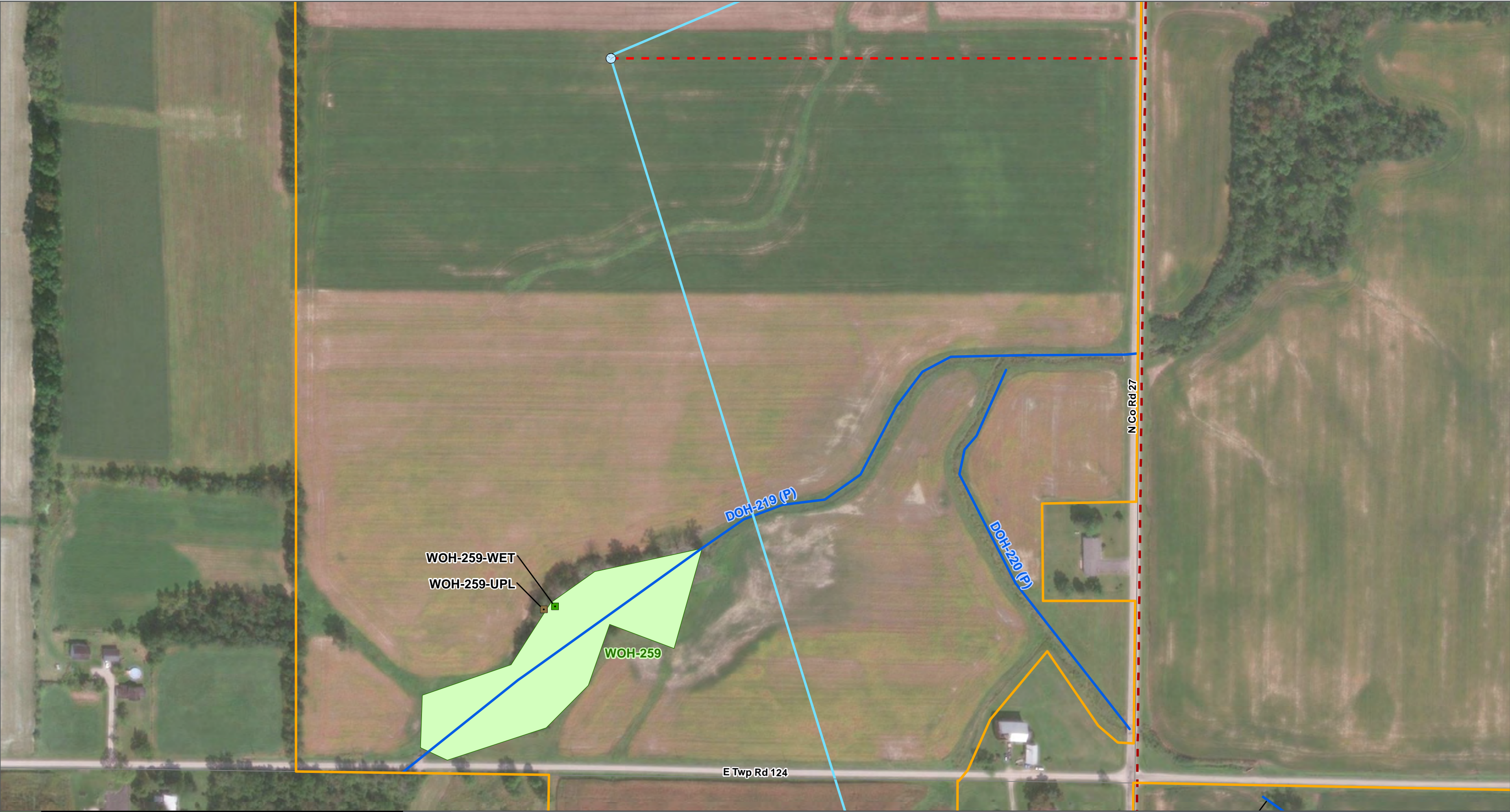


Wetland and Waterbody Maps
(Sheet 209 of 226)

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(Sheet 210 of 226)

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Wetland and Waterbody Maps
(Sheet 211 of 226)


















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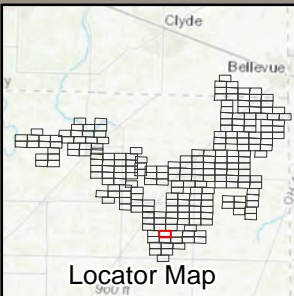


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Locator Map

Wetland and Waterbody Maps (Sheet 212 of 226)

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0 200 400 600 Feet

0 50 100 150 200 Meters



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(Sheet 213 of 226)

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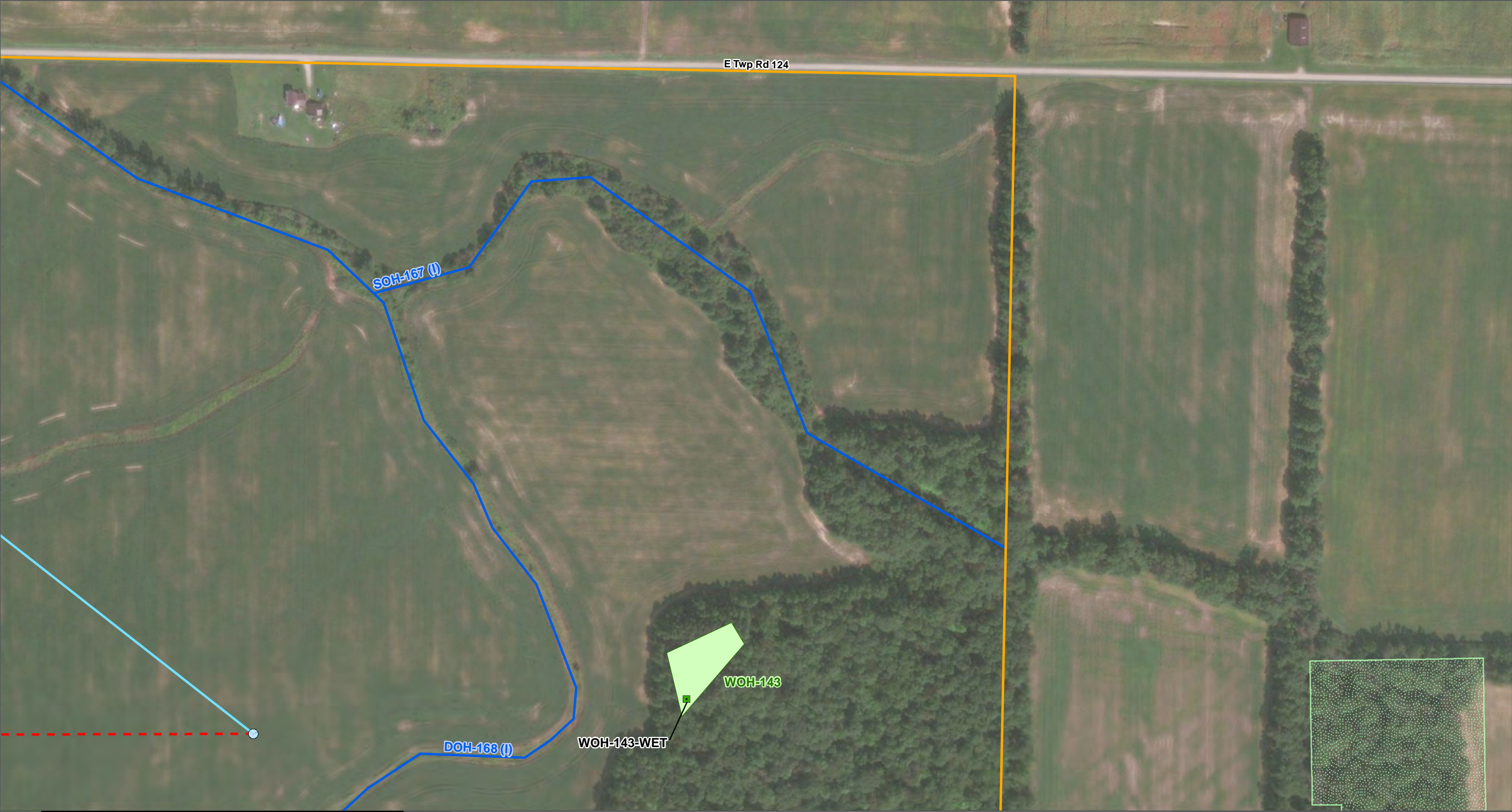


Wetland and Waterbody Maps
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Wetland and Waterbody Maps
(Sheet 215 of 226)


















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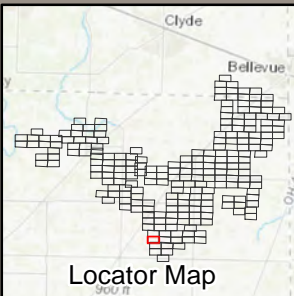


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Locator Map

Wetland and Waterbody Maps (Sheet 216 of 226)

Republic Wind Project
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0 200 400 600 Feet

0 50 100 150 200 Meters



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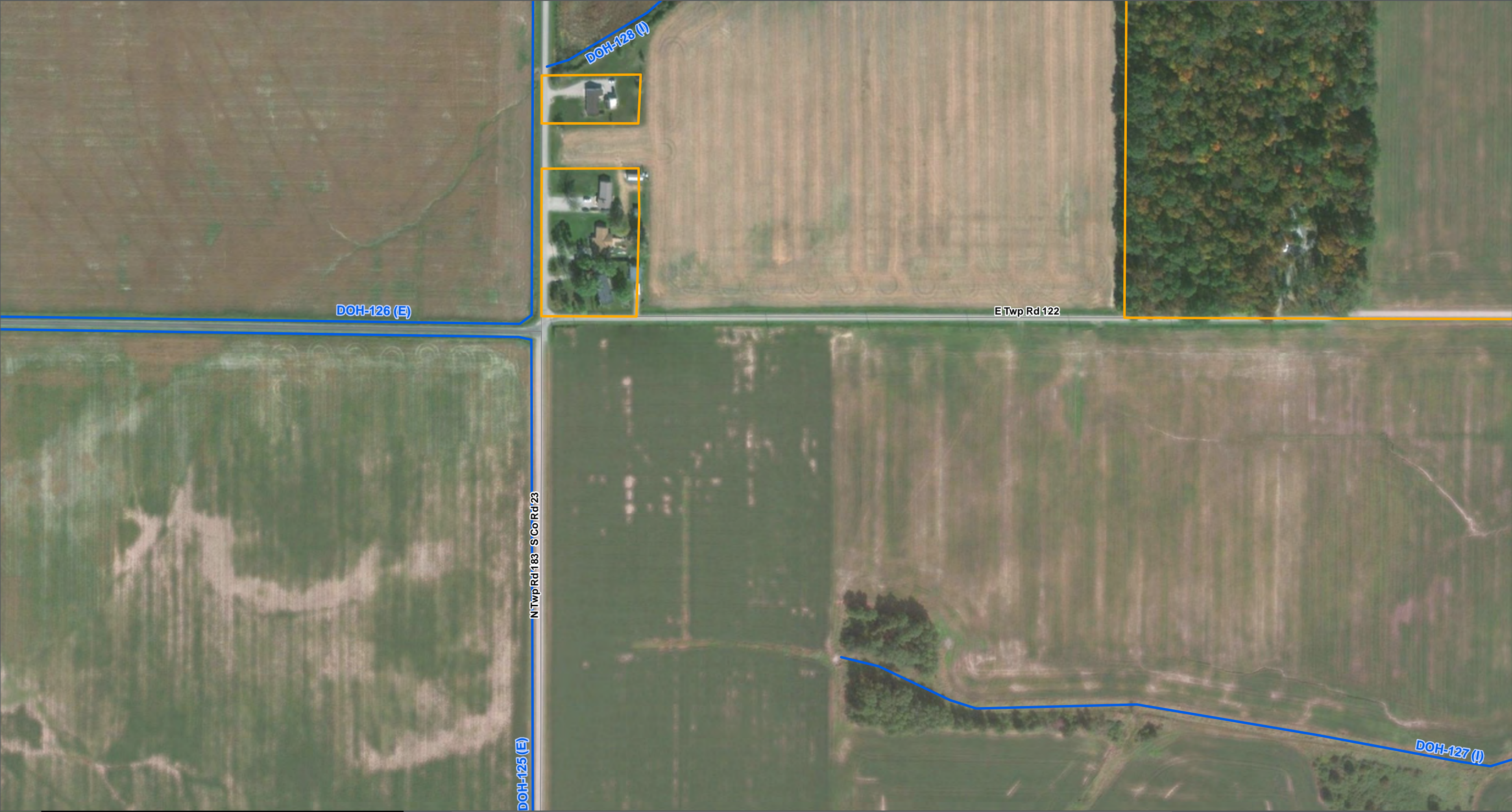


Wetland and Waterbody Maps
(Sheet 217 of 226)

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Wetland and Waterbody Maps (Sheet 218 of 226)


















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Wetland and Waterbody Maps
(Sheet 220 of 226)

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Seneca and Sandusky Counties, OH

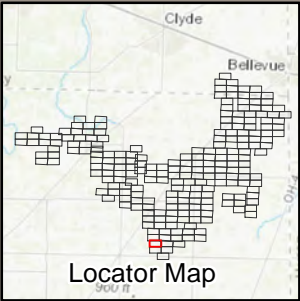


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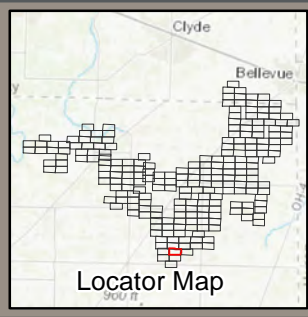
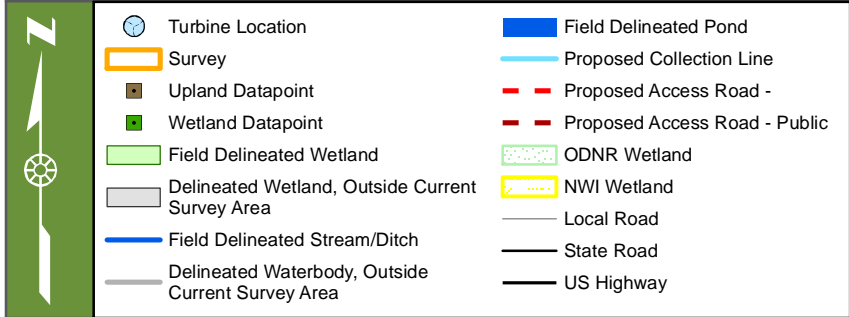


Wetland and Waterbody Maps
(Sheet 221 of 226)

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

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 Field Delineated Stream/Ditch	 Local Road
 Delineated Waterbody, Outside Current Survey Area	 State Road
	 US Highway



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	US Highway




Wetland and Waterbody Maps
(Sheet 225 of 226)


















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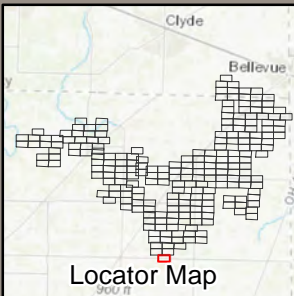


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-  Turbine Location
-  Survey
-  Upland Datapoint
-  Wetland Datapoint
-  Field Delineated Wetland
-  Delineated Wetland, Outside Current Survey Area
-  Field Delineated Stream/Ditch
-  Delineated Waterbody, Outside Current Survey Area
-  Field Delineated Pond
-  Proposed Collection Line
-  Proposed Access Road - Private
-  Proposed Access Road - Public
-  ODNR Wetland
-  NWI Wetland
-  Local Road
-  State Road
-  US Highway




Locator Map

Wetland and Waterbody Maps (Sheet 226 of 226)

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0 200 400 600 Feet

0 50 100 150 200 Meters



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APPENDIX

C

WETLAND DELINEATION AND
ASSESSMENT FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 9/30/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-002-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Roadside Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.2003 Long.: -83.0342 Datum: WGS84
 Soil Map Unit Name: Pa NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-002-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Tree Stratum	20% 0
2						Sapling/Shrub Stratum	50% 0
3						Herb Stratum	20 50
4						Woody Vine Stratum	0 0
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)	
2						Total Number of Dominant Species Across all Strata: 1 (B)	
3						Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)	
4							
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Herb Stratum					Prevalence Index Worksheet		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Total % Cover of:	
2						OBL species 0 x 1 = 0	
3						FACW species 0 x 2 = 0	
4						FAC species 0 x 3 = 0	
5						FACU species 100 x 4 = 400	
6						UPL species 0 x 5 = 0	
7						Column totals 100 (A) 400 (B)	
8						Prevalence Index = B/A = 4.00	
9							
10							
			0	= Total Cover			
<div style="display: flex; justify-content: space-between;"> Herb Stratum Plot Size (6 x 20) </div> <div style="display: flex; justify-content: space-between;"> 1 <i>Festuca rubra</i> 95 Y FACU </div> <div style="display: flex; justify-content: space-between;"> 2 <i>Trifolium pratense</i> 5 N FACU </div>					Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) <small>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</small>		
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
			100	= Total Cover			
Woody Vine Stratum					Definitions of Vegetation Strata:		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
2						Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
3						Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
4						Woody vines - All woody vines greater than 3.28 ft in height.	
5							
			0	= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet)					Hydrophytic vegetation present? N		

SOIL

Sampling Point: WOH-002-UPL

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 9/30/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-002-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Roadside depression Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat.: 41.2004 Long.: -83.0342 Datum: WGS84
 Soil Map Unit Name: Pa NWI Classification: N/A
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Remarks: (Explain alternative procedures here or in a separate report.)	

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VEGETATION - Use scientific names of plants
Sampling Point: WOH-002-WET

Tree Stratum					50/20 Thresholds		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Tree Stratum	20% 0
2						Sapling/Shrub Stratum	50% 0
3						Herb Stratum	19 48
4						Woody Vine Stratum	0 0
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
2						Total Number of Dominant Species Across all Strata: <u>1</u> (B)	
3						Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
4							
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Herb Stratum					Prevalence Index Worksheet		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						Total % Cover of:	
2						OBL species <u>95</u> x 1 = <u>95</u>	
3						FACW species <u>0</u> x 2 = <u>0</u>	
4						FAC species <u>0</u> x 3 = <u>0</u>	
5						FACU species <u>0</u> x 4 = <u>0</u>	
6						UPL species <u>0</u> x 5 = <u>0</u>	
7						Column totals <u>95</u> (A) <u>95</u> (B)	
8						Prevalence Index = B/A = <u>1.00</u>	
9							
10							
			95	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (	6 x 20	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						<input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation	
2						<input checked="" type="checkbox"/> Dominance test is >50%	
3						<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
4						Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5						Problematic hydrophytic vegetation* (explain)	
6						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
7							
8							
9							
10							
11							
12							
13							
14							
15							
			0	= Total Cover			
Definitions of Vegetation Strata:					Hydrophytic vegetation present?		
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.					Y		

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

SOIL

Sampling Point: WOH-002-WET

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/1/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-003-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Crop edge Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.19036 Long.: -83.0122 Datum: WGS84
 Soil Map Unit Name: Pa NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-003-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1					Tree Stratum	0	0
2					Sapling/Shrub Stratum	0	0
3					Herb Stratum	17	43
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
	0	= Total Cover					

Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1					Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)		
2							
3							
4							
5							
6							
7							
8							
9							
10							
	0	= Total Cover					

Herb Stratum					Prevalence Index Worksheet		
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1					Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>65</u> x 4 = <u>260</u> UPL species <u>20</u> x 5 = <u>100</u> Column totals <u>85</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>4.24</u>		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
	85	= Total Cover					

Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1					Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2							
3							
4							
5							
6							
7							
8							
9							
10							
	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 3.28 ft (1 m) tall.				
Herb - All herbaceous (non-woody) plants, 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?				
N				

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

SOIL

Sampling Point: WOH-003-UPL

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*	Loc**		
0-12	10YR 7/1	60	10YR 7/8	5	C	M	Clay	
	10YR 5/1	35						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? ☐ Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/1/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-003-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1 Lat.: 41.1904 Long.: -83.0125 Datum: WGS84
 Soil Map Unit Name: Pa NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Sparse concave surfaces located in the forested portion of the wetland. Trees exhibit significant root buttressing.	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-003-WET

Tree Stratum					50/20 Thresholds		
Tree Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1 <i>Acer rubrum</i>		20	Y	FAC	Tree Stratum	4	10
2					Sapling/Shrub Stratum	0	0
3					Herb Stratum	19	48
4					Woody Vine Stratum	0	0
5					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>100.00%</u> (A/B)		
6							
7							
8							
9							
10		20 = Total Cover			Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>95</u> x 2 = <u>190</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>115</u> (A) <u>250</u> (B) Prevalence Index = B/A = <u>2.17</u>		
Sapling/Shrub Stratum							
Sapling/Shrub Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10		0 = Total Cover			Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
Herb Stratum							
Herb Stratum	Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1 <i>Phalaris arundinacea</i>		95	Y	FACW			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		95 = Total Cover			Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
Woody Vine Stratum							
Woody Vine Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1							
2							
3							
4							
5							
				0 = Total Cover	Hydrophytic vegetation present? <u>Y</u>		

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

SOIL
Sampling Point: WOH-003-WET

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*	Loc**		
0-12	10YR 5/1	95	7.5YR 5/8	5	C	M	Loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/1/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-004-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Crop edge Local relief (concave, convex, none): None
 Slope (%): 0 Lat.: 41.19321 Long.: -83.0437 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI Classification: PFO1C
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-004-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1				Tree Stratum	0	0	
2				Sapling/Shrub Stratum	0	0	
3				Herb Stratum	15	38	
4				Woody Vine Stratum	0	0	
5							
6							
7							
8							
9							
10							
	0	= Total Cover					

Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1				Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)	
2				Total Number of Dominant Species Across all Strata:	1	(B)	
3				Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)	
4							
5							
6							
7							
8							
9							
10							
	0	= Total Cover					

Herb Stratum					Prevalence Index Worksheet		
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1				Total % Cover of:			
2				OBL species	0	x 1 = 0	
3				FACW species	0	x 2 = 0	
4				FAC species	0	x 3 = 0	
5				FACU species	10	x 4 = 40	
6				UPL species	65	x 5 = 325	
7				Column totals	75	(A) 365 (B)	
8				Prevalence Index = B/A =	4.87		
9							
10							
11							
12							
13							
14							
15							
	75	= Total Cover					

Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1				___ Rapid test for hydrophytic vegetation			
2				___ Dominance test is >50%			
3				___ Prevalence index is ≤3.0*			
4				___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
5				___ Problematic hydrophytic vegetation* (explain)			
				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
				Definitions of Vegetation Strata:			
				Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
				Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
				Woody vines - All woody vines greater than 3.28 ft in height.			
	0	= Total Cover		Hydrophytic vegetation present? <u> N </u>			

Remarks: (Include photo numbers here or on a separate sheet)
 Edge of crop area

SOIL
Sampling Point: WOH-004-UPL

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*	Loc**		
0-6	10YR 3/6	100					Clay loam	
6-12	10YR 3/6	90	7.5YR 6/8	5	C	M	Clay loam	
			2.5Y 8/4	5	C	M		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|---|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/1/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-004-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1 Lat.: 41.1929 Long.: -83.0436 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI Classification: PFO1C
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Trees exhibit significant root buttressing.	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-004-WET

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Acer rubrum</i>	40	Y	FAC	Tree Stratum	17	43	
2 <i>Ulmus americana</i>	30	Y	FACW	Sapling/Shrub Stratum	0	0	
3 <i>Quercus bicolor</i>	15	N	FACW	Herb Stratum	0	0	
4				Woody Vine Stratum	0	0	
5				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>100.00%</u> (A/B)			
6							
7							
8							
9							
10	85	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>45</u> x 2 = <u>90</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>85</u> (A) <u>210</u> (B) Prevalence Index = B/A = <u>2.47</u>			
Sapling/Shrub Stratum							
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Herb Stratum					Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic hydrophytic vegetation* (explain) <small>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</small>		
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
			0	= Total Cover			
Woody Vine Stratum					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4							
5							
			0	= Total Cover			
Hydrophytic vegetation present? <u>Y</u>							

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

The trees in the wetland had significant root buttressing indicating adaption to saturated soils and flooding.

SOIL

Sampling Point: WOH-004-WET

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 10/2/2016
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-005-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Convex
 Slope (%): 1% Lat: 41.20923 Long: -83.0647 Datum: WGS84
 Soil Map Unit Name: NpA NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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>			
Wetland Hydrology Present?	Yes <u> </u>	No <u> X </u>			

Remarks:

The upland point technically had wetland vegetation, however the trees lacked any significant buttressing. The calculation of the Dominance Test also includes FAC species which may result in overestimation of wetland vegetation.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 2 </u> (A) Total Number of Dominant Species Across All Strata: <u> 3 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 67% </u> (A/B)														
1. <u>Acer saccharum</u>	<u>60%</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Acer saccharinum</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>															
3. <u>Fagus grandifolia</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
	<u>90%</u> = Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>25%</u></td> <td>x2 = <u>0.5</u></td> </tr> <tr> <td>FAC species <u>15%</u></td> <td>x3 = <u>0.45</u></td> </tr> <tr> <td>FACU species <u>65%</u></td> <td>x4 = <u>2.6</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.05</u> (A)</td> <td><u>3.55</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u> 3.38 </u>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>25%</u>	x2 = <u>0.5</u>	FAC species <u>15%</u>	x3 = <u>0.45</u>	FACU species <u>65%</u>	x4 = <u>2.6</u>	UPL species _____	x5 = _____	Column Totals: <u>1.05</u> (A)	<u>3.55</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species <u>25%</u>	x2 = <u>0.5</u>																	
FAC species <u>15%</u>	x3 = <u>0.45</u>																	
FACU species <u>65%</u>	x4 = <u>2.6</u>																	
UPL species _____	x5 = _____																	
Column Totals: <u>1.05</u> (A)	<u>3.55</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
	_____ = Total Cover																	
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Toxicodendron radicans</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1-Rapid Test for Hydrophytic Vegetation <u> X </u> 2-Dominance Test is >50% <u> </u> 3-Prevalence Index is ≤3.0 ¹ <u> </u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	_____	_____	_____															
	<u>15%</u> = Total Cover																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>														
2. _____	_____	_____	_____															
	_____ = Total Cover																	

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

SOIL

Sampling Point: WOH-005-UPL

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		
0-4	7.5YR 2.5/1	100					Loam	Dry
4-12	7.5YR 3/1	95	2.5YR 4/8	5	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

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:		

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"/> True Aquatic Plants (B14)	
<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"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> N/A </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:	

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 10/2/2016
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-005-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression in woodlot Local relief (concave, convex, none): Concave
 Slope (%): 2% Lat: 41.209 Long: -83.0645 Datum: WGS84
 Soil Map Unit Name: HoA NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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 _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																																
1. <u>Quercus bicolor</u>	<u>50%</u>	<u>Yes</u>	<u>FACW</u>																																	
2. <u>Acer saccharinum</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>																																	
3. <u>Liriodendron tulipifera</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
<u>80%</u> = Total Cover																																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td colspan="2">Total % Cover of:</td> <td colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td>_____</td> <td>x1 =</td> <td>_____</td> </tr> <tr> <td>FACW species</td> <td><u>70%</u></td> <td>x2 =</td> <td><u>1.4</u></td> </tr> <tr> <td>FAC species</td> <td>_____</td> <td>x3 =</td> <td>_____</td> </tr> <tr> <td>FACU species</td> <td><u>10%</u></td> <td>x4 =</td> <td><u>0.4</u></td> </tr> <tr> <td>UPL species</td> <td>_____</td> <td>x5 =</td> <td>_____</td> </tr> <tr> <td>Column Totals:</td> <td><u>0.80</u> (A)</td> <td></td> <td><u>1.8</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.25</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	_____	x1 =	_____	FACW species	<u>70%</u>	x2 =	<u>1.4</u>	FAC species	_____	x3 =	_____	FACU species	<u>10%</u>	x4 =	<u>0.4</u>	UPL species	_____	x5 =	_____	Column Totals:	<u>0.80</u> (A)		<u>1.8</u> (B)	Prevalence Index = B/A = <u>2.25</u>			
Total % Cover of:		Multiply by:																																		
OBL species	_____	x1 =	_____																																	
FACW species	<u>70%</u>	x2 =	<u>1.4</u>																																	
FAC species	_____	x3 =	_____																																	
FACU species	<u>10%</u>	x4 =	<u>0.4</u>																																	
UPL species	_____	x5 =	_____																																	
Column Totals:	<u>0.80</u> (A)		<u>1.8</u> (B)																																	
Prevalence Index = B/A = <u>2.25</u>																																				
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
_____ = Total Cover																																				
Herb Stratum (Plot size: <u>5'</u> radius)																																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>X</u> 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. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
12. _____	_____	_____	_____																																	
13. _____	_____	_____	_____																																	
14. _____	_____	_____	_____																																	
15. _____	_____	_____	_____																																	
16. _____	_____	_____	_____																																	
17. _____	_____	_____	_____																																	
18. _____	_____	_____	_____																																	
19. _____	_____	_____	_____																																	
20. _____	_____	_____	_____																																	
_____ = Total Cover																																				
Woody Vine Stratum (Plot size: <u>30'</u> radius)																																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																																
2. _____	_____	_____	_____																																	
_____ = Total Cover																																				
Remarks: (Include photo numbers here or on a separate sheet.)																																				

SOIL

Sampling Point: WOH-005-WET**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	Humus						Humus	Degrading leaf matter
1-4	7.5YR 2.5/1	95	7.5YR 5/8	5	C	M	Clay loam	
4-12	2.5Y 6/2	80	7.5YR 5/8	5	C	M	Clay	
	7.5YR 5/1	15						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

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 checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

Saturation was present in top four inches of soil, above the clay layer but did not appear to extend lower. The clay may become saturated after either higher intensity rain events or later after a storm.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/2/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-006-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Forested slope Local relief (concave, convex, none): Convex
 Slope (%): 5 Lat.: 41.20467 Long.: -83.0203 Datum: WGS84
 Soil Map Unit Name: Ch NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Relatively steeply sloped hillside.	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-006-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Acer saccharum</i>	65	Y	FACU	Tree Stratum	13	33	
2				Sapling/Shrub Stratum	0	0	
3				Herb Stratum	8	20	
4				Woody Vine Stratum	0	0	
5				Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)			
6							
7							
8							
9							
10	65	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>100</u> x 4 = <u>400</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>105</u> (A) <u>415</u> (B) Prevalence Index = B/A = <u>3.95</u>			
Sapling/Shrub Stratum		Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Herb Stratum		Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus		
1	<i>Parthenocissus quinquefolia</i>		20	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2	<i>Agertina altissima</i>		15	Y	FACU		
3	<i>Toxicodendron radicans</i>		5	N	FAC		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
			40	= Total Cover		Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum		Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		
1							
2							
3							
4							
5							
			0	= Total Cover		Hydrophytic vegetation present? <u>N</u>	

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

SOIL
Sampling Point: WOH-006-UPL

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*	Loc**		
0-4	10YR 3/3	100					Loam	
4-12	10YR 5/2	55					Clayey loam	
	10YR 6/6	45					Clayey loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/2/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-006-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Relic stream channel Local relief (concave, convex, none): Concave
 Slope (%): 5 Lat.: 41.2046 Long.: -83.02 Datum: WGS84
 Soil Map Unit Name: Ch NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (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"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Relic channel area at toe of slope	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-006-WET

Tree Stratum					50/20 Thresholds		
Tree Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1 <i>Acer rubrum</i>		65	Y	FAC	Tree Stratum	13	33
2					Sapling/Shrub Stratum	4	10
3					Herb Stratum	0	0
4					Woody Vine Stratum	0	0
5					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>100.00%</u> (A/B)		
6							
7							
8							
9							
10		65 = Total Cover			Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>65</u> x 3 = <u>195</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>85</u> (A) <u>235</u> (B) Prevalence Index = B/A = <u>2.76</u>		
Sapling/Shrub Stratum							
Sapling/Shrub Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1 <i>Ulmus americana</i>		20	Y	FACW			
2							
3							
4							
5							
6							
7							
8							
9							
10		20 = Total Cover			Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
Herb Stratum							
Herb Stratum	Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
				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 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, 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							
Woody Vine Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1							
2							
3							
4							
5							
				0 = Total Cover	Hydrophytic vegetation present? <u>Y</u>		

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

SOIL
Sampling Point: WOH-006-WET

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*	Loc**		
0-1							Humus	Decaying leaves
1-10	10YR 4/2	90	10YR5/1	5	C	M	Clay loam	
			7.5YR 5/8	5	C	M	Clay loam	
10-12	2.5Y 6/1	75					Clay loam	
	2.5YR 5/8	25					Clay loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? ☐ Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/3/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-007-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Crop edge Local relief (concave, convex, none): None
 Slope (%): 2 Lat.: 41.20456 Long.: -83.0022 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-007-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Carya ovata</i>	50	Y	FACU	Tree Stratum	18	45	
2 <i>Quercus alba</i>	40	Y	FACU	Sapling/Shrub Stratum	0	0	
3				Herb Stratum	12	30	
4				Woody Vine Stratum	0	0	
5				Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)			
6							
7							
8							
9							
10	90	= Total Cover		Prevalence Index Worksheet Total % Cover of: 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>0</u> x 5 = <u>0</u> Column totals <u>140</u> (A) <u>560</u> (B) Prevalence Index = B/A = <u>4.00</u>			
Sapling/Shurb Stratum		Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
			0	= Total Cover			
Herb Stratum		Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus		
1	<i>Schedonorus arundinaceus</i>		30	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2	<i>Symphyotrichum pilosum</i>		20	Y	FACU		
3	<i>Toxicodendron radicans</i>		10	N	FAC		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
			60	= Total Cover		Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
Woody Vine Stratum		Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		
1							
2							
3							
4							
5							
			0	= Total Cover		Hydrophytic vegetation present? <u>N</u>	

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

SOIL

Sampling Point: WOH-007-UPL

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*	Loc**		
0-4	5YR 4/4	100					Loam	
4-12	5Y 7/3	100					Clayey loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/3/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-007-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 3 Lat.: 41.2051 Long.: -83.00025 Datum: WGS84
 Soil Map Unit Name: Pa NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (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"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland had areas of sparsely vegetated concave surfaces, and apparent algal mats on some woody debris.	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-007-WET

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Acer saccharinum</i>	50	Y	FACW	Tree Stratum	14	35	
2 <i>Quercus bicolor</i>	20	Y	FACW	Sapling/Shrub Stratum	6	15	
3				Herb Stratum	3	8	
4				Woody Vine Stratum	0	0	
5				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>100.00%</u> (A/B)			
6							
7							
8							
9							
10	70	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>115</u> (A) <u>215</u> (B) Prevalence Index = B/A = <u>1.87</u>			
Sapling/Shrub Stratum		Absolute % Cover	Dominant Species	Indicator Staus	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
1 <i>Ulmus americana</i>	30	Y	FACW				
2							
3							
4							
5					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
6							
7							
8							
9							
10	30	= Total Cover		Hydrophytic vegetation present? <u>Y</u>			
Herb Stratum		Absolute % Cover	Dominant Species	Indicator Staus			
1 <i>Scirpus atrovirens</i>	15	Y	OBL				
2							
3							
4							
5							
6							
7							
8							
9							
10	15	= Total Cover					
Woody Vine Stratum		Absolute % Cover	Dominant Species	Indicator Staus			
1							
2							
3							
4							
5	0	= Total Cover					

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

SOIL
Sampling Point: WOH-007-WET

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*	Loc**		
0-1							Humus	Decaying leaves
1-6	10YR 4/1	95	7.5YR 5/8	5	C	M	Loamey clay	
6-12	7.5YR 2.5/1	80	7.5YR 5/8	5	C	M	Loamey clay	
	10YR 7/1	15						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? ☐ Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/3/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-008-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Hillslope in woodlot Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: 41.156059 Long.: -82.94409 Datum: WGS84
 Soil Map Unit Name: _____ NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-008-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Acer saccharum</i>	100	Y	FACU		Tree Stratum	20	50
2					Sapling/Shrub Stratum	0	0
3					Herb Stratum	9	23
4					Woody Vine Stratum	0	0
5					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)		
6							
7							
8							
9							
10	100 = Total Cover				Prevalence Index Worksheet Total % Cover of: 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>130</u> x 4 = <u>520</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>145</u> (A) <u>565</u> (B) Prevalence Index = B/A = <u>3.90</u>		
Sapling/Shrub Stratum					Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
5							
6							
7							
8							
9					Hydrophytic vegetation present? <u>N</u>		
10							
11							
12							
13							
14					Hydrophytic vegetation present? <u>N</u>		
15							
16							
17							
18							
Herb Stratum					Hydrophytic vegetation present? <u>N</u>		
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1 <i>Symphyotrichum pilosum</i>	25	Y	FACU				
2 <i>Toxicodendron radicans</i>	15	Y	FAC				
3 <i>Agertina altissima</i>	5	N	FACU				
4					Hydrophytic vegetation present? <u>N</u>		
5							
6							
7							
8							
9					Hydrophytic vegetation present? <u>N</u>		
10							
11							
12							
13							
14					Hydrophytic vegetation present? <u>N</u>		
15							
16							
17							
18							
19					Hydrophytic vegetation present? <u>N</u>		
20							
21							
22							
23							
24					Hydrophytic vegetation present? <u>N</u>		
25							
26							
27							
28							
29					Hydrophytic vegetation present? <u>N</u>		
30							
31							
32							
33							
34					Hydrophytic vegetation present? <u>N</u>		
35							
36							
37							
38							
39					Hydrophytic vegetation present? <u>N</u>		
40							
41							
42							
43							
44					Hydrophytic vegetation present? <u>N</u>		
45							
46							
47							
48							
49					Hydrophytic vegetation present? <u>N</u>		
50							
51							
52							
53							
54					Hydrophytic vegetation present? <u>N</u>		
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57							
58							
59					Hydrophytic vegetation present? <u>N</u>		
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64					Hydrophytic vegetation present? <u>N</u>		
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69					Hydrophytic vegetation present? <u>N</u>		
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74					Hydrophytic vegetation present? <u>N</u>		
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79					Hydrophytic vegetation present? <u>N</u>		
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84					Hydrophytic vegetation present? <u>N</u>		
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86							
87							
88							
89					Hydrophytic vegetation present? <u>N</u>		
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94					Hydrophytic vegetation present? <u>N</u>		
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99					Hydrophytic vegetation present? <u>N</u>		
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104					Hydrophytic vegetation present? <u>N</u>		
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109					Hydrophytic vegetation present? <u>N</u>		
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114					Hydrophytic vegetation present? <u>N</u>		
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119					Hydrophytic vegetation present? <u>N</u>		
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124					Hydrophytic vegetation present? <u>N</u>		
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129					Hydrophytic vegetation present? <u>N</u>		
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134					Hydrophytic vegetation present? <u>N</u>		
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139					Hydrophytic vegetation present? <u>N</u>		
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144					Hydrophytic vegetation present? <u>N</u>		
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149					Hydrophytic vegetation present? <u>N</u>		
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154					Hydrophytic vegetation present? <u>N</u>		
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159					Hydrophytic vegetation present? <u>N</u>		
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164					Hydrophytic vegetation present? <u>N</u>		
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169					Hydrophytic vegetation present? <u>N</u>		
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174					Hydrophytic vegetation present? <u>N</u>		
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179					Hydrophytic vegetation present? <u>N</u>		
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184					Hydrophytic vegetation present? <u>N</u>		
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189					Hydrophytic vegetation present? <u>N</u>		
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194					Hydrophytic vegetation present? <u>N</u>		
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199					Hydrophytic vegetation present? <u>N</u>		
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204					Hydrophytic vegetation present? <u>N</u>		
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209					Hydrophytic vegetation present? <u>N</u>		
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214					Hydrophytic vegetation present? <u>N</u>		
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219					Hydrophytic vegetation present? <u>N</u>		
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224					Hydrophytic vegetation present? <u>N</u>		
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229					Hydrophytic vegetation present? <u>N</u>		
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234					Hydrophytic vegetation present? <u>N</u>		
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239					Hydrophytic vegetation present? <u>N</u>		
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244					Hydrophytic vegetation present? <u>N</u>		
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249					Hydrophytic vegetation present? <u>N</u>		
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254					Hydrophytic vegetation present? <u>N</u>		
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257							
258							
259					Hydrophytic vegetation present? <u>N</u>		
260							
261							
262							
263							
264					Hydrophytic vegetation present? <u>N</u>		

SOIL
Sampling Point: WOH-008-UPL

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*	Loc**		
0-6	10YR 3/6	100					Loam	
6-10	10YR 5/3	100					Clayey loam	
10-12	2.5Y 7/3	95	2.5Y 7/8	5	C	M	Loamey clay	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/3/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-009-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Relic stream channel in woodlot Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat.: 41.16009 Long.: -82.96 Datum: WGS84
 Soil Map Unit Name: _____ NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-009-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Acer saccharum</i>	80	Y	FACU	Tree Stratum	24	60	
2 <i>Carya vata</i>	30	Y	FACU	Sapling/Shrub Stratum	8	20	
3 <i>Ulmus americana</i>	10	N	FACW	Herb Stratum	0	0	
4				Woody Vine Stratum	0	0	
5				Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)			
6							
7							
8							
9							
10	120	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>150</u> x 4 = <u>600</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>160</u> (A) <u>620</u> (B) Prevalence Index = B/A = <u>3.88</u>			
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) <small>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</small>			
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1 <i>Carya vata</i>	40	Y	FACU				
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 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.			
5							
6							
7							
8							
9				Hydrophytic vegetation present? <u>N</u>			
10							
11							
12							
13							
14				Remarks: (Include photo numbers here or on a separate sheet)			
15							
	0	= Total Cover					
Woody Vine Stratum							
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4							
5							
	0	= Total Cover					

SOIL

Sampling Point: WOH-009-UPL

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*	Loc**		
0-1	7.5YR 3/2	100					Loam	
1-8	10YR 5/3	100					Loam	
8-12	5Y 7/4	100					Loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/3/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-009-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Relic stream channel in woodlot Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat.: 41.1605 Long.: -82.9593 Datum: WGS84
 Soil Map Unit Name: _____ NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Soils saturated throughout.	

VEGETATION - Use scientific names of plants **Sampling Point:** WOH-009-WET

Sampling Point: WOH-009-WET

50/20 Thresholds				
Tree Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1 <i>Acer rubrum</i>		80	Y	FAC
2 <i>Carya vata</i>		10	N	FACU
3				
4				
5				
6				
7				
8				
9				
10				
		90 = Total Cover		
Sapling/Shurb Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 = Total Cover		
Herb Stratum	Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1 <i>Microstegium vimineum</i>		80	Y	FAC
2 <i>Scirpus atrovirens</i>		10	N	OBL
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		90 = Total Cover		
Woody Vine Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	<u>10</u>	x 1 =	<u>10</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>80</u>	x 3 =	<u>240</u>
FACU species	<u>10</u>	x 4 =	<u>40</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>100</u> (A)		<u>290</u> (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

 Dominance test is >50%

X Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

X Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present?

Y

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

SOIL
Sampling Point: WOH-009-WET

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*	Loc**		
0-1	10R 2.5/1	100					Organic loam	High leaf matter content
1-8	2.5YR 4/1	95	2.5YR 5/8	5	C	M	Loam	
8-12	10YR 6/1	60	10Yr 5/8	5	C	M	Loamey Clay	
	10YR 4/1	35						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|---|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 10/3/16
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-010-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Intermittent ditch floodplain Local relief (concave, convex, none): Concave
 Slope (%): 0 Lat.: 41.166 Long.: -82.9483 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI Classification: N/A
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-010-UPL

Tree Stratum					50/20 Thresholds		
Tree Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1					Tree Stratum	0	0
2					Sapling/Shrub Stratum	0	0
3					Herb Stratum	20	50
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
		0	= Total Cover				

Sapling/Shrub Stratum					Dominance Test Worksheet		
Sapling/Shrub Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1					Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)
2					Total Number of Dominant Species Across all Strata:	1	(B)
3					Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)
4							
5							
6							
7							
8							
9							
10							
		0	= Total Cover				

Herb Stratum					Prevalence Index Worksheet		
Herb Stratum	Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1	<i>Schedonorus arundinaceus</i>	80	Y	FACU	Total % Cover of:		
2	<i>Symphyotrichum pilosum</i>	15	N	FACU	OBL species	0	x 1 = 0
3	<i>Taraxacum officinale</i>	5	N	FACU	FACW species	0	x 2 = 0
4					FAC species	0	x 3 = 0
5					FACU species	100	x 4 = 400
6					UPL species	0	x 5 = 0
7					Column totals	100	(A) 400 (B)
8					Prevalence Index = B/A =	4.00	
9							
10							
11							
12							
13							
14							
15							
		100	= Total Cover				

Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Woody Vine Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1					<input type="checkbox"/> Rapid test for hydrophytic vegetation		
2					<input type="checkbox"/> Dominance test is >50%		
3					<input type="checkbox"/> Prevalence index is ≤3.0*		
4					<input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
5					<input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		

Woody Vine Stratum					Definitions of Vegetation Strata:		
Woody Vine Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
2					Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
3					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
4					Woody vines - All woody vines greater than 3.28 ft in height.		
5							
		0	= Total Cover				

Woody Vine Stratum					Hydrophytic vegetation present?		
Woody Vine Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus			
1							
2							
3							
4							
5							
		0	= Total Cover				

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

SOIL

Sampling Point: WOH-010-UPL

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/8/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-101-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Crop Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.22272 Long.: -83.079 Datum: WGS84
 Soil Map Unit Name: Mf NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Taken in crop area nearby </div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div>	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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-101-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (20 x 10)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1					Tree Stratum	0	0
2					Sapling/Shrub Stratum	0	0
3					Herb Stratum	6	15
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
	0	= Total Cover					
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (20 x 10)	Absolute % Cover	Dominant Species	Indicator Staus				
1					Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)		
2					Total Number of Dominant Species Across all Strata: <u>1</u> (B)		
3					Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)		
4							
5							
6							
7							
8							
9							
10							
	0	= Total Cover					
Herb Stratum					Prevalence Index Worksheet		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1					Total % Cover of:		
2					OBL species <u>0</u> x 1 = <u>0</u>		
3					FACW species <u>0</u> x 2 = <u>0</u>		
4					FAC species <u>0</u> x 3 = <u>0</u>		
5					FACU species <u>0</u> x 4 = <u>0</u>		
6					UPL species <u>30</u> x 5 = <u>150</u>		
7					Column totals <u>30</u> (A) <u>150</u> (B)		
8					Prevalence Index = B/A = <u>5.00</u>		
9							
10							
11							
12							
13							
14							
15							
	30	= Total Cover					
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1					Rapid test for hydrophytic vegetation		
2					Dominance test is >50%		
3					Prevalence index is ≤3.0*		
4					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
5					Problematic hydrophytic vegetation* (explain)		
6					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
7							
8							
9							
10							
11							
12							
13							
14							
15							
	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 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, 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? <u> N </u>		
Remarks: (Include photo numbers here or on a separate sheet)							

SOIL

Sampling Point: WOH-101-UPL

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)
- _____ Dark Surface (S7) (**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 Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/8/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-101-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave
 Slope (%): 1 Lat.: 41.2228 Long.: -83.0792 Datum: WGS84
 Soil Map Unit Name: Mf NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="text-align: center; font-size: 1.2em;">Occurs along toe of slope of old railroad bed.</div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (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"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> Water table present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-101-WET

Tree Stratum					50/20 Thresholds		
Plot Size (20 x 10)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Ulmus americana</i>	70	Y	FACW	Tree Stratum	16	40	
2 <i>Prunus serotina</i>	10	N	FACU	Sapling/Shrub Stratum	6	15	
3				Herb Stratum	14	35	
4				Woody Vine Stratum	0	0	
5				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>100.00%</u> (A/B)			
6							
7							
8							
9							
10	80 = Total Cover			Prevalence Index Worksheet Total % Cover of: OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>160</u> x 2 = <u>320</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>180</u> (A) <u>370</u> (B) Prevalence Index = B/A = <u>2.06</u>			
Sapling/Shrub Stratum					Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
Plot Size (20 x 10)	Absolute % Cover	Dominant Species	Indicator Staus				
1 <i>Ulmus americana</i>	30	Y	FACW				
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 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.			
5							
6							
7							
8							
9				Hydrophytic vegetation present? <u>Y</u>			
10							
11							
12							
13							
14				Remarks: (Include photo numbers here or on a separate sheet)			
15	70 = Total Cover						
Woody Vine Stratum							
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4							
5	0 = Total Cover						

SOIL

Sampling Point: WOH-101-WET

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/8/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-102-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Forest edge Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.20912 Long.: -83.0906 Datum: WGS84
 Soil Map Unit Name: HoA NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Taken along edge of forest	

HYDROLOGY

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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-102-UPL

Tree Stratum					50/20 Thresholds					
Tree Stratum	Plot Size (20 x 10)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%			
1 <i>Carya ovata</i>		15	Y	FACU	Tree Stratum	5	13			
2 <i>Juglans nigra</i>		10	Y	FACU	Sapling/Shrub Stratum	4	10			
3					Herb Stratum	4	10			
4					Woody Vine Stratum	0	0			
5					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>20.00%</u> (A/B)					
6										
7										
8										
9										
10										
25 = Total Cover										
Sapling/Shrub Stratum								Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>45</u> x 4 = <u>180</u> UPL species <u>10</u> x 5 = <u>50</u> Column totals <u>65</u> (A) <u>260</u> (B) Prevalence Index = B/A = <u>4.00</u>		
1 <i>Aesculus glabra</i>		10	Y	FAC						
2 <i>Rubus occidentalis</i>		10	Y	UPL						
3										
4										
5										
6										
7										
8										
9										
20 = Total Cover										
Herb Stratum					Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
1 <i>Alliaria petiolata</i>		20	Y	FACU						
2										
3										
4										
5										
6										
7										
8										
9										
20 = Total Cover										
Woody Vine Stratum					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.					
1										
2										
3										
4										
5										
0 = Total Cover										
Remarks: (Include photo numbers here or on a separate sheet)								Hydrophytic vegetation present? <u>N</u>		

SOIL
Sampling Point: WOH-102-UPL

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*	Loc**		
0-12	7.5YR 4/2	100					Loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|---|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/8/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-102-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave
 Slope (%): 1 Lat.: 41.2091 Long.: -83.0904 Datum: WGS84
 Soil Map Unit Name: HoA NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Taken at toe of slope depression along old railroad bed.	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (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"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Water table present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-102-WET

Tree Stratum					50/20 Thresholds		
Plot Size (	20 x 10	)	Absolute % Cover	Dominant Species	Indicator Staus		
1	<i>Ulmus americana</i>		30	Y	FACW	Tree Stratum	20% 8
2	<i>Quercus bicolor</i>		10	Y	FACW	Sapling/Shrub Stratum	50% 20
3						Herb Stratum	6 15
4						Woody Vine Stratum	0 0
5							
6							
7							
8							
9							
10							
			40	=	Total Cover		
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (	20 x 10	)	Absolute % Cover	Dominant Species	Indicator Staus		
1	<i>Ulmus americana</i>		10	Y	FACW	Number of Dominant Species that are OBL, FACW, or FAC: <u>3</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>60.00%</u> (A/B)	
4							
5							
6							
7							
8							
9							
10							
			10	=	Total Cover		
Herb Stratum					Prevalence Index Worksheet		
Plot Size (	15' radius	)	Absolute % Cover	Dominant Species	Indicator Staus		
1	<i>Erythronium albidum</i>		20	Y	FACU	Total % Cover of:	
2	<i>Carex blanda</i>		10	Y	FAC	OBL species <u>0</u> x 1 = <u>0</u>	
3						FACW species <u>50</u> x 2 = <u>100</u>	
4						FAC species <u>0</u> x 3 = <u>0</u>	
5						FACU species <u>20</u> x 4 = <u>80</u>	
6						UPL species <u>0</u> x 5 = <u>0</u>	
7						Column totals <u>70</u> (A) <u>180</u> (B)	
8						Prevalence Index = B/A = <u>2.57</u>	
9							
10							
11							
12							
13							
14							
15							
			30	=	Total Cover		
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (	15' radius	)	Absolute % Cover	Dominant Species	Indicator Staus		
1						<input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation	
2						<input checked="" type="checkbox"/> Dominance test is >50%	
3						<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
4						Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5						Problematic hydrophytic vegetation* (explain)	
						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
					Definitions of Vegetation Strata:		
					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
					Woody vines - All woody vines greater than 3.28 ft in height.		
					Hydrophytic vegetation present? <u>Y</u>		
Remarks: (Include photo numbers here or on a separate sheet)							

SOIL
Sampling Point: WOH-102-WET

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*	Loc**		
0-10	10YR 4/1	90	10YR 8/6	10	C	M	Sandy loam	
10-12	10YR 5/1	80	10YR 6/8	20	C	M	Clayey loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|---|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/12/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-105-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Forest Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.22745 Long.: -83.0416 Datum: WGS84
 Soil Map Unit Name: FcA NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Crop edge</div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div>	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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants

Sampling Point: WOH-105-UPL

50/200 Thresholds				
Tree Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Platanus occidentalis</i>	40	Y	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
		40 = Total Cover		
Sapling/Shrub Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Rosa multiflora</i>	5	Y	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
		5 = Total Cover		
Herb Stratum	Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Alliaria petiolata</i>	40	Y	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		40 = Total Cover		
Woody Vine Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>40</u>	x 2 =	<u>80</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>45</u>	x 4 =	<u>180</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>85</u> (A)		<u>260</u> (B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

 Dominance test is >50%

 Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? N

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

SOIL

Sampling Point: WOH-105-UPL

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)
- _____ Dark Surface (S7) (**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 Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/12/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-105-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat.: 41.2273 Long.: -83.0417 Datum: WGS84
 Soil Map Unit Name: FcA NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>8</u> Water table present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-105-WET

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1 <i>Platanus occidentalis</i>	60	Y	FACW	Tree Stratum	12	30	
2				Sapling/Shrub Stratum	0	0	
3				Herb Stratum	0	0	
4				Woody Vine Stratum	0	0	
5				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>100.00%</u> (A/B)			
6							
7							
8							
9							
10	60 = Total Cover			Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>60</u> x 2 = <u>120</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>60</u> (A) <u>120</u> (B) Prevalence Index = B/A = <u>2.00</u>			
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.			
5							
6							
7							
8							
9				Hydrophytic vegetation present? <u>Y</u>			
10							
11							
12							
13							
14				Hydrophytic vegetation present? <u>Y</u>			
15							
Herb Stratum				Hydrophytic vegetation present? <u>Y</u>			
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4				Hydrophytic vegetation present? <u>Y</u>			
5							
6							
7							
8							
9				Hydrophytic vegetation present? <u>Y</u>			
10							
11							
12							
13							
14				Hydrophytic vegetation present? <u>Y</u>			
15							
Woody Vine Stratum				Hydrophytic vegetation present? <u>Y</u>			
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1							
2							
3							
4				Hydrophytic vegetation present? <u>Y</u>			
5							
Remarks: (Include photo numbers here or on a separate sheet)							

SOIL

Sampling Point: WOH-105-WET

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)
- _____ Dark Surface (S7) (**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 Soils:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☒ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

Assumed based on significant standign water within a concave surface/

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/12/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-106-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Roadside Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.21641 Long.: -83.0413 Datum: WGS84
 Soil Map Unit Name: GaA NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Crop edge</div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 50%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div>	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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-106-UPL

Tree Stratum					50/20 Thresholds		
Tree Stratum	Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1					Tree Stratum	0	0
2					Sapling/Shrub Stratum	4	10
3					Herb Stratum	20	50
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
		0	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Sapling/Shrub Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1	<i>Rubus occidentalis</i>	20	Y	UPL	Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)
2					Total Number of Dominant Species Across all Strata:	2	(B)
3					Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)
4							
5							
6							
7							
8							
9							
10							
		20	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Herb Stratum	Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1	<i>Festuca rubra</i>	90	Y	FACU	Total % Cover of:		
2	<i>Dipsacus fullonum</i>	10	N	FACU	OBL species	0 x 1 =	0
3					FACW species	0 x 2 =	0
4					FAC species	0 x 3 =	0
5					FACU species	100 x 4 =	400
6					UPL species	20 x 5 =	100
7					Column totals	120 (A)	500 (B)
8					Prevalence Index = B/A =	4.17	
9							
10							
11							
12							
13							
14							
15							
		100	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Woody Vine Stratum	Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%
1					___ Rapid test for hydrophytic vegetation		
2					___ Dominance test is >50%		
3					___ Prevalence index is ≤3.0*		
4					___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
5					___ Problematic hydrophytic vegetation* (explain)		
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
		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 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, 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? <u> N </u>		
Remarks: (Include photo numbers here or on a separate sheet)							

SOIL

Sampling Point: WOH-106-UPL

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)
- _____ Dark Surface (S7) (**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 Soils:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
 ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 ___ Dark Surface (S7) (**LRR K, L**)
 ___ Polyvalue Below Surface (S8) (**LRR K, L**)
 ___ Thin Dark Surface (S9) (**LRR K, L**)
 ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
 ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 ___ Red Parent Material (TF2)
 ___ Very Shallow Dark Surface (TF12)
 ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/12/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-106-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat.: 41.2163 Long.: -83.0412 Datum: WGS84
 Soil Map Unit Name: GaA NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (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"/> FAC-Neutral Test (D5) <input checked="" type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> Water table present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-106-WET

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1				Tree Stratum	0	0	
2				Sapling/Shrub Stratum	0	0	
3				Herb Stratum	14	35	
4				Woody Vine Stratum	2	5	
5							
6							
7							
8							
9							
10							
0 = Total Cover							
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1				Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A)			
2				Total Number of Dominant Species Across all Strata: <u>2</u> (B)			
3				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)			
4							
5							
6							
7							
8							
9							
10							
0 = Total Cover							
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1				Total % Cover of:			
2				OBL species <u>70</u> x 1 = <u>70</u>			
3				FACW species <u>0</u> x 2 = <u>0</u>			
4				FAC species <u>10</u> x 3 = <u>30</u>			
5				FACU species <u>0</u> x 4 = <u>0</u>			
6				UPL species <u>0</u> x 5 = <u>0</u>			
7				Column totals <u>80</u> (A) <u>100</u> (B)			
8				Prevalence Index = B/A = <u>1.25</u>			
9							
10							
70 = Total Cover							
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1				<input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation			
2				<input checked="" type="checkbox"/> Dominance test is >50%			
3				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*			
4				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
5				Problematic hydrophytic vegetation* (explain)			
6				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
7							
8							
9							
10							
11							
12							
13							
14							
15							
10 = Total Cover							
Woody Vine Stratum					Definitions of Vegetation Strata:		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1				Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
2				Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
3				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
4				Woody vines - All woody vines greater than 3.28 ft in height.			
5							
10 = Total Cover							
Remarks: (Include photo numbers here or on a separate sheet)					Hydrophytic vegetation present? <u>Y</u>		

SOIL
Sampling Point: WOH-106-WET

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*	Loc**		
0-12	7.5YR 5/2	100					Clayey loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|---|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Apex Republic Wind Farm City/County: Seneca Sampling Date: 4/12/17
 Applicant/Owner: Apex State: OH Sampling Point: WOH-107-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Roadside Local relief (concave, convex, none): Convex
 Slope (%): 1 Lat.: 41.21312 Long.: -83.0409 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI Classification: NA
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="text-align: center; font-weight: bold;">Mound between ditch and wetland</div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 50%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div>	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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION - Use scientific names of plants
Sampling Point: WOH-107-UPL

Tree Stratum					50/20 Thresholds		
Plot Size (30' radius)	Absolute % Cover	Dominant Species	Indicator Staus		20%	50%	
1					Tree Stratum	0	0
2					Sapling/Shrub Stratum	0	0
3					Herb Stratum	18	45
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
	0	= Total Cover					
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1					Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)		
2					Total Number of Dominant Species Across all Strata: <u>2</u> (B)		
3					Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)		
4							
5							
6							
7							
8							
9							
10							
	0	= Total Cover					
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1					Total % Cover of:		
2					OBL species <u>0</u> x 1 = <u>0</u>		
3					FACW species <u>0</u> x 2 = <u>0</u>		
4					FAC species <u>0</u> x 3 = <u>0</u>		
5					FACU species <u>90</u> x 4 = <u>360</u>		
6					UPL species <u>0</u> x 5 = <u>0</u>		
7					Column totals <u>90</u> (A) <u>360</u> (B)		
8					Prevalence Index = B/A = <u>4.00</u>		
9							
10							
11							
12							
13							
14							
15							
	90	= Total Cover					
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (15' radius)	Absolute % Cover	Dominant Species	Indicator Staus				
1					Rapid test for hydrophytic vegetation		
2					Dominance test is >50%		
3					Prevalence index is ≤3.0*		
4					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
5					Problematic hydrophytic vegetation* (explain)		
6					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
7							
8							
9							
10							
11							
12							
13							
14							
15							
	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 3.28 ft (1 m) tall.		
					Herb - All herbaceous (non-woody) plants, 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? <u>N</u>		

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

SOIL
Sampling Point: WOH-107-UPL

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*	Loc**		
0-12	7.5YR 5/3	100					Clay loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|---|
| <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) |
| <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 (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-108-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Convex
 Slope (%): 1% Lat: 41.20712 Long: -83.0406 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. <u>Quercus rubra</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Fagus grandifolia</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>60%</u>	<u>= Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>80%</u></td> <td>x4 = <u>3.2</u></td> </tr> <tr> <td>UPL species <u>40%</u></td> <td>x5 = <u>2</u></td> </tr> <tr> <td>Column Totals: <u>1.20</u> (A)</td> <td><u>5.2</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.33</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>80%</u>	x4 = <u>3.2</u>	UPL species <u>40%</u>	x5 = <u>2</u>	Column Totals: <u>1.20</u> (A)	<u>5.2</u> (B)	Prevalence Index = B/A = <u>4.33</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species <u>80%</u>	x4 = <u>3.2</u>																			
UPL species <u>40%</u>	x5 = <u>2</u>																			
Column Totals: <u>1.20</u> (A)	<u>5.2</u> (B)																			
Prevalence Index = B/A = <u>4.33</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Erythronium americanum</u>	<u>40%</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Claytonia virginica</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>60%</u>	<u>= Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-108-UPL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/4	100					Loam	Dry
6-12	2.5Y 7/2	80	2.5Y 6/8	20	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)

☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Dark Surface (S7)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)

☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:Surface Water Present? Yes _____ No X Depth (inches): N/AWater Table Present? Yes _____ No X Depth (inches): N/ASaturation Present? Yes _____ No X Depth (inches): N/A

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-108-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.2071 Long: -83.0407 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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 <u> </u> X <u> </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u> </u> X <u> </u>
Hydric Soil Present?	Yes <u> </u> X <u> </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> </u> X <u> </u>	No <u> </u>			
Remarks: Manmade berm at northern end, created by landowner to improve water retention.					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> </u> 3 <u> </u> (A) Total Number of Dominant Species Across All Strata: <u> </u> 3 <u> </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> </u> 100% <u> </u> (A/B)																
1. <u>Quercus bicolor</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Populus deltoides</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>45%</u> = Total Cover	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>30%</u></td> <td>x2 = <u>0.6</u></td> </tr> <tr> <td>FAC species <u>55%</u></td> <td>x3 = <u>1.65</u></td> </tr> <tr> <td>FACU species <u>5%</u></td> <td>x4 = <u>0.2</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>0.90</u> (A)</td> <td><u>2.45</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.72</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>30%</u>	x2 = <u>0.6</u>	FAC species <u>55%</u>	x3 = <u>1.65</u>	FACU species <u>5%</u>	x4 = <u>0.2</u>	UPL species _____	x5 = _____	Column Totals: <u>0.90</u> (A)	<u>2.45</u> (B)	Prevalence Index = B/A = <u>2.72</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species <u>30%</u>	x2 = <u>0.6</u>																			
FAC species <u>55%</u>	x3 = <u>1.65</u>																			
FACU species <u>5%</u>	x4 = <u>0.2</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>0.90</u> (A)	<u>2.45</u> (B)																			
Prevalence Index = B/A = <u>2.72</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Carex blanda</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1-Rapid Test for Hydrophytic Vegetation <u> </u> X 2-Dominance Test is >50% <u> </u> X 3-Prevalence Index is ≤3.0 ¹ <u> </u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Claytonia virginica</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>45%</u> = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-108-WE

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 5/2	95	10YR 8/8	5	C	M	Loamy clay	
8-12	10YR 5/1	95	10YR 5/8	20	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>5</u>	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ (includes capillary fringe)	Depth (inches): <u>0</u>	

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-109-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.20504 Long: -83.0404 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. <u>Fagus grandifolia</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>50%</u> = Total Cover	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>100%</u></td> <td>x4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>10%</u></td> <td>x5 = <u>0.5</u></td> </tr> <tr> <td>Column Totals: <u>1.10</u> (A)</td> <td><u>4.5</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.09</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>100%</u>	x4 = <u>4</u>	UPL species <u>10%</u>	x5 = <u>0.5</u>	Column Totals: <u>1.10</u> (A)	<u>4.5</u> (B)	Prevalence Index = B/A = <u>4.09</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species <u>100%</u>	x4 = <u>4</u>																			
UPL species <u>10%</u>	x5 = <u>0.5</u>																			
Column Totals: <u>1.10</u> (A)	<u>4.5</u> (B)																			
Prevalence Index = B/A = <u>4.09</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Claytonia virginica</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Erythronium americanum</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>60%</u> = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-109-UPL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 4/1	100					Clay loam	
6-12	2.5Y 6/1	85	7.5YR 5/8	15	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-109-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.205 Long: -83.0403 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:

Vegetation was overhanging the sampling point and not reflective of the vegetation within the small wetland.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																
1. <u>Fagus grandifolia</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>15%</u> = Total Cover	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>10%</u></td> <td>x3 = <u>0.3</u></td> </tr> <tr> <td>FACU species <u>15%</u></td> <td>x4 = <u>0.6</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>0.25</u> (A)</td> <td><u>0.9</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.60</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>10%</u>	x3 = <u>0.3</u>	FACU species <u>15%</u>	x4 = <u>0.6</u>	UPL species _____	x5 = _____	Column Totals: <u>0.25</u> (A)	<u>0.9</u> (B)	Prevalence Index = B/A = <u>3.60</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>10%</u>	x3 = <u>0.3</u>																			
FACU species <u>15%</u>	x4 = <u>0.6</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>0.25</u> (A)	<u>0.9</u> (B)																			
Prevalence Index = B/A = <u>3.60</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Carex blanda</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>10%</u> = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30' radius</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				

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

Vegetation was overhanging the sampling point and not reflective of the vegetation within the small wetland.

SOIL

Sampling Point: WOH-109-WET

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 4/1	100					Clay loam	
6-12	2.5Y 6/1	85	7.5YR 5/8	15	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): 5Water Table Present? Yes ☒ No _____ Depth (inches): 0Saturation Present? Yes ☒ No _____ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-110-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.20429 Long: -83.0443 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. <u>Fagus grandifolia</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Acer saccharum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>70%</u>	<u>= Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>90%</u></td> <td>x4 = <u>3.6</u></td> </tr> <tr> <td>UPL species <u>10%</u></td> <td>x5 = <u>0.5</u></td> </tr> <tr> <td>Column Totals: <u>1.00</u> (A)</td> <td><u>4.1</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.10</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>90%</u>	x4 = <u>3.6</u>	UPL species <u>10%</u>	x5 = <u>0.5</u>	Column Totals: <u>1.00</u> (A)	<u>4.1</u> (B)	Prevalence Index = B/A = <u>4.10</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species <u>90%</u>	x4 = <u>3.6</u>																			
UPL species <u>10%</u>	x5 = <u>0.5</u>																			
Column Totals: <u>1.00</u> (A)	<u>4.1</u> (B)																			
Prevalence Index = B/A = <u>4.10</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Claytonia virginica</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Erythronium americanum</u>	<u>10%</u>	<u>Yes</u>	<u>UPL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>30%</u>	<u>= Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-110-UPL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/1	100					Loam	
8-12	2.5Y 5/2	95	2.5Y 6/8	5	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<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:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-110-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.2043 Long: -83.0445 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
1. <u>Tilia americana</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Carya ovata</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>30%</u>	<u>= Total Cover</u>																
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																		
1. <u>Lindera benzoin</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>15%</u></td> <td>x2 = <u>0.3</u></td> </tr> <tr> <td>FAC species <u>30%</u></td> <td>x3 = <u>0.9</u></td> </tr> <tr> <td>FACU species <u>30%</u></td> <td>x4 = <u>1.2</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>0.75</u> (A)</td> <td><u>2.4</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.20</u>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>15%</u>	x2 = <u>0.3</u>	FAC species <u>30%</u>	x3 = <u>0.9</u>	FACU species <u>30%</u>	x4 = <u>1.2</u>	UPL species _____	x5 = _____	Column Totals: <u>0.75</u> (A)	<u>2.4</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species <u>15%</u>	x2 = <u>0.3</u>																	
FAC species <u>30%</u>	x3 = <u>0.9</u>																	
FACU species <u>30%</u>	x4 = <u>1.2</u>																	
UPL species _____	x5 = _____																	
Column Totals: <u>0.75</u> (A)	<u>2.4</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>15%</u>	<u>= Total Cover</u>																
Herb Stratum (Plot size: <u>5' radius</u>)																		
1. <u>Carex blanda</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	<u>30%</u>	<u>= Total Cover</u>																
Woody Vine Stratum (Plot size: <u>30' radius</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
_____ = Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)
 Vegetation was overhanging the sampling point and not reflective of the vegetation within the small wetland.

SOIL

Sampling Point: WOH-110-WET

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 5/1	100					Loam	
6-12	2.5Y 5/2	95	2.5Y 6/8	5	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>3</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0</u>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-111-UPL
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.2027 Long: -83.0454 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks:			

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. <u>Carya ovata</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Fagus grandifolia</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>45%</u>	<u>= Total Cover</u>																
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>75%</u></td> <td>x4 = <u>3</u></td> </tr> <tr> <td>UPL species <u>10%</u></td> <td>x5 = <u>0.5</u></td> </tr> <tr> <td>Column Totals: <u>0.85</u> (A)</td> <td><u>3.5</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.12</u>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>75%</u>	x4 = <u>3</u>	UPL species <u>10%</u>	x5 = <u>0.5</u>	Column Totals: <u>0.85</u> (A)	<u>3.5</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species _____	x2 = _____																	
FAC species _____	x3 = _____																	
FACU species <u>75%</u>	x4 = <u>3</u>																	
UPL species <u>10%</u>	x5 = <u>0.5</u>																	
Column Totals: <u>0.85</u> (A)	<u>3.5</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Claytonia virginica</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Erythronium americanum</u>	<u>10%</u>	<u>Yes</u>	<u>UPL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	<u>40%</u>	<u>= Total Cover</u>																
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: WOH-111-UPL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	100					Clay loam	
6-12	10YR 6/1	90	10YR 7/8	15	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/12/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-111-WET
 Investigator(s): Brian Smith and Lori Stone Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.2029 Long: -83.0456 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	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)																
1. <u>Quercus bicolor</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Tilia americana</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>50%</u>	<u>= Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Lindera benzoin</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>85%</u></td> <td>x2 = <u>1.7</u></td> </tr> <tr> <td>FAC species <u>15%</u></td> <td>x3 = <u>0.45</u></td> </tr> <tr> <td>FACU species <u>10%</u></td> <td>x4 = <u>0.4</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.10</u> (A)</td> <td><u>2.55</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.32</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>85%</u>	x2 = <u>1.7</u>	FAC species <u>15%</u>	x3 = <u>0.45</u>	FACU species <u>10%</u>	x4 = <u>0.4</u>	UPL species _____	x5 = _____	Column Totals: <u>1.10</u> (A)	<u>2.55</u> (B)	Prevalence Index = B/A = <u>2.32</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species <u>85%</u>	x2 = <u>1.7</u>																			
FAC species <u>15%</u>	x3 = <u>0.45</u>																			
FACU species <u>10%</u>	x4 = <u>0.4</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>1.10</u> (A)	<u>2.55</u> (B)																			
Prevalence Index = B/A = <u>2.32</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>15%</u>	<u>= Total Cover</u>																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Iodanthus pinnatifidus</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>30%</u>	<u>= Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Toxicodendron radicans</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	

<u>15%</u> = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-111-WET

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	100					Loam	
6-12	10YR 6/1	90	10YR 7/8	10	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> 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>0</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0</u>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-122-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Convex
 Slope (%): 1% Lat: 41.19527 Long: -83.0176 Datum: WGS84
 Soil Map Unit Name: Pa NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																
1. <u>Acer saccharum</u>	80%	Yes	FACU																	
2. <u>Fagus grandifolia</u>	10%	No	FACU																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	90% = Total Cover	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>70%</u></td> <td>x3 = <u>2.1</u></td> </tr> <tr> <td>FACU species <u>105%</u></td> <td>x4 = <u>4.2</u></td> </tr> <tr> <td>UPL species <u>15%</u></td> <td>x5 = <u>0.75</u></td> </tr> <tr> <td>Column Totals: <u>1.90</u> (A)</td> <td><u>7.05</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.71</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>70%</u>	x3 = <u>2.1</u>	FACU species <u>105%</u>	x4 = <u>4.2</u>	UPL species <u>15%</u>	x5 = <u>0.75</u>	Column Totals: <u>1.90</u> (A)	<u>7.05</u> (B)	Prevalence Index = B/A = <u>3.71</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>70%</u>	x3 = <u>2.1</u>																			
FACU species <u>105%</u>	x4 = <u>4.2</u>																			
UPL species <u>15%</u>	x5 = <u>0.75</u>																			
Column Totals: <u>1.90</u> (A)	<u>7.05</u> (B)																			
Prevalence Index = B/A = <u>3.71</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Alliaria petiolata</u>	60%	Yes	FAC	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Taraxacum officinale</u>	15%	No	FACU																	
3. <u>Dicentra cucullaria</u>	10%	No	UPL																	
4. <u>Hydrophyllum virginianum</u>	10%	No	FAC																	
5. <u>Verbascum thapsus</u>	5%	No	UPL																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	100% = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-122-UPL

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		
0-12	2.5Y 4/2	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-122-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1955 Long: -83.0185 Datum: WGS84
 Soil Map Unit Name: Pa NWI classification: PFO1C

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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	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>Acer rubrum</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>																																	
2. <u>Acer saccharum</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	<u>70%</u>	<u>= Total Cover</u>																																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td colspan="2">Total % Cover of:</td> <td colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td><u>20%</u></td> <td>x1 =</td> <td><u>0.2</u></td> </tr> <tr> <td>FACW species</td> <td>_____</td> <td>x2 =</td> <td>_____</td> </tr> <tr> <td>FAC species</td> <td><u>135%</u></td> <td>x3 =</td> <td><u>4.05</u></td> </tr> <tr> <td>FACU species</td> <td><u>10%</u></td> <td>x4 =</td> <td><u>0.4</u></td> </tr> <tr> <td>UPL species</td> <td>_____</td> <td>x5 =</td> <td>_____</td> </tr> <tr> <td>Column Totals:</td> <td><u>1.65</u></td> <td>(A)</td> <td><u>4.65</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.82</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>20%</u>	x1 =	<u>0.2</u>	FACW species	_____	x2 =	_____	FAC species	<u>135%</u>	x3 =	<u>4.05</u>	FACU species	<u>10%</u>	x4 =	<u>0.4</u>	UPL species	_____	x5 =	_____	Column Totals:	<u>1.65</u>	(A)	<u>4.65</u> (B)	Prevalence Index = B/A = <u>2.82</u>			
Total % Cover of:		Multiply by:																																		
OBL species	<u>20%</u>	x1 =	<u>0.2</u>																																	
FACW species	_____	x2 =	_____																																	
FAC species	<u>135%</u>	x3 =	<u>4.05</u>																																	
FACU species	<u>10%</u>	x4 =	<u>0.4</u>																																	
UPL species	_____	x5 =	_____																																	
Column Totals:	<u>1.65</u>	(A)	<u>4.65</u> (B)																																	
Prevalence Index = B/A = <u>2.82</u>																																				
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
Herb Stratum (Plot size: <u>5'</u> radius)																																				
1. <u>Carex blanda</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																
2. <u>Carex muskingumensis</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
12. _____	_____	_____	_____																																	
13. _____	_____	_____	_____																																	
14. _____	_____	_____	_____																																	
15. _____	_____	_____	_____																																	
16. _____	_____	_____	_____																																	
17. _____	_____	_____	_____																																	
18. _____	_____	_____	_____																																	
19. _____	_____	_____	_____																																	
20. _____	<u>80%</u>	<u>= Total Cover</u>																																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																																				
1. <u>Toxicodendron radicans</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																
2. _____	<u>15%</u>	<u>= Total Cover</u>																																		

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

SOIL

Sampling Point: WOH-122-WET

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		
0-12	10YR 4/2	100					Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>6</u>
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 ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-123-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Convex
 Slope (%): 1% Lat: 41.18615 Long: -83.0273 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																
1. <u>Acer rubrum</u>	<u>70%</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Fagus grandifolia</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>80%</u>	<u>= Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Acer rubrum</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>100%</u></td> <td>x3 = <u>3</u></td> </tr> <tr> <td>FACU species <u>30%</u></td> <td>x4 = <u>1.2</u></td> </tr> <tr> <td>UPL species <u>60%</u></td> <td>x5 = <u>3</u></td> </tr> <tr> <td>Column Totals: <u>1.90</u> (A)</td> <td><u>7.2</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.79</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>100%</u>	x3 = <u>3</u>	FACU species <u>30%</u>	x4 = <u>1.2</u>	UPL species <u>60%</u>	x5 = <u>3</u>	Column Totals: <u>1.90</u> (A)	<u>7.2</u> (B)	Prevalence Index = B/A = <u>3.79</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>100%</u>	x3 = <u>3</u>																			
FACU species <u>30%</u>	x4 = <u>1.2</u>																			
UPL species <u>60%</u>	x5 = <u>3</u>																			
Column Totals: <u>1.90</u> (A)	<u>7.2</u> (B)																			
Prevalence Index = B/A = <u>3.79</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>30%</u>	<u>= Total Cover</u>																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Erythronium americanum</u>	<u>60%</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Podophyllum peltatum</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>80%</u>	<u>= Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-123-UPL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 4/4	100					Sicloam	
6-12	2.5Y 6/6	95	2.5Y 6/8	5	C	M	Loan clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Dark Surface (S7)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:Surface Water Present? Yes _____ No X Depth (inches): N/AWater Table Present? Yes _____ No X Depth (inches): N/ASaturation Present? Yes _____ No X Depth (inches): N/A

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-123-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1871 Long: -83.0264 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)																
1. <u>Acer rubrum</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Carya ovata</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>70%</u> = Total Cover	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>110%</u></td> <td>x3 = <u>3.3</u></td> </tr> <tr> <td>FACU species <u>30%</u></td> <td>x4 = <u>1.2</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.40</u> (A)</td> <td><u>4.5</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.21</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>110%</u>	x3 = <u>3.3</u>	FACU species <u>30%</u>	x4 = <u>1.2</u>	UPL species _____	x5 = _____	Column Totals: <u>1.40</u> (A)	<u>4.5</u> (B)	Prevalence Index = B/A = <u>3.21</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>110%</u>	x3 = <u>3.3</u>																			
FACU species <u>30%</u>	x4 = <u>1.2</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>1.40</u> (A)	<u>4.5</u> (B)																			
Prevalence Index = B/A = <u>3.21</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Acer rubrum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>10%</u> = Total Cover	_____	_____	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Carex blanda</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>60%</u> = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-123-WET

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		
0-4	2.5Y 6/1	100					Sand loam	
4-12	2.5Y 6/2	80	10YR 5/8	20	C	M	Loamy clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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>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:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-124-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.18181 Long: -83.0265 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14%</u> (A/B)																
1. <u>Acer saccharum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Fagus grandifolia</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>40%</u>	<u>= Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Acer saccharum</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>10%</u></td> <td>x3 = <u>0.3</u></td> </tr> <tr> <td>FACU species <u>135%</u></td> <td>x4 = <u>5.4</u></td> </tr> <tr> <td>UPL species <u>40%</u></td> <td>x5 = <u>2</u></td> </tr> <tr> <td>Column Totals: <u>1.85</u> (A)</td> <td><u>7.7</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.16</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>10%</u>	x3 = <u>0.3</u>	FACU species <u>135%</u>	x4 = <u>5.4</u>	UPL species <u>40%</u>	x5 = <u>2</u>	Column Totals: <u>1.85</u> (A)	<u>7.7</u> (B)	Prevalence Index = B/A = <u>4.16</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>10%</u>	x3 = <u>0.3</u>																			
FACU species <u>135%</u>	x4 = <u>5.4</u>																			
UPL species <u>40%</u>	x5 = <u>2</u>																			
Column Totals: <u>1.85</u> (A)	<u>7.7</u> (B)																			
Prevalence Index = B/A = <u>4.16</u>																				
2. <u>Aesculus glabra</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>50%</u>	<u>= Total Cover</u>																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Podophyllum peltatum</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Erythronium americanum</u>	<u>20%</u>	<u>Yes</u>	<u>UPL</u>																	
3. <u>Trillium erectum</u>	<u>20%</u>	<u>Yes</u>	<u>UPL</u>																	
4. <u>Allium tricoccum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>95%</u>	<u>= Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-124-UPL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 5/1	100					Clay loam	
10-12	2.5Y 7/4	95	2.5Y 7/8	5	C	M	Loam clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-124-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1819 Long: -83.0262 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	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>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83%</u> (A/B)																
1. <u>Ulmus americana</u>	30%	Yes	FACW																	
2. <u>Carya ovata</u>	30%	Yes	FACU																	
3. <u>Acer rubrum</u>	20%	Yes	FAC																	
4. _____																				
5. _____																				
	80%	= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Acer rubrum</u>	10%	Yes	FAC	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species</td> <td>x2 = <u>0.7</u></td> </tr> <tr> <td>FAC species</td> <td>x3 = <u>1.35</u></td> </tr> <tr> <td>FACU species</td> <td>x4 = <u>1.2</u></td> </tr> <tr> <td>UPL species</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals:</td> <td><u>1.10</u> (A) <u>3.25</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.95</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species	x1 = _____	FACW species	x2 = <u>0.7</u>	FAC species	x3 = <u>1.35</u>	FACU species	x4 = <u>1.2</u>	UPL species	x5 = _____	Column Totals:	<u>1.10</u> (A) <u>3.25</u> (B)	Prevalence Index = B/A = <u>2.95</u>	
Total % Cover of:	Multiply by:																			
OBL species	x1 = _____																			
FACW species	x2 = <u>0.7</u>																			
FAC species	x3 = <u>1.35</u>																			
FACU species	x4 = <u>1.2</u>																			
UPL species	x5 = _____																			
Column Totals:	<u>1.10</u> (A) <u>3.25</u> (B)																			
Prevalence Index = B/A = <u>2.95</u>																				
2. <u>Ulmus americana</u>	5%	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
	15%	= Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Carex blanda</u>	15%	Yes	FAC	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2-Dominance Test is >50% <input checked="" type="checkbox"/> 3-Prevalence Index is ≤3.0 ¹ _____ 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. _____																				
8. _____																				
9. _____																				
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13. _____																				
14. _____																				
15. _____																				
16. _____																				
17. _____																				
18. _____																				
19. _____																				
20. _____																				
	15%	= Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____																				
		= Total Cover																		

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

SOIL

Sampling Point: WOH-124-WET

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	5Y 5/1	100					Sand loam	Slight muck content
2-12	2.5Y 6/1	95	5YR 5/8	5	C	M	Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>3</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>1</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0</u>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-125-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Corn field Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.18006 Long: -83.0277 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: Taken in nearby crop area					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species <u>50%</u></td> <td>x5 = <u>2.5</u></td> </tr> <tr> <td>Column Totals: <u>0.50</u> (A)</td> <td><u>2.5</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species _____	x4 = _____	UPL species <u>50%</u>	x5 = <u>2.5</u>	Column Totals: <u>0.50</u> (A)	<u>2.5</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species _____	x4 = _____																			
UPL species <u>50%</u>	x5 = <u>2.5</u>																			
Column Totals: <u>0.50</u> (A)	<u>2.5</u> (B)																			
Prevalence Index = B/A = <u>5.00</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Zea mays</u>	<u>50%</u>	<u>Yes</u>	<u>UPL</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	_____	_____	_____																	
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-125-UPL

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		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Dark Surface (S7)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X **Remarks:**

Assumed due to corn field

HYDROLOGY**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:Surface Water Present? Yes _____ No X Depth (inches): N/A Water Table Present? Yes _____ No X Depth (inches): N/A Saturation Present? Yes _____ No X Depth (inches): N/A

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-125-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1803 Long: -83.0278 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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)																
1. <u>Ulmus americana</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Carya ovata</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>45%</u>	_____	_____																	
<u>45%</u> = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Acer rubrum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>30%</u></td> <td>x2 = <u>0.6</u></td> </tr> <tr> <td>FAC species <u>25%</u></td> <td>x3 = <u>0.75</u></td> </tr> <tr> <td>FACU species <u>20%</u></td> <td>x4 = <u>0.8</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>0.75</u> (A)</td> <td><u>2.15</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.87</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>30%</u>	x2 = <u>0.6</u>	FAC species <u>25%</u>	x3 = <u>0.75</u>	FACU species <u>20%</u>	x4 = <u>0.8</u>	UPL species _____	x5 = _____	Column Totals: <u>0.75</u> (A)	<u>2.15</u> (B)	Prevalence Index = B/A = <u>2.87</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species <u>30%</u>	x2 = <u>0.6</u>																			
FAC species <u>25%</u>	x3 = <u>0.75</u>																			
FACU species <u>20%</u>	x4 = <u>0.8</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>0.75</u> (A)	<u>2.15</u> (B)																			
Prevalence Index = B/A = <u>2.87</u>																				
2. <u>Ulmus americana</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>15%</u>	_____	_____																	
<u>15%</u> = Total Cover																				
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Carex blanda</u>	<u>15%</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% <input checked="" type="checkbox"/> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>15%</u>	_____	_____																	
<u>15%</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30' radius</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-125-WET

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		
0-4	5YR 4/1	100					Sand silt Loar	
4-12	7.5YR 5/1	95	7.5YR 6/8	5	C	M	Loam clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-126-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Forest Local relief (concave, convex, none): Convex
 Slope (%): <1 Lat: 41.18124 Long: -83.0251 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. <u>Acer saccharum</u>	<u>80%</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Fagus grandifolia</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>															
3. <u>Carya ovata</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
	<u>90%</u>	= Total Cover																
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. <u>Acer saccharum</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>205%</u></td> <td>x4 = <u>8.2</u></td> </tr> <tr> <td>UPL species <u>15%</u></td> <td>x5 = <u>0.75</u></td> </tr> <tr> <td>Column Totals: <u>2.20</u> (A)</td> <td><u>8.95</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>205%</u>	x4 = <u>8.2</u>	UPL species <u>15%</u>	x5 = <u>0.75</u>	Column Totals: <u>2.20</u> (A)	<u>8.95</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species _____	x2 = _____																	
FAC species _____	x3 = _____																	
FACU species <u>205%</u>	x4 = <u>8.2</u>																	
UPL species <u>15%</u>	x5 = <u>0.75</u>																	
Column Totals: <u>2.20</u> (A)	<u>8.95</u> (B)																	
2. <u>Aesculus flava</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
	<u>20%</u>	= Total Cover																
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Allium tricoccum</u>	<u>80%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u>4.07</u>														
2. <u>Dicentra cucullaria</u>	<u>15%</u>	<u>No</u>	<u>UPL</u>															
3. <u>Parthenocissus quinquefolia</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>															
4. <u>Podophyllum peltatum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	_____	_____	_____															
	<u>110%</u>	= Total Cover																
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present?														
2. _____	_____	_____	_____															
	_____	= Total Cover		Yes _____ No <u>X</u>														
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: WOH-126-UPL

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		
0-12	10YR 3/2	95	10YR 6/8	5	C	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-126-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1816 Long: -83.0251 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																		
1. <u>Aesculus glabra</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>																			
2. _____	_____	_____	_____																			
3. _____	_____	_____	_____																			
4. _____	_____	_____	_____																			
5. _____	<u>15%</u>	<u>= Total Cover</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																						
1. <u>Acer rubrum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>30%</u></td> <td>x2 = <u>0.6</u></td> </tr> <tr> <td>FAC species <u>80%</u></td> <td>x3 = <u>2.4</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.10</u> (A)</td> <td><u>3</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.73</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>30%</u>	x2 = <u>0.6</u>	FAC species <u>80%</u>	x3 = <u>2.4</u>	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: <u>1.10</u> (A)	<u>3</u> (B)	Prevalence Index = B/A = <u>2.73</u>			
Total % Cover of:	Multiply by:																					
OBL species _____	x1 = _____																					
FACW species <u>30%</u>	x2 = <u>0.6</u>																					
FAC species <u>80%</u>	x3 = <u>2.4</u>																					
FACU species _____	x4 = _____																					
UPL species _____	x5 = _____																					
Column Totals: <u>1.10</u> (A)	<u>3</u> (B)																					
Prevalence Index = B/A = <u>2.73</u>																						
2. <u>Aesculus glabra</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>																			
3. _____	_____	_____	_____																			
4. _____	_____	_____	_____																			
5. _____	<u>15%</u>	<u>= Total Cover</u>																				
Herb Stratum (Plot size: <u>5'</u> radius)																						
1. <u>Carex blanda</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
2. <u>Impatiens capensis</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>																			
3. _____	_____	_____	_____																			
4. _____	_____	_____	_____																			
5. _____	_____	_____	_____																			
6. _____	_____	_____	_____																			
7. _____	_____	_____	_____																			
8. _____	_____	_____	_____																			
9. _____	_____	_____	_____																			
10. _____	_____	_____	_____																			
11. _____	_____	_____	_____																			
12. _____	_____	_____	_____																			
13. _____	_____	_____	_____																			
14. _____	_____	_____	_____																			
15. _____	_____	_____	_____																			
16. _____	_____	_____	_____																			
17. _____	_____	_____	_____																			
18. _____	_____	_____	_____																			
19. _____	_____	_____	_____																			
20. _____	<u>80%</u>	<u>= Total Cover</u>																				
Woody Vine Stratum (Plot size: <u>30'</u> radius)																						
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
2. _____	_____	_____	_____																			
_____ = Total Cover																						
Remarks: (Include photo numbers here or on a separate sheet.)																						

SOIL

Sampling Point: WOH-126-WET

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	5YR 5/1	100					Sand loam	Slight muck content
2-12	2.5Y 6/1	95	5YR 5/8	5	C	M	Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-127-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Forest Local relief (concave, convex, none): Convex
 Slope (%): <1 Lat: 41.17951 Long: -83.0227 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. <u>Acer saccharum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>30%</u> = Total Cover	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Acer saccharum</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>10%</u></td> <td>x3 = <u>0.3</u></td> </tr> <tr> <td>FACU species <u>100%</u></td> <td>x4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>30%</u></td> <td>x5 = <u>1.5</u></td> </tr> <tr> <td>Column Totals: <u>1.40</u> (A)</td> <td><u>5.8</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.14</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>10%</u>	x3 = <u>0.3</u>	FACU species <u>100%</u>	x4 = <u>4</u>	UPL species <u>30%</u>	x5 = <u>1.5</u>	Column Totals: <u>1.40</u> (A)	<u>5.8</u> (B)	Prevalence Index = B/A = <u>4.14</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>10%</u>	x3 = <u>0.3</u>																			
FACU species <u>100%</u>	x4 = <u>4</u>																			
UPL species <u>30%</u>	x5 = <u>1.5</u>																			
Column Totals: <u>1.40</u> (A)	<u>5.8</u> (B)																			
Prevalence Index = B/A = <u>4.14</u>																				
2. <u>Aesculus flava</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>20%</u> = Total Cover	_____	_____																	
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Allium tricoccum</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Alliaria petiolata</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>																	
3. <u>Parthenocissus quinquefolia</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Draba verna</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>																	
5. <u>Trillium erectum</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>70%</u> = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Rubus occidentalis</u>	<u>20%</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____	_____	_____	_____																	
_____ <u>20%</u> = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-127-UPL

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		
0-12	10YR 3/2	95	10YR 6/8	5	C	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="N/A"/>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site:	<u>Apex Republic Windfarm</u>	City/County:	<u>Seneca County</u>	Sampling Date:	<u>4/26/2017</u>
Applicant/Owner:	<u>Apex Clean Energy</u>	State:	<u>OH</u>	Sampling Point:	<u>WOH-127-WET</u>
Investigator(s):	<u>Brian Smith and Kaye Grob</u>	Section, Township, Range:			
Landform (hillslope, terrace, etc.):	<u>Woodlot pond</u>	Local relief (concave, convex, none):	<u>Concave</u>		
Slope (%):	<u>2%</u>	Lat:	<u>41.1797</u>	Long:	<u>-83.0226</u>
				Datum:	<u>WGS84</u>
Soil Map Unit Name:	<u>Blg1B1</u>	NWI classification:	<u>N/A</u>		

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

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u> X </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>			

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Phalaris arundinacea</i>	30%	Yes	FACW
2.	<i>Polygonum persicaria</i>	20%	Yes	FACW
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
		50%	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)				
1.				
2.				
			= 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	x1 =
FACW species	x2 = 1
FAC species	x3 =
FACU species	x4 =
UPL species	x5 =
Column Totals: 0.50 (A)	1 (B)

Prevalence Index = B/A = 2.00

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

SOIL

Sampling Point: WOH-127-WET

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		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

No test pit taken due to significant ponding, but H2S smell detected upon disturbing soils while traversing wetland.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	8
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	0
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	0
(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:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site:	Apex Republic Windfarm		City/County:	Seneca County	Sampling Date:	4/26/2017	
Applicant/Owner:	Apex Clean Energy		State:	OH	Sampling Point:	WOH-128-UPL	
Investigator(s):	Brian Smith and Kaye Grob		Section, Township, Range:				
Landform (hillslope, terrace, etc.):	Corn field		Local relief (concave, convex, none):	Convex			
Slope (%):	<1	Lat:	41.17663	Long:	-83.0182	Datum:	WGS84
Soil Map Unit Name:	Blg1B1		NWI classification:	N/A			

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

Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u> X </u>
Hydric Soil Present?	Yes _____	No <u> X </u>			
Wetland Hydrology Present?	Yes _____	No <u> X </u>			

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.						
2.						
3.						
4.						
5.						
				= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)						
1.						
2.						
3.						
4.						
5.						
				= Total Cover		
Herb Stratum (Plot size: 5' radius)						
1.	<i>Zea mays</i>	30%	Yes	UPL		
2.	<i>Sinapis arvensis</i>	20%	Yes	UPL		
3.	<i>Lamium purpureum</i>	5%	No	UPL		
4.	<i>Taraxacum officinale</i>	5%	No	FACU		
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
				60% = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)						
1.	<i>Rubus occidentalis</i>	20%	Yes	UPL		
2.						
				20% = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x1 = _____
FACW species _____	x2 = _____
FAC species _____	x3 = _____
FACU species 5%	x4 = 0.2
UPL species 75%	x5 = 3.75
Column Totals: 0.80 (A)	3.95 (B)

Prevalence Index = B/A = 4.94

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.

Hydrophytic Vegetation Present?

SOIL

Sampling Point: WOH-128-UPL

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		
0-12	10YR 4/6	100					Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) |
| <input type="checkbox"/> Dark Surface (S7) |
| <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:

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"/> True Aquatic Plants (B14) |
| <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"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-128-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1765 Long: -83.0184 Datum: WGS84
 Soil Map Unit Name: Blg1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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>Ulmus americana</u>	<u>70%</u>	<u>Yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>70%</u> = Total Cover	_____	_____																	
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Ulmus americana</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>105%</u></td> <td>x2 = <u>2.1</u></td> </tr> <tr> <td>FAC species <u>5%</u></td> <td>x3 = <u>0.15</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.10</u> (A)</td> <td><u>2.25</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>105%</u>	x2 = <u>2.1</u>	FAC species <u>5%</u>	x3 = <u>0.15</u>	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: <u>1.10</u> (A)	<u>2.25</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species <u>105%</u>	x2 = <u>2.1</u>																			
FAC species <u>5%</u>	x3 = <u>0.15</u>																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: <u>1.10</u> (A)	<u>2.25</u> (B)																			
Prevalence Index = B/A = <u>2.05</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>30%</u> = Total Cover	_____	_____																	
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Phalaris arundinacea</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Carex blanda</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>10%</u> = Total Cover	_____	_____																	
Woody Vine Stratum (Plot size: <u>30' radius</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-128-WET

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		
0-12	10YR 6/2	95	10YR 6/8	5	C	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	1
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	2
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	0
(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:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-130-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.17684 Long: -83.0045 Datum: WGS84
 Soil Map Unit Name: BIG1B1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. <u>Fagus grandifolia</u>	<u>90%</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Acer saccharum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>120%</u> = Total Cover	_____	_____															
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. <u>Acer saccharum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>240%</u></td> <td>x4 = <u>9.6</u></td> </tr> <tr> <td>UPL species <u>15%</u></td> <td>x5 = <u>0.75</u></td> </tr> <tr> <td>Column Totals: <u>2.55</u> (A)</td> <td><u>10.35</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>240%</u>	x4 = <u>9.6</u>	UPL species <u>15%</u>	x5 = <u>0.75</u>	Column Totals: <u>2.55</u> (A)	<u>10.35</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species _____	x2 = _____																	
FAC species _____	x3 = _____																	
FACU species <u>240%</u>	x4 = <u>9.6</u>																	
UPL species <u>15%</u>	x5 = <u>0.75</u>																	
Column Totals: <u>2.55</u> (A)	<u>10.35</u> (B)																	
2. <u>Fagus grandifolia</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>40%</u> = Total Cover	_____	_____															
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Allium tricoccum</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Podophyllum peltatum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Erythronium americanum</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>															
4. <u>Dicentra cucullaria</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	<u>95%</u> = Total Cover	_____	_____															
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: WOH-130-UPL

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		
0-12	2.5Y 4/4	100					Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Yes _____	No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>		
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-130-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1767 Long: -83.0048 Datum: WGS84
 Soil Map Unit Name: Blg1A1 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
 Are Vegetation 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"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
1. <u>Ulmus americana</u>	<u>70%</u>	<u>Yes</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>70%</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. <u>Ulmus americana</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____ x1 = _____</td> <td></td> </tr> <tr> <td>FACW species <u>80%</u> x2 = <u>1.6</u></td> <td></td> </tr> <tr> <td>FAC species _____ x3 = _____</td> <td></td> </tr> <tr> <td>FACU species _____ x4 = _____</td> <td></td> </tr> <tr> <td>UPL species _____ x5 = _____</td> <td></td> </tr> <tr> <td>Column Totals: <u>0.80</u> (A)</td> <td><u>1.6</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____ x1 = _____		FACW species <u>80%</u> x2 = <u>1.6</u>		FAC species _____ x3 = _____		FACU species _____ x4 = _____		UPL species _____ x5 = _____		Column Totals: <u>0.80</u> (A)	<u>1.6</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____ x1 = _____																		
FACW species <u>80%</u> x2 = <u>1.6</u>																		
FAC species _____ x3 = _____																		
FACU species _____ x4 = _____																		
UPL species _____ x5 = _____																		
Column Totals: <u>0.80</u> (A)	<u>1.6</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>10%</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	_____	_____	_____															
_____ = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: WOH-130-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 6/2	100					Organic	
1-10	10YR 5/1	100					Sicloam	
10-12	10YR 6/2	95	10YR 6/8	5	C	M	Loam clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>3</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>0</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>0</u>
(includes capillary fringe)			
Wetland Hydrology Present?		Yes	<input checked="" type="checkbox"/> No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-131-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.16286 Long: -82.9907 Datum: WGS84
 Soil Map Unit Name: Pa NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. <u>Fagus grandifolia</u>	60%	Yes	FACU															
2. <u>Acer saccharum</u>	30%	Yes	FACU															
3. <u>Carya ovata</u>	10%	No	FACU															
4. _____																		
5. _____																		
	100% = Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. <u>Acer saccharum</u>	20%	Yes	FACU	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>5%</u></td> <td>x3 = <u>0.15</u></td> </tr> <tr> <td>FACU species <u>205%</u></td> <td>x4 = <u>8.2</u></td> </tr> <tr> <td>UPL species <u>25%</u></td> <td>x5 = <u>1.25</u></td> </tr> <tr> <td>Column Totals: <u>2.35</u> (A)</td> <td><u>9.6</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>5%</u>	x3 = <u>0.15</u>	FACU species <u>205%</u>	x4 = <u>8.2</u>	UPL species <u>25%</u>	x5 = <u>1.25</u>	Column Totals: <u>2.35</u> (A)	<u>9.6</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species _____	x2 = _____																	
FAC species <u>5%</u>	x3 = <u>0.15</u>																	
FACU species <u>205%</u>	x4 = <u>8.2</u>																	
UPL species <u>25%</u>	x5 = <u>1.25</u>																	
Column Totals: <u>2.35</u> (A)	<u>9.6</u> (B)																	
2. <u>Fagus grandifolia</u>	15%	Yes	FACU															
3. <u>Asimina triloba</u>	5%	No	FAC															
4. _____																		
5. _____																		
	40% = Total Cover																	
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Podophyllum peltatum</u>	70%	Yes	FACU	Prevalence Index = B/A = <u>4.09</u>														
2. <u>Erythronium americanum</u>	20%	Yes	UPL															
3. <u>Trillium erectum</u>	5%	No	UPL															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
13. _____																		
14. _____																		
15. _____																		
16. _____																		
17. _____																		
18. _____																		
19. _____																		
20. _____																		
	95% = Total Cover																	
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____																		

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

SOIL

Sampling Point: WOH-131-UPL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 5/4	100	2.5Y 6/6	10	C	M	Silt loam	
6-12	2.5Y 5/4	80	2.5Y 6/6	20	C	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) |
| <input type="checkbox"/> Dark Surface (S7) |
| <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:

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"/> True Aquatic Plants (B14) |
| <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"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <u> X </u>	Depth (inches): <u> N/A </u>
Water Table Present?	Yes <input type="checkbox"/> No <u> X </u>	Depth (inches): <u> N/A </u>
Saturation Present?	Yes <input type="checkbox"/> No <u> X </u>	Depth (inches): <u> N/A </u>

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-131-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1624 Long: -82.9906 Datum: WGS84
 Soil Map Unit Name: Pa NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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 _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: Flooded woodlot, with several utv trails throughout.					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	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)																
1. <u>Acer saccharinum</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Acer saccharum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>70%</u>	<u>= Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Lindera benzoin</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>65%</u></td> <td>x2 = <u>1.3</u></td> </tr> <tr> <td>FAC species <u>25%</u></td> <td>x3 = <u>0.75</u></td> </tr> <tr> <td>FACU species <u>35%</u></td> <td>x4 = <u>1.4</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.25</u> (A)</td> <td><u>3.45</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.76</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species <u>65%</u>	x2 = <u>1.3</u>	FAC species <u>25%</u>	x3 = <u>0.75</u>	FACU species <u>35%</u>	x4 = <u>1.4</u>	UPL species _____	x5 = _____	Column Totals: <u>1.25</u> (A)	<u>3.45</u> (B)	Prevalence Index = B/A = <u>2.76</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species <u>65%</u>	x2 = <u>1.3</u>																			
FAC species <u>25%</u>	x3 = <u>0.75</u>																			
FACU species <u>35%</u>	x4 = <u>1.4</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>1.25</u> (A)	<u>3.45</u> (B)																			
Prevalence Index = B/A = <u>2.76</u>																				
2. <u>Fagus grandifolia</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Fraxinus pennsylvanica</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>																	
4. _____	_____	_____	_____																	
5. _____	<u>30%</u>	<u>= Total Cover</u>																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Carex blanda</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>X</u> 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>Toxicodendron radicans</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	<u>25%</u>	<u>= Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) Significant amount of root buttressing and evidence of shallow roots throughout.																				

SOIL

Sampling Point: WOH-131-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 6/1	100					Silt loam	
6-12	2.5Y 7/1	85	7.5YR 6/8	15	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-132-UPL
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.13392 Long: -82.9647 Datum: WGS84
 Soil Map Unit Name: Pa NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation 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>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. <u>Acer saccharum</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Carya ovata</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>80%</u>	_____	_____															
<u>80%</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																		
1. <u>Acer saccharum</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>155%</u></td> <td>x4 = <u>6.2</u></td> </tr> <tr> <td>UPL species <u>35%</u></td> <td>x5 = <u>1.75</u></td> </tr> <tr> <td>Column Totals: <u>1.90</u> (A)</td> <td><u>7.95</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.18</u>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species <u>155%</u>	x4 = <u>6.2</u>	UPL species <u>35%</u>	x5 = <u>1.75</u>	Column Totals: <u>1.90</u> (A)	<u>7.95</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x1 = _____																	
FACW species _____	x2 = _____																	
FAC species _____	x3 = _____																	
FACU species <u>155%</u>	x4 = <u>6.2</u>																	
UPL species <u>35%</u>	x5 = <u>1.75</u>																	
Column Totals: <u>1.90</u> (A)	<u>7.95</u> (B)																	
2. <u>Fagus grandifolia</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	<u>55%</u>	_____	_____															
<u>55%</u> = Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Trillium erectum</u>	<u>20%</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Claytonia virginica</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Erythronium americanum</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>															
4. <u>Phlox divaricata</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>															
5. <u>Holosteum umbellatum</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
13. _____	_____	_____	_____															
14. _____	_____	_____	_____															
15. _____	_____	_____	_____															
16. _____	_____	_____	_____															
17. _____	_____	_____	_____															
18. _____	_____	_____	_____															
19. _____	_____	_____	_____															
20. _____	_____	_____	_____															
<u>55%</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: WOH-132-UPL

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		
0-4	10YR 4/3	100					Silt loam	
4-12	10YR 7/6	80	10YR 4/3	5	C	M	Silt loam	
	10YR 7/2	15						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Yes _____	No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>		
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Apex Republic Windfarm City/County: Seneca County Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: WOH-132-WET
 Investigator(s): Brian Smith and Kaye Grob Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Woodlot Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.1337 Long: -82.9644 Datum: WGS84
 Soil Map Unit Name: Pa NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation 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> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>			
Remarks: Flooded woodlot, with several utv trails throughout.					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 3 </u> (A) Total Number of Dominant Species Across All Strata: <u> 5 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 60% </u> (A/B)																
1. <u>Carya ovata</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. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>15%</u>	_____	_____																	
<u>15%</u> = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Lindera benzoin</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>80%</u></td> <td>x1 = <u>0.8</u></td> </tr> <tr> <td>FACW species <u>30%</u></td> <td>x2 = <u>0.6</u></td> </tr> <tr> <td>FAC species <u>10%</u></td> <td>x3 = <u>0.3</u></td> </tr> <tr> <td>FACU species <u>15%</u></td> <td>x4 = <u>0.6</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.35</u> (A)</td> <td><u>2.3</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.70</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>80%</u>	x1 = <u>0.8</u>	FACW species <u>30%</u>	x2 = <u>0.6</u>	FAC species <u>10%</u>	x3 = <u>0.3</u>	FACU species <u>15%</u>	x4 = <u>0.6</u>	UPL species _____	x5 = _____	Column Totals: <u>1.35</u> (A)	<u>2.3</u> (B)	Prevalence Index = B/A = <u>1.70</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>80%</u>	x1 = <u>0.8</u>																			
FACW species <u>30%</u>	x2 = <u>0.6</u>																			
FAC species <u>10%</u>	x3 = <u>0.3</u>																			
FACU species <u>15%</u>	x4 = <u>0.6</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>1.35</u> (A)	<u>2.3</u> (B)																			
Prevalence Index = B/A = <u>1.70</u>																				
2. <u>Ulmus americana</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Acer negundo</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>30%</u> = Total Cover																				
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Caltha palustris</u>	<u>80%</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u> </u> 1-Rapid Test for Hydrophytic Vegetation <u> X </u> 2-Dominance Test is >50% <u> X </u> 3-Prevalence Index is ≤3.0 ¹ <u> </u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Phalaris arundinacea</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Alliaria petiolata</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	_____	_____	_____																	
<u>90%</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>																
2. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: WOH-132-WET

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		
0-12	7.5YR 5/1	95	7.5YR 4/6	5	C	M	Loam clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u> 3 </u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u> 4 </u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u> 0 </u> (includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/8/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-200
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2662 Long: -82.9172 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: PFO1A

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <div style="text-align: right;">= Total Cover</div>	<table border="0"> <tr> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> </table>	Absolute % Cover	Dominant Species?	Indicator Status	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B)
Absolute % Cover	Dominant Species?	Indicator Status																		
_____	_____	_____																		
_____	_____	_____																		
_____	_____	_____																		
_____	_____	_____																		
_____	_____	_____																		

Sapling/Shrub Stratum (Plot size: 15' radius) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <div style="text-align: right;">= Total Cover</div>	<table border="0"> <tr> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td><td>_____</td></tr> </table>	Absolute % Cover	Dominant Species?	Indicator Status	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
Absolute % Cover	Dominant Species?	Indicator Status																		
_____	_____	_____																		
_____	_____	_____																		
_____	_____	_____																		
_____	_____	_____																		
_____	_____	_____																		

Herb Stratum (Plot size: 5' radius) 1. <u>Penthorum sedoides</u> 5% No OBL 2. <u>Juncus effusus</u> 10% Yes OBL 3. <u>Scirpus cyperinus</u> 10% Yes OBL 4. <u>Carex vulpinoidea</u> 10% Yes FACW 5. <u>Rumex crispus</u> 5% No FAC 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____ 18. _____ 19. _____ 20. _____ <div style="text-align: right;">40% = Total Cover</div>	<table border="0"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th>A/B</th> </tr> <tr> <td>That Are OBL, FACW, or FAC:</td> <td></td> <td></td> </tr> <tr> <td>OBL species 25%</td> <td>x1 =</td> <td>0.25</td> </tr> <tr> <td>FACW species 10%</td> <td>x2 =</td> <td>0.2</td> </tr> <tr> <td>FAC species 5%</td> <td>x3 =</td> <td>0.15</td> </tr> <tr> <td>FACU species</td> <td>x4 =</td> <td></td> </tr> <tr> <td>UPL species</td> <td>x5 =</td> <td></td> </tr> <tr> <td>Column Totals: 0.40 (A)</td> <td></td> <td>0.6 (B)</td> </tr> </table> <p>Prevalence Index = B/A = <u>1.50</u></p>	Total % Cover of:	Multiply by:	A/B	That Are OBL, FACW, or FAC:			OBL species 25%	x1 =	0.25	FACW species 10%	x2 =	0.2	FAC species 5%	x3 =	0.15	FACU species	x4 =		UPL species	x5 =		Column Totals: 0.40 (A)		0.6 (B)
Total % Cover of:	Multiply by:	A/B																							
That Are OBL, FACW, or FAC:																									
OBL species 25%	x1 =	0.25																							
FACW species 10%	x2 =	0.2																							
FAC species 5%	x3 =	0.15																							
FACU species	x4 =																								
UPL species	x5 =																								
Column Totals: 0.40 (A)		0.6 (B)																							

Woody Vine Stratum (Plot size: 30' radius) 1. _____ 2. _____ <div style="text-align: right;">= Total Cover</div>	Hydrophytic Vegetation Present? Yes <u>x</u> No _____
--	--

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

SOIL

Sampling Point: woh-200

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3"	10yr 4/2	100					Silty Clay Loam	
3-12"	10yr 5/2	90	10yr 5/6	10	C	M	Silty Clay Loam	
12-20"	10yr 6/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/8/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-201
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2602 Long: -82.9089 Datum: NAD83 UTM16N
 Soil Map Unit Name: RoB NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover			_____	

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: <u>A/B</u> That Are OBL, FACW, or FAC: _____ OBL species <u>30%</u> x1 = <u>0.3</u> FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.30</u> (A) <u>0.3</u> (B) Prevalence Index = B/A = <u>1.00</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover			_____	

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Typha latifolia</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
= Total Cover			_____	

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover			_____	

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

SOIL

Sampling Point: woh-201

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		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒ X

Remarks:

Soil under water

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> X No _____	Depth (inches): <u>3"</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> X No _____	Depth (inches): <u>Surface</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> X No _____	Depth (inches): <u>Surface</u>

Wetland Hydrology Present? Yes ☒ X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/10/2017
 Applicant/Owner: _____ State: OH Sampling Point: _____ woh-202-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.23313 Long: -82.8453 Datum: NAD83 UTM16N
 Soil Map Unit Name: Mm NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Ulmus rubra</u>	20%	Yes	FAC	
2. <u>Juglans nigra</u>	25%	Yes	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	45% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species <u>65%</u> x3 = <u>1.95</u> FACU species <u>32%</u> x4 = <u>1.28</u> UPL species <u>10%</u> x5 = <u>0.5</u> Column Totals: <u>1.07</u> (A) <u>3.73</u> (B) Prevalence Index = B/A = <u>3.49</u>
1. <u>Rubus occidentalis</u>	10%	Yes	UPL	
2. <u>Lonicera morrowii</u>	5%	Yes	FACU	
3. <u>Acer negundo</u>	5%	Yes	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	20% = Total Cover			

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Sanicula odorata</u>	35%	Yes	FAC	
2. <u>Carex blanda</u>	5%	No	FAC	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
3. <u>Prunus serotina</u>	2%	No	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	42% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-202-upl

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}
0-12"	10yr 3/1	100					Silt Loam
12-20"	10yr 4/2	100					Silty Clay Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
³ The hydric soil indicators have been updated to comply with the <i>Field Indicators of Hydric Soils in the United States</i> , Version 8.0, 2016.	

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:		Wetland Hydrology Present? Yes _____ No <u> X </u>
Surface Water Present? Yes _____ No <u> X </u> Depth (inches): <u> na </u> Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >18" </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >18" </u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/10/2017
 Applicant/Owner: _____ State: OH Sampling Point: _____ woh-202-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2332 Long: -82.8453 Datum: NAD83 UTM16N
 Soil Map Unit Name: Mm NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	<u>Populus deltoides</u>	60%	Yes	FAC	
2.	<u>Juglans nigra</u>	10%	No	FACU	
3.	<u>Crataegus mollis</u>	25%	Yes	FAC	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		95%	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Crataegus mollis</u>	10%	Yes	FAC
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		10%	= Total Cover	

Herb Stratum (Plot size: 5' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Elymus virginicus</u>	35%	Yes	FACW
2.	<u>Carex blanda</u>	15%	Yes	FAC
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
13.	_____	_____	_____	_____
14.	_____	_____	_____	_____
15.	_____	_____	_____	_____
16.	_____	_____	_____	_____
17.	_____	_____	_____	_____
18.	_____	_____	_____	_____
19.	_____	_____	_____	_____
20.	_____	_____	_____	_____
		50%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		_____	= Total Cover	

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

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
That Are OBL, FACW, or FAC:	A/B
OBL species _____	x1 = _____
FACW species <u>35%</u>	x2 = <u>0.7</u>
FAC species <u>110%</u>	x3 = <u>3.3</u>
FACU species <u>10%</u>	x4 = <u>0.4</u>
UPL species _____	x5 = _____
Column Totals: <u>1.55</u> (A)	<u>4.4</u> (B)
Prevalence Index = B/A = <u>2.84</u>	

Hydrophytic Vegetation Indicators:

_____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
X 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.

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: woh-202-wet

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8"	10yr 3/2	100					Silt Loam	
8-20"	10yr 5/2	90	10yr 5/6	10	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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 checked="" 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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/10/2017
 Applicant/Owner: _____ State: OH Sampling Point: _____ woh-203-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.23585 Long: -82.8476 Datum: NAD83 UTM16N
 Soil Map Unit Name: RbA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Celtis occidentalis</u>	20%	Yes	FAC	Number of Dominant Species
2. <u>Quercus pagoda</u>	70%	Yes	FACW	That Are OBL, FACW, or FAC: <u>3</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
5. _____	_____	_____	_____	
	90% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Cornus racemosa</u>	80%	Yes	FAC	Total % Cover of: _____ Multiply by: _____ A/B
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____
3. _____	_____	_____	_____	OBL species _____ x1 = _____
4. _____	_____	_____	_____	FACW species <u>70%</u> x2 = <u>1.4</u>
5. _____	_____	_____	_____	FAC species <u>100%</u> x3 = <u>3</u>
	80% = Total Cover			FACU species <u>30%</u> x4 = <u>1.2</u>
				UPL species <u>5%</u> x5 = <u>0.25</u>
				Column Totals: <u>2.05</u> (A) <u>5.85</u> (B)
				Prevalence Index = B/A = <u>2.85</u>

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Galium aparine</u>	10%	Yes	FACU	1-Rapid Test for Hydrophytic Vegetation
2. <u>Leonurus cardiaca</u>	5%	No	UPL	<u>X</u> 2-Dominance Test is >50%
3. <u>Osmorhiza claytonii</u>	20%	Yes	FACU	<u>X</u> 3-Prevalence Index is ≤3.0 ¹
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	35% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes <u>X</u> No _____
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-203-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10yr 3/2	100					Silt Loam	
6-20"	10yr 4/3	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): <u>na</u>	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): <u>>18"</u>	
Saturation Present?	Yes _____ No <u>X</u>	Depth (inches): <u>>18"</u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/10/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-203-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2359 Long: -82.8477 Datum: NAD83 UTM16N
 Soil Map Unit Name: RbA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species <u>80%</u> x3 = <u>2.4</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.80</u> (A) <u>2.4</u> (B) Prevalence Index = B/A = <u>3.00</u>
1. <u>Cornus racemosa</u>	<u>80%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
80% = Total Cover				

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
= Total Cover				

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-203-wet

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8"	10yr 3/2	100					Silt Loam	
8-20"	10yr 5/2	90	10yr 5/6	10	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: _____ woh-204-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2247 Long: -82.9177 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover			_____	

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: <u>A/B</u> That Are OBL, FACW, or FAC: _____ OBL species <u>10%</u> x1 = <u>0.1</u> FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species <u>15%</u> x4 = <u>0.6</u> UPL species <u>40%</u> x5 = <u>2</u> Column Totals: <u>0.65</u> (A) <u>2.7</u> (B) Prevalence Index = B/A = <u>4.15</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover			_____	

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Triticum aestivum</u>	<u>25%</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Lindernia dubia</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>	
3. <u>Stellaria media</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Raphanus sativus</u>	<u>15%</u>	<u>Yes</u>	<u>UPL</u>	
5. <u>Lathyrus pratensis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
65% = Total Cover			_____	

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover			_____	

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

SOIL

Sampling Point: woh-204-upl

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		
0-20"	10yr 5/2	99	10yr 5*4	1	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	³ The hydric soil indicators have been updated to comply with the <i>Field Indicators of Hydric Soils in the United States</i> , Version 8.0, 2016.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒ X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Depth (inches):	na
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Depth (inches):	>18"
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Depth (inches):	>18"
(includes capillary fringe)			
Wetland Hydrology Present?		Yes _____ No <input checked="" type="checkbox"/> X	

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-204-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2247 Long: -82.9178 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>100%</u> x2 = <u>2</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.00</u> (A) <u>2</u> (B) Prevalence Index = B/A = <u>2.00</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	<u>100%</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
<u>100%</u> = Total Cover				

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-204-wet

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		
0-20"	10yr 5/2	95	10yr 3/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-205-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 41.22554 Long: -82.9152 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
1. <u>Gleditsia triacanthos</u>	5%	Yes	FACU	
2. <u>Betula nigra</u>	5%	Yes	FACW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	10% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>25%</u> x2 = <u>0.5</u> FAC species <u>15%</u> x3 = <u>0.45</u> FACU species <u>89%</u> x4 = <u>3.56</u> UPL species <u>70%</u> x5 = <u>3.5</u> Column Totals: <u>1.99</u> (A) <u>8.01</u> (B) Prevalence Index = B/A = <u>4.03</u>
1. <u>Prunus serotina</u>	1%	No	FACU	
2. <u>Rubus allegheniensis</u>	3%	No	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	4% = Total Cover			

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bromus inermis</u>	80%	Yes	FACU	
2. <u>Euonymus fortunei</u>	70%	Yes	UPL	
3. <u>Poa pratensis</u>	15%	No	FAC	
4. <u>Phalaris arundinacea</u>	20%	No	FACW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	185% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-205-upl

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		
0-4"	10yr 3/3	100					Silt Loam	
4-20"	10yr 5/4	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): <u>na</u>	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): <u>>18"</u>	
Saturation Present?	Yes _____ No <u>X</u>	Depth (inches): <u>>18"</u>	
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-205-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2256 Long: -82.9151 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover	Absolute % Cover Dominant Species? Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B)
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Sapling/Shrub Stratum (Plot size: 15' radius) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover	Absolute % Cover Dominant Species? Indicator Status	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
---	---	--

Herb Stratum (Plot size: 5' radius) 1. <u>Phalaris arundinacea</u> 100% Yes FACW 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____ 18. _____ 19. _____ 20. _____ 100% = Total Cover	Absolute % Cover Dominant Species? Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>100%</u> x2 = <u>2</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.00</u> (A) <u>2</u> (B) Prevalence Index = B/A = <u>2.00</u>
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Woody Vine Stratum (Plot size: 30' radius) 1. _____ 2. _____ _____ = Total Cover	Absolute % Cover Dominant Species? Indicator Status	Hydrophytic Vegetation Present? Yes <u>x</u> No _____
--	---	--

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

SOIL

Sampling Point: woh-205-wet

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		
0-20"	10yr 6/2	80	10yr 4/6	20	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>na</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-206-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 41.22064 Long: -82.8749 Datum: NAD83 UTM16N
 Soil Map Unit Name: MnA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Crataegus mollis</u>	10%	Yes	FAC	Number of Dominant Species
2. <u>Prunus serotina</u>	28%	Yes	FACU	That Are OBL, FACW, or FAC: <u>3</u> (A)
3. <u>Acer saccharum</u>	10%	Yes	FACU	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
4. <u>Carya ovata</u>	1%	No	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>38%</u> (A/B)
5. _____	_____	_____	_____	
	49%	= Total Cover		

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Ulmus americana</u>	5%	No	FACW	Total % Cover of: _____ Multiply by: _____
2. <u>Rosa multiflora</u>	25%	Yes	FACU	That Are OBL, FACW, or FAC: _____ A/B
3. _____	_____	_____	_____	OBL species _____ x1 = _____
4. _____	_____	_____	_____	FACW species <u>10%</u> x2 = <u>0.2</u>
5. _____	_____	_____	_____	FAC species <u>19%</u> x3 = <u>0.57</u>
	30%	= Total Cover		FACU species <u>85%</u> x4 = <u>3.4</u>
				UPL species _____ x5 = _____
				Column Totals: <u>1.14</u> (A) <u>4.17</u> (B)
				Prevalence Index = B/A = <u>3.66</u>

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Osmorhiza claytonii</u>	10%	Yes	FACU	1-Rapid Test for Hydrophytic Vegetation
2. <u>Geum canadense</u>	5%	Yes	FAC	2-Dominance Test is >50%
3. <u>Claytonia virginica</u>	5%	Yes	FACU	3-Prevalence Index is ≤3.0 ¹
4. <u>Sanicula canadensis</u>	2%	No	FACU	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Cryptotaenia canadensis</u>	3%	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6. <u>Symphotrichum lateriflorum</u>	5%	Yes	FACW	
7. <u>Galium aparine</u>	2%	No	FACU	
8. <u>Stellaria media</u>	2%	No	FACU	
9. <u>Viola sororia</u>	1%	No	FAC	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	35%	= Total Cover		

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
	_____	= Total Cover		

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

SOIL

Sampling Point: woh-206-upl

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		
0-4"	10yr 3/2	100					Silt Loam	
4-20"	10yr 6/4	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): <u>na</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): <u>>18"</u>
Saturation Present?	Yes _____ No <u>X</u>	Depth (inches): <u>>18"</u>
(includes capillary fringe)		

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-206-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2207 Long: -82.8749 Datum: NAD83 UTM16N
 Soil Map Unit Name: MnA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	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)
1. <u>Quercus palustris</u>	25%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
25% = Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)				Percent of Dominant Species	
1. <u>Carya laciniosa</u>	10%	Yes	FACW	That Are OBL, FACW, or FAC: 100% (A/B)	
2. <u>Cornus racemosa</u>	10%	Yes	FAC		
3. _____	_____	_____	_____	Prevalence Index worksheet:	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
20% = Total Cover					
				Total % Cover of:	Multiply by:

Herb Stratum (Plot size: 5' radius)							
1. <i>Phalaris arundinacea</i>	100%	Yes	FACW				
2. <i>Viola sororia</i>	1%	No	FAC				
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
	101%	= Total Cover					

OBL species		x1 =	
FACW species	135%	x2 =	2.7
FAC species	11%	x3 =	0.33
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.46	(A)	3.03
			(B)
Prevalence Index = B/A =		2.08	

Hydrophytic Vegetation Indicators:

_____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 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.

<u>Woody Vine Stratum</u> (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>
1.	_____	_____	_____	
2.	_____	_____	_____	
_____ = Total Cover				

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

SOIL

Sampling Point: woh-206-wet

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		
0-20"	10yr 5/2	98	10yr 5/4	2	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	³ The hydric soil indicators have been updated to comply with the <i>Field Indicators of Hydric Soils in the United States</i> , Version 8.0, 2016.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-207-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2191 Long: -82.8748 Datum: NAD83 UTM16N
 Soil Map Unit Name: MnA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus palustris</u>	25%	Yes	FACW	Number of Dominant Species
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>4</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
4. _____	_____	_____	_____	Percent of Dominant Species
5. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
	25% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Ulmus americana</u>	10%	Yes	FACW	Total % Cover of: _____ Multiply by: _____
2. <u>Quercus palustris</u>	10%	Yes	FACW	That Are OBL, FACW, or FAC: _____ A/B
3. _____	_____	_____	_____	OBL species _____ x1 = _____
4. _____	_____	_____	_____	FACW species <u>45%</u> x2 = <u>0.9</u>
5. _____	_____	_____	_____	FAC species <u>25%</u> x3 = <u>0.75</u>
	20% = Total Cover			FACU species <u>10%</u> x4 = <u>0.4</u>
				UPL species _____ x5 = _____
				Column Totals: <u>0.80</u> (A) <u>2.05</u> (B)
				Prevalence Index = B/A = <u>2.56</u>

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Galium aparine</u>	10%	Yes	FACU	1-Rapid Test for Hydrophytic Vegetation
2. <u>Toxicodendron radicans</u>	25%	Yes	FAC	<u>X</u> 2-Dominance Test is >50%
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	35% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes <u>X</u> No _____
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-207-wet

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		
0-20"	10yr 5/2	95	10yr 5/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" 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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: _____ woh-208-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 41.20586 Long: -82.9222 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus alba</i>	35%	Yes	FACU	Number of Dominant Species
2. <i>Carya ovata</i>	20%	Yes	FACU	That Are OBL, FACW, or FAC: <u>0</u> (A)
3. <i>Acer saccharum</i>	25%	Yes	FACU	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
4. _____	_____	_____	_____	Percent of Dominant Species
5. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
	80% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <i>Rubus allegheniensis</i>	40%	Yes	FACU	Total % Cover of: _____ Multiply by: _____
2. <i>Rosa multiflora</i>	10%	No	FACU	That Are OBL, FACW, or FAC: _____ A/B
3. <i>Carya ovata</i>	5%	No	FACU	OBL species _____ x1 = _____
4. _____	_____	_____	_____	FACW species <u>2%</u> x2 = <u>0.04</u>
5. _____	_____	_____	_____	FAC species <u>3%</u> x3 = <u>0.09</u>
	55% = Total Cover			FACU species <u>161%</u> x4 = <u>6.44</u>
				UPL species _____ x5 = _____
				Column Totals: <u>1.66</u> (A) <u>6.57</u> (B)
				Prevalence Index = B/A = <u>3.96</u>

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>Osmorhiza claytonii</i>	5%	Yes	FACU	1-Rapid Test for Hydrophytic Vegetation
2. <i>Cardamine concatenata</i>	5%	Yes	FACU	2-Dominance Test is >50%
3. <i>Claytonia virginica</i>	5%	Yes	FACU	3-Prevalence Index is ≤3.0 ¹
4. <i>Sanicula canadensis</i>	10%	Yes	FACU	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <i>Sceptridium dissectum</i>	3%	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6. <i>Symphyotrichum lateriflorum</i>	2%	No	FACW	
7. <i>Galium aparine</i>	1%	No	FACU	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	31% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-208-upl

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10yr 4/2	100					Silt Loam	
6-20"	10yr 6/3	90	10yr 5/6	10	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

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"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): na
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): 6"
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): 6"

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-208-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.206 Long: -82.9221 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Quercus macrocarpa</u>	80%	Yes	FAC	
2. <u>Acer rubrum</u>	50%	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	130%	= Total Cover		

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species <u>130%</u> x3 = <u>3.9</u> FACU species <u>1%</u> x4 = <u>0.04</u> UPL species _____ x5 = _____ Column Totals: <u>1.31</u> (A) <u>3.94</u> (B) Prevalence Index = B/A = <u>3.01</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	_____	= Total Cover		

<u>Herb Stratum</u> (Plot size: 5' radius)			
1. <u>Galium aparine</u>	1%	No	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____
	1%	= Total Cover	

OBL species	x1 =	_____
FACW species	x2 =	_____
FAC species	130%	x3 = 3.9
FACU species	1%	x4 = 0.04
UPL species	x5 =	_____
Column Totals:	1.31 (A)	3.94 (B)
Prevalence Index = B/A = 3.01		

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.

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____	= Total Cover		

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

SOIL

Sampling Point: woh-208-wet

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		
0-20"	10yr 4/1	90	10yr 5/6	10	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" 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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present?

Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/11/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-209-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2059 Long: -82.9225 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius) 1. <u>Quercus palustris</u> 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover	Absolute % Cover: <u>20%</u> Dominant Species?: <u>Yes</u> Indicator Status: <u>FACW</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)
---	--	--

Sapling/Shrub Stratum (Plot size: 15' radius) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover	Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
---	--	--

Herb Stratum (Plot size: 5' radius) 1. <u>Carex muskingumensis</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____ 18. _____ 19. _____ 20. _____ _____ = Total Cover	Absolute % Cover: <u>70%</u> Dominant Species?: <u>Yes</u> Indicator Status: <u>OBL</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ OBL species <u>70%</u> x1 = <u>0.7</u> FACW species <u>20%</u> x2 = <u>0.4</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.90</u> (A) <u>1.1</u> (B) Prevalence Index = B/A = <u>1.22</u>
--	---	--

Woody Vine Stratum (Plot size: 30' radius) 1. _____ 2. _____ _____ = Total Cover	Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____	Hydrophytic Vegetation Present? Yes <u>x</u> No _____
--	--	--

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

SOIL

Sampling Point: woh-209-wet

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		
0-20"	10yr 4/2	90	10yr 4/6	10	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>na</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-210-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 5% Lat: 41.20446 Long: -82.9168 Datum: NAD83 UTM16N
 Soil Map Unit Name: HkA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species <u>110%</u> x4 = <u>4.4</u> UPL species _____ x5 = _____ Column Totals: <u>1.10</u> (A) <u>4.4</u> (B) Prevalence Index = B/A = <u>4.00</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bromus inermis</u>	<u>80%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Festuca rubra</u>	<u>20%</u>	<u>No</u>	<u>FACU</u>	
3. <u>Oenothera biennis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Taraxacum officinale</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
110% = Total Cover				

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-210-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10yr 4/2	100					Silt Loam	
6-20"	10yr 4/3	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches): na	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> X
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches): >18"	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches): >18"	
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-210-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2044 Long: -82.917 Datum: NAD83 UTM16N
 Soil Map Unit Name: HkA NWI classification: PEM1A

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

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

Hydrophytic Vegetation Present?	Yes <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u> No _____
Hydric Soil Present?	Yes <u>x</u>	No _____		
Wetland Hydrology Present?	Yes <u>x</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
			= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>92%</u> x2 = <u>1.84</u> FAC species <u>5%</u> x3 = <u>0.15</u> FACU species <u>15%</u> x4 = <u>0.6</u> UPL species _____ x5 = _____ Column Totals: <u>1.12</u> (A) <u>2.59</u> (B) Prevalence Index = B/A = <u>2.31</u>
1. <u>Ulmus americana</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
	<u>2%</u>		= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. <i>Persicaria pensylvanica</i>	90%	Yes	FACW
2. <i>Setaria faberi</i>	15%	No	FACU
3. <i>Symphyotrichum lanceolatum</i>	5%	No	FAC
4.			
5.			
6.			
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14.			
15.			
16.			
17.			
18.			
19.			
20.			
	110%	= Total Cover	

OBL species	x1 =
FACW species	x2 = 1.84
FAC species	x3 = 0.15
FACU species	x4 = 0.6
UPL species	x5 =
Column Totals:	1.12 (A) 2.59 (B)
Prevalence Index = B/A = 2.31	

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' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____				
2. _____				
			= Total Cover	

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

SOIL

Sampling Point: woh-210-wet

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		
0-20"	10yr 4/2	90	10yr 4/6	10	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present?

Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-211-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 2% Lat: 41.20274 Long: -82.9148 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)				Percent of Dominant Species	
1. <u>Juglans nigra</u>	25%	Yes	FACU	That Are OBL, FACW, or FAC: <u>25%</u> (A/B)	
2. <u>Rosa multiflora</u>	20%	Yes	FACU		
3. <u>Rhus typhina</u>	2%	No	UPL		
4. <u>Ulmus americana</u>	5%	No	FACW		
5. <u>Fraxinus pennsylvanica</u>	3%	No	FACW		
	55%	= Total Cover			
				Prevalence Index worksheet:	
				Total % Cover of:	Multiply by:

<u>Herb Stratum</u> (Plot size: 5' radius)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____				
2. _____				
= Total Cover				

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

SOIL

Sampling Point: woh-211-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10yr 4/2	100					Silt Loam	
6-20"	10yr 4/3	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	
<input type="checkbox"/> Stratified Layers (A5)	
<input type="checkbox"/> 2 cm Muck (A10)	
<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"/> 5 cm Mucky Peat or Peat (S3)	

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): na	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): >18"	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): >18"	
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-211-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.2027 Long: -82.9148 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>2</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	Species Across All Strata: <u>2</u> (B)
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Fraxinus pennsylvanica</u>	50%	Yes	FACW	Percent of Dominant Species
2. <u>Ulmus americana</u>	5%	No	FACW	That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
55% = Total Cover				

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Phalaris arundinacea</u>	100%	Yes	FACW	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation
2. _____	_____	_____	_____	<u>X</u> 2-Dominance Test is >50%
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
100% = Total Cover				

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation
1. _____	_____	_____	_____	Present?
2. _____	_____	_____	_____	Yes <u>X</u> No _____
= Total Cover				

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

SOIL

Sampling Point: woh-211-wet

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		
0-20"	10yr 4/2	90	10yr 4/6	10	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.Hydric Soil Indicators³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)

Test Indicators of Hydric Soils:

<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-212-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 2% Lat: 41.20625 Long: -82.9021 Datum: NAD83 UTM16N
 Soil Map Unit Name: HkB NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species <u>100%</u> x5 = <u>5</u> Column Totals: <u>1.00</u> (A) <u>5</u> (B) Prevalence Index = B/A = <u>5.00</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bare Ground</u>	100%	Yes	UPL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
= Total Cover				

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-212-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8"	10yr 4/3	100					Silty Clay Loam	
8-20"	10yr 4/2	80	10yr 5/8	20	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	³ The hydric soil indicators have been updated to comply with the <i>Field Indicators of Hydric Soils in the United States</i> , Version 8.0, 2016.

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

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u> X </u>	Depth (inches): <u> na </u>	Wetland Hydrology Present? Yes _____ No <u> X </u>
Water Table Present?	Yes _____ No <u> X </u>	Depth (inches): <u> >18" </u>	
Saturation Present?	Yes _____ No <u> X </u>	Depth (inches): <u> >18" </u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-212-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.20653 Long: -82.90223 Datum: NAD83 UTM16N
 Soil Map Unit Name: HkB NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				= Total Cover
Sapling/Shrub Stratum (Plot size: 15' radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				= Total Cover
Herb Stratum (Plot size: 5' radius)				
1. <u>Phalaris arundinacea</u>	100%	Yes	FACW	
2. <u>Apocynum cannabinum</u>	10%	No	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
				110% = Total Cover
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
				= 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:
That Are OBL, FACW, or FAC: _____	A/B
OBL species _____	x1 = _____
FACW species <u>100%</u>	x2 = <u>2</u>
FAC species <u>10%</u>	x3 = <u>0.3</u>
FACU species _____	x4 = _____
UPL species _____	x5 = _____
Column Totals: <u>1.10</u> (A)	<u>2.3</u> (B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators:

X 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 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.

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: woh-212-wet

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		
0-20"	10yr 5/2	98	10yr 5/4	2	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-213-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 2% Lat: 41.19068 Long: -82.905382 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>1%</u> x2 = <u>0.02</u> FAC species <u>50%</u> x3 = <u>1.5</u> FACU species <u>34%</u> x4 = <u>1.36</u> UPL species _____ x5 = _____ Column Totals: <u>0.85</u> (A) <u>2.88</u> (B) Prevalence Index = B/A = <u>3.39</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Schedonorus arundinaceus</i>	30%	Yes	FACU	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Poa pratensis</i>	50%	Yes	FAC	
3. <i>Solidago altissima</i>	2%	No	FACU	
4. <i>Cirsium arvense</i>	2%	No	FACU	
5. <i>Geum laciniatum</i>	1%	No	FACW	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
85% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-213-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8"	10yr 5/2	100					Silty Clay Loam	
8-20"	10yr 5/2	95	10yr 4/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Gauge or Well Data (D9)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): na	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): >18"	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): >18"	

(includes capillary fringe)

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/12/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-213-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): concave
 Slope (%): 2% Lat: 41.190269 Long: -82.905325 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>55%</u> x1 = <u>0.55</u> FACW species <u>30%</u> x2 = <u>0.6</u> FAC species _____ x3 = _____ FACU species <u>10%</u> x4 = <u>0.4</u> UPL species _____ x5 = _____ Column Totals: <u>0.95</u> (A) <u>1.55</u> (B) Prevalence Index = B/A = <u>1.63</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ ____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Juncus effusus</u>	<u>50%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Schoenoplectus fluvialis</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
4. <u>Packera glabella</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
5. <u>Schedonorus arundinaceus</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
<u>95%</u> = Total Cover				

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-213-wet

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		
0-20"	10yr 4/2	95	10yr 4/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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 checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

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): na		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): >18"		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Surface		

(includes capillary fringe)

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-214-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 5% Lat: 41.20856 Long: -82.890412 Datum: NAD83 UTM16N
 Soil Map Unit Name: GwG1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Prunus serotina</i>	15%	Yes	FACU		Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 7 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 14% (A/B)
2. <i>Prunus avium</i>	15%	Yes	FACU	
3. <i>Quercus alba</i>	10%	No	FACU	
4. <i>Juglans nigra</i>	20%	Yes	FACU	
5. _____				
			60% = Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <i>Quercus alba</i>	5%	No	FACU	Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>5%</u> x2 = <u>0.1</u> FAC species <u>19%</u> x3 = <u>0.57</u> FACU species <u>83%</u> x4 = <u>3.32</u> UPL species <u>25%</u> x5 = <u>1.25</u> Column Totals: <u>1.32</u> (A) <u>5.24</u> (B) Prevalence Index = B/A = <u>3.97</u>
2. <i>Ulmus americana</i>	5%	No	FACW	
3. <i>Celtis occidentalis</i>	10%	Yes	FAC	
4. <i>Rubus occidentalis</i>	10%	Yes	UPL	
5. _____				
			30% = Total Cover	
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators:
1. <i>Galium aparine</i>	15%	Yes	FACU	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. <i>Euonymus fortunei</i>	10%	Yes	UPL	
3. <i>Smilax hispida</i>	5%	No	FAC	
4. <i>Alliaria petiolata</i>	1%	No	FAC	
5. <i>Geum canadense</i>	2%	No	FAC	
6. <i>Symphytotrichum cordifolium</i>	5%	No	UPL	
7. <i>Osmorhiza claytonii</i>	2%	No	FACU	
8. <i>Claytonia virginica</i>	1%	No	FACU	
9. <i>Sanicula odorata</i>	1%	No	FAC	
10. _____				
11. _____				
12. _____				
13. _____				
14. _____				
15. _____				
16. _____				
17. _____				
18. _____				
19. _____				
20. _____				
			42% = Total Cover	
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____				
2. _____				
			_____ = Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-214-upl

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		
0-4"	10yr 3/3	100					Silt Loam	
4-20"	10yr 4/4	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Yes _____	No <input checked="" type="checkbox"/> X
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-214-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.208593 Long: -82.890834 Datum: NAD83 UTM16N
 Soil Map Unit Name: GwG1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus palustris</u>	10%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			10% = Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>5%</u> x1 = <u>0.05</u> FACW species <u>25%</u> x2 = <u>0.5</u> FAC species <u>30%</u> x3 = <u>0.9</u> FACU species <u>10%</u> x4 = <u>0.4</u> UPL species _____ x5 = _____ Column Totals: <u>0.70</u> (A) <u>1.85</u> (B) Prevalence Index = B/A = <u>2.64</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	
Herb Stratum (Plot size: 5' radius) _____				
1. <u>Phalaris arundinacea</u>	15%	Yes	FACW	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphytotrichum lanceolatum</u>	30%	Yes	FAC	
3. <u>Scirpus atrovirens</u>	5%	No	OBL	
4. <u>Galium aparine</u>	10%	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
			60% = Total Cover	
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
			= Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-214-wet

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		
0-20"	10yr 6/2	90	10yr 5/6	10	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:			Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>1"</u>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>Surface</u>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>Surface</u>		

(includes capillary fringe)

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-215-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 1% Lat: 41.18614 Long: -82.904074 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus rubra</i>	15%	Yes	FACU		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)
2. <i>Ulmus americana</i>	40%	Yes	FACW	
3. <i>Tilia americana</i>	10%	No	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			65% = Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <i>Carya laciniosa</i>	5%	No	FACW	Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>80%</u> x2 = <u>1.6</u> FAC species <u>8%</u> x3 = <u>0.24</u> FACU species <u>64%</u> x4 = <u>2.56</u> UPL species <u>6%</u> x5 = <u>0.3</u> Column Totals: <u>1.58</u> (A) <u>4.7</u> (B) Prevalence Index = B/A = <u>2.97</u>
2. <i>Rubus allegheniensis</i>	30%	Yes	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			35% = Total Cover	
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators:
1. <i>Galium aparine</i>	2%	No	FACU	1-Rapid Test for Hydrophytic Vegetation 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Floerkea proserpinacoides</i>	35%	Yes	FACW	
3. <i>Euonymus fortunei</i>	5%	No	UPL	
4. <i>Alliaria petiolata</i>	5%	No	FAC	
5. <i>Geum canadense</i>	3%	No	FAC	
6. <i>Symphytotrichum cordifolium</i>	1%	No	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. <i>Stellaria media</i>	2%	No	FACU	
8. <i>Claytonia virginica</i>	5%	No	FACU	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
			58% = Total Cover	
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
			_____ = Total Cover	

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

SOIL

Sampling Point: woh-215-upl

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		
0-4"	10yr 3/2	100					Silt Loam	
4-20"	10yr 4/1	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒ X

Remarks:

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"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> X No _____
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches): na		
Water Table Present? Yes <input checked="" type="checkbox"/> X No _____	Depth (inches): 4"		
Saturation Present? Yes <input checked="" type="checkbox"/> X No _____	Depth (inches): Surface		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-215-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.186518 Long: -82.904161 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus palustris</i>	65%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
65% = Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <i>Quercus palustris</i>	80%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
80% = Total Cover				
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators:
1. <i>Carex tribuloides</i>	70%	Yes	OBL	
2. <i>Apocynum cannabinum</i>	20%	Yes	FAC	
3. <i>Scirpus atrovirens</i>	5%	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
95% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-215-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)
³ The hydric soil indicators have been updated to comply with the <i>Field Indicators of Hydric Soils in the United States</i> , Version 8.0, 2016.	

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

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"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>na</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-216-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.185267 Long: -82.902811 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		
Remarks:				

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>15%</u> x1 = <u>0.15</u> FACW species <u>5%</u> x2 = <u>0.1</u> FAC species <u>45%</u> x3 = <u>1.35</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.65</u> (A) <u>1.6</u> (B) Prevalence Index = B/A = <u>2.46</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Carex tribuloides</i>	5%	No	OBL	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Symphytotrichum lanceolatum</i>	25%	Yes	FAC	
3. <i>Scirpus atrovirens</i>	5%	No	OBL	
4. <i>Penthorum sedoides</i>	5%	No	OBL	
5. <i>Poa pratensis</i>	20%	Yes	FAC	
6. <i>Persicaria pensylvanica</i>	5%	No	FACW	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
65% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-216-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-217-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.18485 Long: -82.903206 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>70%</u> x1 = <u>0.7</u> FACW species _____ x2 = _____ FAC species <u>40%</u> x3 = <u>1.2</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.10</u> (A) <u>1.9</u> (B) Prevalence Index = B/A = <u>1.73</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>1</u> -Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> -Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Carex tribuloides</u>	55%	Yes	OBL	
2. <u>Symphytotrichum lanceolatum</u>	20%	Yes	FAC	
3. <u>Scirpus atrovirens</u>	15%	No	OBL	
4. <u>Eupatorium serotinum</u>	20%	Yes	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
			110% = Total Cover	

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
			= Total Cover	

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

SOIL

Sampling Point: woh-217-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-218-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.184302 Long: -82.902972 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>87%</u> x1 = <u>0.87</u> FACW species _____ x2 = _____ FAC species <u>10%</u> x3 = <u>0.3</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.97</u> (A) <u>1.17</u> (B) Prevalence Index = B/A = <u>1.21</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Carex tribuloides</i>	40%	Yes	OBL	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Symphytotrichum lanceolatum</i>	5%	No	FAC	
3. <i>Juncus effusus</i>	10%	No	OBL	
4. <i>Typha latifolia</i>	35%	Yes	OBL	
5. <i>Rumex crispus</i>	5%	No	FAC	
6. <i>Penthorum sedoides</i>	2%	No	OBL	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
97% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-218-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)
³ The hydric soil indicators have been updated to comply with the <i>Field Indicators of Hydric Soils in the United States</i> , Version 8.0, 2016.	

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:			Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): na		
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): 4"		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): Surface		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-219-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.18382 Long: -82.906566 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius) 1. <u>Quercus palustris</u> Absolute % Cover: <u>40%</u> Dominant Species?: <u>Yes</u> Indicator Status: <u>FACW</u> 2. <u>Ulmus americana</u> Absolute % Cover: <u>2%</u> Dominant Species?: <u>No</u> Indicator Status: <u>FACW</u> 3. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 4. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 5. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ _____ Absolute % Cover: <u>42%</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius) 1. <u>Rosa multiflora</u> Absolute % Cover: <u>10%</u> Dominant Species?: <u>No</u> Indicator Status: <u>FACU</u> 2. <u>Fagus grandifolia</u> Absolute % Cover: <u>20%</u> Dominant Species?: <u>Yes</u> Indicator Status: <u>FACU</u> 3. <u>Ostrya virginiana</u> Absolute % Cover: <u>15%</u> Dominant Species?: <u>Yes</u> Indicator Status: <u>FACU</u> 4. <u>Viburnum lentago</u> Absolute % Cover: <u>5%</u> Dominant Species?: <u>No</u> Indicator Status: <u>FAC</u> 5. <u>Fraxinus pennsylvanica</u> Absolute % Cover: <u>5%</u> Dominant Species?: <u>No</u> Indicator Status: <u>FACW</u> _____ Absolute % Cover: <u>55%</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>47%</u> x2 = <u>0.94</u> FAC species <u>5%</u> x3 = <u>0.15</u> FACU species <u>75%</u> x4 = <u>3</u> UPL species _____ x5 = _____ Column Totals: <u>1.27</u> (A) <u>4.09</u> (B) Prevalence Index = B/A = <u>3.22</u>
Herb Stratum (Plot size: 5' radius) 1. <u>Claytonia virginica</u> Absolute % Cover: <u>20%</u> Dominant Species?: <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u>Potentilla simplex</u> Absolute % Cover: <u>5%</u> Dominant Species?: <u>No</u> Indicator Status: <u>FACU</u> 3. <u>Galium aparine</u> Absolute % Cover: <u>5%</u> Dominant Species?: <u>No</u> Indicator Status: <u>FACU</u> 4. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 5. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 6. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 7. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 8. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 9. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 10. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 11. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 12. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 13. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 14. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 15. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 16. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 17. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 18. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 19. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 20. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ _____ Absolute % Cover: <u>30%</u> = Total Cover	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 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.
Woody Vine Stratum (Plot size: 30' radius) 1. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ 2. _____ Absolute % Cover: _____ Dominant Species?: _____ Indicator Status: _____ _____ Absolute % Cover: _____ = Total Cover	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: (Include photo numbers here or on a separate sheet.)	

SOIL

Sampling Point: woh-219-upl

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input 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"/> Gauge or Well Data (D9)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input checked="" type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> FAC-Neutral Test (D5)

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-219-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183942 Long: -82.906687 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		
Remarks:				

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>65%</u> x1 = <u>0.65</u> FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.65</u> (A) <u>0.65</u> (B) Prevalence Index = B/A = <u>1.00</u>
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Scirpus atrovirens</u>	<u>40%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Juncus effusus</u>	<u>25%</u>	<u>Yes</u>	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
<u>65%</u> = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-219-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/13/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-220-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183328 Long: -82.907505 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <u>Acer rubrum</u>	10%	Yes	FAC	
2. <u>Quercus palustris</u>	15%	Yes	FACW	Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>40%</u> x1 = <u>0.4</u> FACW species <u>70%</u> x2 = <u>1.4</u> FAC species <u>25%</u> x3 = <u>0.75</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.35</u> (A) <u>2.55</u> (B) Prevalence Index = B/A = <u>1.89</u>
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
25% = Total Cover				
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	20%	Yes	FACW	
2. <u>Juncus effusus</u>	40%	Yes	OBL	
3. <u>Onoclea sensibilis</u>	20%	Yes	FACW	
4. <u>Impatiens capensis</u>	5%	No	FACW	
5. <u>Prunella vulgaris</u>	5%	No	FAC	
6. <u>Symphotrichum lanceolatum</u>	10%	No	FAC	
7. <u>Cinna arundinacea</u>	10%	No	FACW	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
110% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-220-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	No	<input type="checkbox"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/14/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-221-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 5% Lat: 41.18934 Long: -82.935078 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species <u>60%</u> x3 = <u>1.8</u> FACU species <u>50%</u> x4 = <u>2</u> UPL species _____ x5 = _____ Column Totals: <u>1.10</u> (A) <u>3.8</u> (B) Prevalence Index = B/A = <u>3.45</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Poa pratensis</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Sorghastrum nutans</u>	<u>20%</u>	<u>No</u>	<u>FACU</u>	
3. <u>Rubus allegheniensis</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Cirsium arvense</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
			<u>110%</u> = Total Cover	

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
			= Total Cover	

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

SOIL

Sampling Point: woh-221-upl

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		
0-20"	10yr 4/3	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒ X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Depth (inches):	na
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Depth (inches):	>18"
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Depth (inches):	>18"
(includes capillary fringe)			
Wetland Hydrology Present?		Yes _____ No <input checked="" type="checkbox"/> X	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/14/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-221-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.189083 Long: -82.934975 Datum: _____
 Soil Map Unit Name: HkA NWI classification: PEM1A

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>100%</u> x2 = <u>2</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.00</u> (A) <u>2</u> (B) Prevalence Index = B/A = <u>2.00</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Phalaris arundinacea</i>	100%	Yes	FACW	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	100%	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-221-wet

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text" value="na"/> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text" value="8"/> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text" value="Surface"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/14/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-222-upl
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): none
 Slope (%): 1% Lat: 41.18347 Long: -82.937354 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No _____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed?

Are "Normal Circumstances" present? Yes X No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>11%</u> (A/B)
1. <i>Quercus rubra</i>	60%	Yes	FACU	
2. <i>Quercus alba</i>	25%	Yes	FACU	
3. <i>Carya ovata</i>	25%	Yes	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
110% = Total Cover				

Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>7%</u> x2 = <u>0.14</u> FAC species <u>5%</u> x3 = <u>0.15</u> FACU species <u>157%</u> x4 = <u>6.28</u> UPL species <u>15%</u> x5 = <u>0.75</u> Column Totals: <u>1.84</u> (A) <u>7.32</u> (B) Prevalence Index = B/A = <u>3.98</u>
1. <i>Acer saccharum</i>	30%	Yes	FACU	
2. <i>Ribes cynosbati</i>	5%	No	FAC	
3. <i>Fraxinus pennsylvanica</i>	2%	No	FACW	
4. <i>Prunus avium</i>	2%	No	FACU	
5. <i>Quercus alba</i>	5%	No	FACU	
44% = Total Cover				

Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators: ____ 1-Rapid Test for Hydrophytic Vegetation ____ 2-Dominance Test is >50% ____ 3-Prevalence Index is ≤3.0 ¹ ____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Dicentra cucullaria</i>	5%	Yes	UPL	
2. <i>Erythronium americanum</i>	10%	Yes	UPL	
3. <i>Claytonia virginica</i>	5%	Yes	FACU	
4. <i>Cirsium arvense</i>	5%	Yes	FACU	
5. <i>Symphyotrichum lateriflorum</i>	5%	Yes	FACW	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
30% = Total Cover				

Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

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

SOIL

Sampling Point: woh-222-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	10yr 3/2	100					Silt Loam	
5-20"	10yr 4/2	95	10yr 4/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Sandusky Sampling Date: 4/14/2017
 Applicant/Owner: _____ State: OH Sampling Point: woh-222-wet
 Investigator(s): Ben Hess & Kaitlin Hillier Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Shoulder _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183581 Long: -82.937345 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer saccharinum</u>	80%	Yes	FACW		Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A) Total Number of Dominant Species Across All Strata: 7 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
2. <u>Quercus palustris</u>	30%	Yes	FACW	
3. _____				
4. _____				
5. _____				
	110%	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <u>Fraxinus pennsylvanica</u>	10%	Yes	FACW	
2. <u>Quercus palustris</u>	5%	Yes	FACW	Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>5%</u> x1 = <u>0.05</u> FACW species <u>140%</u> x2 = <u>2.8</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.45</u> (A) <u>2.85</u> (B) Prevalence Index = B/A = <u>1.97</u>
3. _____				
4. _____				
5. _____				
	15%	= Total Cover		
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cinna arundinacea</u>	10%	Yes	FACW	
2. <u>Carex grayi</u>	5%	Yes	FACW	
3. <u>Carex muskingumensis</u>	5%	Yes	OBL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
13. _____				
14. _____				
15. _____				
16. _____				
17. _____				
18. _____				
19. _____				
20. _____				
	20%	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____				
2. _____				
		= Total Cover		

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

SOIL

Sampling Point: woh-222-wet

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		
0-20"	10yr 4/1	90	10yr 4/4	10	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input 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"/> Gauge or Well Data (D9)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input checked="" type="checkbox"/> Surface Water Cracks (B6)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input checked="" type="checkbox"/> Geomorphic Position (D2)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

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): na	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): Surface	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): Surface	

(includes capillary fringe)

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-223-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183215 Long: -82.925602 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)		Absolute % Cover	Dominant Species?	Indicator Status	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>Acer saccharinum</u>		25%	Yes	FACW																			
2. <u>Carya laciniosa</u>		10%	Yes	FACW																			
3. _____																							
4. _____																							
5. _____																							
		35% = Total Cover																					
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)					Prevalence Index worksheet: <table border="1"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>That Are OBL, FACW, or FAC:</td> <td>A/B</td> </tr> <tr> <td>OBL species</td> <td>x1 =</td> </tr> <tr> <td>FACW species</td> <td>x2 =</td> </tr> <tr> <td>FAC species</td> <td>x3 =</td> </tr> <tr> <td>FACU species</td> <td>x4 =</td> </tr> <tr> <td>UPL species</td> <td>x5 =</td> </tr> <tr> <td>Column Totals:</td> <td><u>1.40</u> (A) <u>3.9</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.79</u></td> </tr> </table>	Total % Cover of:	Multiply by:	That Are OBL, FACW, or FAC:	A/B	OBL species	x1 =	FACW species	x2 =	FAC species	x3 =	FACU species	x4 =	UPL species	x5 =	Column Totals:	<u>1.40</u> (A) <u>3.9</u> (B)	Prevalence Index = B/A = <u>2.79</u>	
Total % Cover of:	Multiply by:																						
That Are OBL, FACW, or FAC:	A/B																						
OBL species	x1 =																						
FACW species	x2 =																						
FAC species	x3 =																						
FACU species	x4 =																						
UPL species	x5 =																						
Column Totals:	<u>1.40</u> (A) <u>3.9</u> (B)																						
Prevalence Index = B/A = <u>2.79</u>																							
1. <u>Celtis occidentalis</u>		15%	Yes	FAC																			
2. _____																							
3. _____																							
4. _____																							
5. _____																							
		15% = Total Cover																					
Herb Stratum (Plot size: <u>5' radius</u>)					Hydrophytic Vegetation Indicators: <u>1</u> -Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> -Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
1. <u>Toxicodendron radicans</u>		80%	Yes	FAC																			
2. <u>Galium aparine</u>		5%	No	FACU																			
3. <u>Symphyotrichum lanceolatum</u>		5%	No	FAC																			
4. _____																							
5. _____																							
6. _____																							
7. _____																							
8. _____																							
9. _____																							
10. _____																							
11. _____																							
12. _____																							
13. _____																							
14. _____																							
15. _____																							
16. _____																							
17. _____																							
18. _____																							
19. _____																							
20. _____																							
		90% = Total Cover																					
Woody Vine Stratum (Plot size: <u>30' radius</u>)					Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		
1. _____																							
2. _____																							
Remarks: (Include photo numbers here or on a separate sheet.)																							

SOIL

Sampling Point: woh-223-wet

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		
0-20"	10yr 5/2	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-224-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.18275 Long: -82.93554 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Acer negundo</u>	Absolute % Cover <u>25%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FAC</u>	Number of Dominant Species	
2. <u>Ulmus americana</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	That Are OBL, FACW, or FAC: <u>4</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>5</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
	<u>45%</u> = Total Cover			That Are OBL, FACW, or FAC: <u>80%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. <u>Ulmus americana</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of:	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>25%</u> x2 = <u>0.5</u>	
5. _____	_____	_____	_____	FAC species <u>45%</u> x3 = <u>1.35</u>	
	<u>5%</u> = Total Cover			FACU species <u>5%</u> x4 = <u>0.2</u>	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.75</u> (A) <u>2.05</u> (B)	
				Prevalence Index = B/A = <u>2.73</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Toxicodendron radicans</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	1-Rapid Test for Hydrophytic Vegetation	
2. <u>Galium aparine</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	<u>X</u> 2-Dominance Test is >50%	
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
	<u>25%</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
	_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-224-wet

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		
0-20"	10yr 5/2	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-225-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183463 Long: -82.935107 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		
Remarks:			

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Acer saccharinum</u>	Absolute % Cover <u>5%</u>	Dominant Species? <u>No</u>	Indicator Status <u>FACW</u>	Number of Dominant Species	
2. <u>Ulmus americana</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	That Are OBL, FACW, or FAC: <u>3</u> (A)	
3. <u>Populus deltoides</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5. _____	_____	_____	_____		
30% = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>35%</u> x2 = <u>0.7</u>	
5. _____	_____	_____	_____	FAC species <u>25%</u> x3 = <u>0.75</u>	
_____ = Total Cover				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.60</u> (A) <u>1.45</u> (B)	
				Prevalence Index = B/A = <u>2.42</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Toxicodendron radicans</u>	20%	Yes	FAC	1-Rapid Test for Hydrophytic Vegetation	
2. <u>Carex grayi</u>	10%	Yes	FACW	<u>X</u> 2-Dominance Test is >50%	
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
30% = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-225-wet

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		
0-20"	10yr 5/2	95	10yr 4/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>N/A</u>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>3"</u>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>Surface</u>		
(includes capillary fringe)				

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-227-upl
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.19049 Long: -82.967822 Datum: NAD83 UTM16N
 Soil Map Unit Name: Le NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks:			

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:			
	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species			
1. <i>Ostrya virginiana</i>	20%	Yes	FACU	That Are OBL, FACW, or FAC: <u>2</u> (A)			
2. <i>Fagus grandifolia</i>	20%	Yes	FACU	Total Number of Dominant Species Across All Strata: <u>8</u> (B)			
3. <i>Acer saccharum</i>	30%	Yes	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)			
4. _____	_____	_____	_____				
5. _____	_____	_____	_____				
	70%	= Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:			
				Total % Cover of: _____ Multiply by: _____			
1. <i>Fraxinus pennsylvanica</i>	10%	Yes	FACW	That Are OBL, FACW, or FAC: _____ A/B			
2. <i>Ostrya virginiana</i>	5%	No	FACU	OBL species _____ x1 = _____			
3. <i>Prunus serotina</i>	20%	Yes	FACU	FACW species <u>10%</u> x2 = <u>0.2</u>			
4. <i>Rosa multiflora</i>	10%	Yes	FACU	FAC species <u>60%</u> x3 = <u>1.8</u>			
5. _____	_____	_____	_____	FACU species <u>185%</u> x4 = <u>7.4</u>			
	45%	= Total Cover		UPL species <u>10%</u> x5 = <u>0.5</u>			
				Column Totals: <u>2.65</u> (A) <u>9.9</u> (B)			
Herb Stratum (Plot size: <u>5'</u> radius)				Prevalence Index = B/A = <u>3.74</u>			
				Hydrophytic Vegetation Indicators:			
1. <i>Geranium maculatum</i>	10%	No	FACU	_____ 1-Rapid Test for Hydrophytic Vegetation			
2. <i>Podophyllum peltatum</i>	50%	Yes	FACU	_____ 2-Dominance Test is >50%			
3. <i>Toxicodendron radicans</i>	40%	Yes	FAC	_____ 3-Prevalence Index is ≤3.0 ¹			
4. <i>Erythronium americanum</i>	10%	No	UPL	_____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
5. <i>Claytonia virginica</i>	10%	No	FACU	_____ Problematic Hydrophytic Vegetation ¹ (Explain)			
6. <i>Viola sororia</i>	10%	No	FAC				
7. <i>Alliaria petiolata</i>	10%	No	FAC				
8. <i>Galium aparine</i>	5%	No	FACU				
9. <i>Phlox divaricata</i>	5%	No	FACU				
10. _____	_____	_____	_____				
11. _____	_____	_____	_____				
12. _____	_____	_____	_____				
13. _____	_____	_____	_____				
14. _____	_____	_____	_____				
15. _____	_____	_____	_____				
16. _____	_____	_____	_____				
17. _____	_____	_____	_____				
18. _____	_____	_____	_____				
19. _____	_____	_____	_____				
20. _____	_____	_____	_____				
	150%	= Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>			
1. _____	_____	_____	_____				
2. _____	_____	_____	_____				
	_____	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)							

SOIL

Sampling Point: woh-227-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	10yr 4/2	100					Silt Loam	
5-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	N/A
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>18"
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>18"
(includes capillary fringe)			
Wetland Hydrology Present?		Yes	<input type="checkbox"/>
		No	<input checked="" type="checkbox"/>

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/25/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-227-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.190297 Long: -82.938148 Datum: NAD83 UTM16N
 Soil Map Unit Name: Le NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Acer saccharinum</u>	Absolute % Cover <u>75%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACW</u>	Number of Dominant Species	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>5</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>5</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
	<u>75%</u> = Total Cover			That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. <u>Fraxinus pennsylvanica</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of:	
2. <u>Acer saccharinum</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	That Are OBL, FACW, or FAC: <u>A/B</u>	
3. _____	_____	_____	_____	OBL species <u>60%</u> x1 = <u>0.6</u>	
4. _____	_____	_____	_____	FACW species <u>145%</u> x2 = <u>2.9</u>	
5. _____	_____	_____	_____	FAC species _____ x3 = _____	
	<u>25%</u> = Total Cover			FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>2.05</u> (A) <u>3.5</u> (B)	
				Prevalence Index = B/A = <u>1.71</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Carex muskingumensis</u>	<u>60%</u>	<u>Yes</u>	<u>OBL</u>	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. <u>Cinna arundinacea</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>	<u>X</u> 2-Dominance Test is >50%	
3. <u>Phalaris arundinacea</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
	<u>105%</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
	_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-227-wet

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		
0-20"	10yr 5/2	95	10yr 5/8	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<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"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): SurfaceWater Table Present? Yes ☒ No _____ Depth (inches): SurfaceSaturation Present? Yes ☒ No _____ Depth (inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-228-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.184619 Long: -82.937149 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. _____	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. _____				That Are OBL, FACW, or FAC: <u>3</u> (A)	
3. _____				Total Number of Dominant	
4. _____				Species Across All Strata: <u>3</u> (B)	
5. _____				Percent of Dominant Species	
= Total Cover				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____				Total % Cover of:	
2. _____				That Are OBL, FACW, or FAC: _____ A/B	
3. _____				OBL species <u>60%</u> x1 = <u>0.6</u>	
4. _____				FACW species <u>40%</u> x2 = <u>0.8</u>	
5. _____				FAC species _____ x3 = _____	
= Total Cover				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>1.00</u> (A) <u>1.4</u> (B)	
				Prevalence Index = B/A = <u>1.40</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <i>Phalaris arundinacea</i>	10%	No	FACW	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. <i>Carex vulpinoidea</i>	30%	Yes	FACW	<u>X</u> 2-Dominance Test is >50%	
3. <i>Scirpus atrovirens</i>	30%	Yes	OBL	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. <i>Carex frankii</i>	30%	Yes	OBL	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____				Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
100% = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____					
2. _____					
= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-228-wet

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		
0-20"	10yr 5/2	98	10yr 3/6	2	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

Project/Site:	Republic Wind		City/County:	Republic/Seneca		Sampling Date:	4/26/2017	
Applicant/Owner:	Apex Clean Energy		State:	OH	Sampling Point:	woh-229-wet		
Investigator(s):	BRH & TPM		Section, Township, Range:					
Landform (hillslope, terrace, etc.):			Summit			Local relief (concave, convex, none):		
Slope (%):			Lat:		41.185292	Long:		-82.934183
						Datum: NAD83 UTM16N		
Soil Map Unit Name:	Pa		NW1 classification:			none		

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

Hydrophytic Vegetation Present?	Yes <u> X </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>			
Remarks:					

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Populus deltoides</i>	50%	Yes	FAC
2. <i>Quercus palustris</i>	20%	Yes	FACW
3. <i>Ulmus americana</i>	10%	No	FACW
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	80%	= Total Cover	

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

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Lysimachia nummularia</i>	25%	Yes	FACW
2. <i>Toxicodendron radicans</i>	5%	No	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____
	30%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
	= 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:
That Are OBL, FACW, or FAC:	A/B
OBL species	x1 = _____
FACW species 55%	x2 = <u>1.1</u>
FAC species 55%	x3 = <u>1.65</u>
FACU species	x4 = _____
UPL species	x5 = _____
Column Totals: <u>1.10</u> (A)	<u>2.75</u> (B)
Prevalence Index = B/A = <u>2.50</u>	

Hydrophytic Vegetation Indicators:

1-Rapid Test for Hydrophytic Vegetation

☒ 2-Dominance Test is >50%

☒ 3-Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: woh-229-wet

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		
0-4"	10yr 3/2	90	10yr 3/6	10	C	M	Silt Loam	
4-20"	10yr 5/2	95	10yr 3/6	5	C	M	Silt Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.								

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-230-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.186024 Long: -82.933118 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. _____	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. _____				That Are OBL, FACW, or FAC: <u>2</u> (A)	
3. _____				Total Number of Dominant	
4. _____				Species Across All Strata: <u>3</u> (B)	
5. _____				Percent of Dominant Species	
			= Total Cover	That Are OBL, FACW, or FAC: <u>67%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____				Total % Cover of:	
2. _____				That Are OBL, FACW, or FAC: _____ A/B	
3. _____				OBL species _____ x1 = _____	
4. _____				FACW species <u>50%</u> x2 = <u>1</u>	
5. _____				FAC species <u>5%</u> x3 = <u>0.15</u>	
			= Total Cover	FACU species <u>30%</u> x4 = <u>1.2</u>	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.85</u> (A) <u>2.35</u> (B)	
				Prevalence Index = B/A = <u>2.76</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <i>Phalaris arundinacea</i>	20%	Yes	FACW	1-Rapid Test for Hydrophytic Vegetation	
2. <i>Schedonorus arundinaceus</i>	30%	Yes	FACU	<u>X</u> 2-Dominance Test is >50%	
3. <i>Lysimachia nummularia</i>	30%	Yes	FACW	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. <i>Symphotrichum lanceolatum</i>	5%	No	FAC	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____				Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
			85% = Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present?	
1. _____				Yes <u>X</u> No _____	
2. _____					
			= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-230-wet

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		
0-20"	10yr 5/2	97	10yr 5/4	3	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-231-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183427 Long: -82.931597 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Quercus palustris</i>	40%	Yes	FACW	Number of Dominant Species	
2. <i>Ulmus americana</i>	10%	No	FACW	That Are OBL, FACW, or FAC: <u>7</u> (A)	
3. <i>Acer saccharinum</i>	20%	Yes	FACW	Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5. _____					
	70%	= Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
				Total % Cover of: _____ Multiply by: _____	
1. <i>Carya laciniosa</i>	5%	Yes	FACW	That Are OBL, FACW, or FAC: _____ A/B	
2. <i>Fraxinus pennsylvanica</i>	5%	Yes	FACW	OBL species _____ x1 = _____	
3. <i>Ulmus americana</i>	10%	Yes	FACW	FACW species <u>110%</u> x2 = <u>2.2</u>	
4. _____				FAC species <u>10%</u> x3 = <u>0.3</u>	
5. _____				FACU species _____ x4 = _____	
	20%	= Total Cover		UPL species _____ x5 = _____	
				Column Totals: <u>1.20</u> (A) <u>2.5</u> (B)	
				Prevalence Index = B/A = <u>2.08</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
				<u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Lysimachia nummularia</i>	10%	Yes	FACW		
2. <i>Viola sororia</i>	5%	No	FAC		
3. <i>Carex seorsa</i>	10%	Yes	FACW		
4. <i>Toxicodendron radicans</i>	5%	No	FAC		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
	30%	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____					
2. _____					
		= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-231-wet

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		
0-20"	10yr 4/1	95	10yr 4/4	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-232-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183727 Long: -82.931307 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Populus deltoides</u>	Absolute % Cover <u>30%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)	
2. <u>Ulmus americana</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>60%</u> x2 = <u>1.2</u>	
5. _____	_____	_____	_____	FAC species <u>35%</u> x3 = <u>1.05</u>	
_____ = Total Cover				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.95</u> (A) <u>2.25</u> (B)	
				Prevalence Index = B/A = <u>2.37</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Lysimachia nummularia</u>	10%	Yes	FACW	1-Rapid Test for Hydrophytic Vegetation	
2. <u>Lysimachia ciliata</u>	10%	Yes	FACW	<u>X</u> 2-Dominance Test is >50%	
3. <u>Carex grayi</u>	10%	Yes	FACW	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. <u>Toxicodendron radicans</u>	5%	No	FAC	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
_____ = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-232-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-233-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.18422 Long: -82.931683 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Quercus palustris</u>	Absolute % Cover <u>25%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)	
2. <u>Acer saccharinum</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>95%</u> x2 = <u>1.9</u>	
5. _____	_____	_____	_____	FAC species <u>5%</u> x3 = <u>0.15</u>	
_____ = Total Cover				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>1.00</u> (A) <u>2.05</u> (B)	
				Prevalence Index = B/A = <u>2.05</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Lysimachia nummularia</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. <u>Lysimachia ciliata</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	<u>X</u> 2-Dominance Test is >50%	
3. <u>Cinna arundinacea</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. <u>Toxicodendron radicans</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
_____ = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-233-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): 3"	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): 3"		
Saturation Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): Surface		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-234-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.184822 Long: -82.931192 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Quercus palustris</u>	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. <u>Ulmus americana</u>	50%	Yes	FACW	That Are OBL, FACW, or FAC: <u>2</u> (A)	
3. _____	20%	Yes	FACW	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5. _____				Prevalence Index worksheet:	
70% = Total Cover				Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				OBL species _____ x1 = _____ FACW species <u>70%</u> x2 = <u>1.4</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.70</u> (A) <u>1.4</u> (B)	
1. _____				Prevalence Index = B/A = <u>2.00</u>	
2. _____				Hydrophytic Vegetation Indicators:	
3. _____				<u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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) _____	
4. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
= Total Cover					
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation	
1. _____				Present? Yes <u>X</u> No _____	
2. _____					
= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-234-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)	Depth (inches): <u>3"</u>		
	Depth (inches): <u>3"</u>		
	Depth (inches): <u>Surface</u>		

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-235-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.185663 Long: -82.931205 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Quercus palustris</i>	100%	Yes	FACW	Number of Dominant Species	
2. <i>Crataegus mollis</i>	20%	No	FAC	That Are OBL, FACW, or FAC: <u>1</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>1</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
	120% = Total Cover			That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>100%</u> x2 = <u>2</u>	
5. _____	_____	_____	_____	FAC species <u>20%</u> x3 = <u>0.6</u>	
	_____ = Total Cover			FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>1.20</u> (A) <u>2.6</u> (B)	
				Prevalence Index = B/A = <u>2.17</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. _____	_____	_____	_____	<u>X</u> 2-Dominance Test is >50%	
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
	_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
	_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-235-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)	Depth (inches): <u>3"</u>		
	Depth (inches): <u>3"</u>		
	Depth (inches): <u>Surface</u>		

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/26/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-236-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.18285 Long: -82.935076 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Acer negundo</u>	Absolute % Cover <u>80%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>30%</u> x2 = <u>0.6</u> FAC species <u>95%</u> x3 = <u>2.85</u> FACU species <u>12%</u> x4 = <u>0.48</u> UPL species _____ x5 = _____ Column Totals: <u>1.37</u> (A) <u>3.93</u> (B) Prevalence Index = B/A = <u>2.87</u>	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)					
1. <u>Acer negundo</u>	Absolute % Cover <u>15%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FAC</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Cinna arundinacea</u>	Absolute % Cover <u>25%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACW</u>		
2. <u>Impatiens capensis</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		
3. <u>Galium aparine</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
4. <u>Geum vernum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
5. <u>Parthenocissus quinquefolia</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-236-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	NA
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>18"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	4"
(includes capillary fringe)			

Wetland Hydrology Present?	
Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-237-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.182126 Long: -82.935874 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. _____	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. _____				That Are OBL, FACW, or FAC: <u>2</u> (A)	
3. _____				Total Number of Dominant	
4. _____				Species Across All Strata: <u>2</u> (B)	
5. _____				Percent of Dominant Species	
			= Total Cover	That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. <u>Cephalanthus occidentalis</u>	<u>35%</u>	<u>Yes</u>	<u>OBL</u>	Total % Cover of:	
2. _____				That Are OBL, FACW, or FAC: _____ A/B	
3. _____				OBL species <u>45%</u> x1 = <u>0.45</u>	
4. _____				FACW species _____ x2 = _____	
5. _____				FAC species _____ x3 = _____	
			= Total Cover	FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.45</u> (A) <u>0.45</u> (B)	
				Prevalence Index = B/A = <u>1.00</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Boehmeria cylindrica</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) _____	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
			= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____					
2. _____					
			= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-237-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	NA
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>18"
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>18"
(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:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-238-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.180766 Long: -82.929914 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)				Dominance Test worksheet:	
1. _____	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>3</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
= Total Cover				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)				Prevalence Index worksheet:	
1. <i>Fraxinus pennsylvanica</i>	20%	Yes	FACW	Total % Cover of:	
2. <i>Ulmus americana</i>	5%	Yes	FACW	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>65%</u> x2 = <u>1.3</u>	
5. _____	_____	_____	_____	FAC species <u>5%</u> x3 = <u>0.15</u>	
25% = Total Cover				FACU species <u>1%</u> x4 = <u>0.04</u>	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.71</u> (A) <u>1.49</u> (B)	
				Prevalence Index = B/A = <u>2.10</u>	
Herb Stratum (Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators:	
1. <i>Carex grayi</i>	40%	Yes	FACW	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. <i>Cryptotaenia canadensis</i>	5%	No	FAC	<u>X</u> 2-Dominance Test is >50%	
3. <i>Galium aparine</i>	1%	No	FACU	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
46% = Total Cover					
Woody Vine Stratum (Plot size: <u>30' radius</u>)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-238-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-239-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.182515 Long: -82.930083 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)				Dominance Test worksheet:	
1. <u>Acer saccharinum</u>	Absolute % Cover <u>90%</u>	Dominant Species? <u>Yes</u>	Indicator Status <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> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>150%</u> x2 = <u>3</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.50</u> (A) <u>3</u> (B) Prevalence Index = B/A = <u>2.00</u>	
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)					
1. <u>Fraxinus pennsylvanica</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>		
2. <u>Ulmus americana</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
Herb Stratum (Plot size: <u>5' radius</u>)					
1. <u>Carex grayi</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>		
2. <u>Packera glabella</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>		
3. <u>Phalaris arundinacea</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
Woody Vine Stratum (Plot size: <u>30' radius</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-239-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-240-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.183872 Long: -82.928867 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Quercus palustris</u>	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. _____	100%	Yes	FACW	That Are OBL, FACW, or FAC: <u>1</u> (A)	
3. _____				Total Number of Dominant	
4. _____				Species Across All Strata: <u>1</u> (B)	
5. _____	100% = Total Cover			Percent of Dominant Species	
				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____				Total % Cover of:	
2. _____				That Are OBL, FACW, or FAC: _____ A/B	
3. _____				OBL species _____ x1 = _____	
4. _____				FACW species <u>100%</u> x2 = <u>2</u>	
5. _____				FAC species _____ x3 = _____	
				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>1.00</u> (A) <u>2</u> (B)	
				Prevalence Index = B/A = <u>2.00</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. _____				<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. _____				<u>X</u> 2-Dominance Test is >50%	
3. _____				<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____				4-Morphological Adaptations ¹ (Provide supporting	
5. _____				data in Remarks or on a separate sheet)	
6. _____				Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____					
2. _____					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-240-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

Project/Site:	Republic Wind		City/County:	Republic/Seneca		Sampling Date:	4/27/2017		
Applicant/Owner:	Apex Clean Energy		State:	OH	Sampling Point:	woh-241-wet			
Investigator(s):	BRH & TPM		Section, Township, Range:						
Landform (hillslope, terrace, etc.):	Stream Terrace		Local relief (concave, convex, none): concave						
Slope (%):	Lat:	41.179476	Long:	-82.928928	Datum:				NAD83 UTM16N
Soil Map Unit Name:	Pa				NWI classification:	none			

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

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes <u> X </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>			
Remarks:					

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Quercus palustris</i>	10%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	10%	= Total Cover		

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

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Carex vulpinoidea</i>	20%	Yes	FACW	
2. <i>Lysimachia nummularia</i>	20%	Yes	FACW	
3. <i>Glyceria striata</i>	5%	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	45%	= Total Cover		

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
		= 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: That Are OBL, FACW, or FAC:	Multiply by:	A/B
OBL species <u>5%</u>	x1 =	<u>0.05</u>
FACW species <u>50%</u>	x2 =	<u>1</u>
FAC species _____	x3 =	_____
FACU species _____	x4 =	_____
UPL species _____	x5 =	_____
Column Totals: <u>0.55</u> (A)		<u>1.05</u> (B)

Prevalence Index = B/A = 1.91

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.

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: woh-241-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-242-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.178702 Long: -82.927917 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Acer saccharinum</u>	Absolute % Cover <u>85%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACW</u>	Number of Dominant Species	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>3</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
85% = Total Cover				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species <u>90%</u> x2 = <u>1.8</u>	
5. _____	_____	_____	_____	FAC species <u>15%</u> x3 = <u>0.45</u>	
_____ = Total Cover				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>1.05</u> (A) <u>2.25</u> (B)	
				Prevalence Index = B/A = <u>2.14</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Symphyotrichum lanceolatum</u>	15%	Yes	FAC	1-Rapid Test for Hydrophytic Vegetation	
2. <u>Carex vulpinoidea</u>	5%	Yes	FACW	<u>X</u> 2-Dominance Test is >50%	
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
20% = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-242-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input 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"/> Gauge or Well Data (D9)
	<input type="checkbox"/> Other (Explain in Remarks)

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/27/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-243-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.178926 Long: -82.932675 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. _____	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>2</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>2</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
= Total Cover				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species _____ x1 = _____	
4. _____	_____	_____	_____	FACW species _____ x2 = _____	
5. _____	_____	_____	_____	FAC species <u>75%</u> x3 = <u>2.25</u>	
= Total Cover				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.75</u> (A) <u>2.25</u> (B)	
				Prevalence Index = B/A = <u>3.00</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <i>Panicum virgatum</i>	25%	Yes	FAC	1-Rapid Test for Hydrophytic Vegetation	
2. <i>Symphyotrichum lanceolatum</i>	40%	Yes	FAC	<u>X</u> 2-Dominance Test is >50%	
3. <i>Juncus tenuis</i>	10%	No	FAC	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
75% = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-243-wet

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		
0-20"	10yr 4/1	95	10YR 4/4	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	NA
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>18"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Surface
(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:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/28/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-244-upl
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.17503 Long: -82.9602 Datum: NAD83 UTM16N
 Soil Map Unit Name: BtgA1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks:			

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:			
1. <i>Tilia americana</i>	Absolute % Cover <u>40%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACU</u>	Number of Dominant Species			
2. <i>Acer saccharum</i>	<u>60%</u>	<u>Yes</u>	<u>FACU</u>	That Are OBL, FACW, or FAC: <u>0</u> (A)			
3. <i>Quercus rubra</i>	<u>10%</u>	<u>No</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)			
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)			
5. _____	_____	_____	_____	Prevalence Index worksheet:			
110% = Total Cover				Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>5%</u> x2 = <u>0.1</u> FAC species _____ x3 = _____ FACU species <u>245%</u> x4 = <u>9.8</u> UPL species <u>15%</u> x5 = <u>0.75</u> Column Totals: <u>2.65</u> (A) <u>10.65</u> (B) Prevalence Index = B/A = <u>4.02</u>			
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Hydrophytic Vegetation Indicators:			
1. <i>Carya cordiformis</i>	<u>10%</u>	<u>No</u>	<u>FACU</u>	_____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)			
2. <i>Acer saccharum</i>	<u>60%</u>	<u>Yes</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
3. _____	_____	_____	_____				
4. _____	_____	_____	_____				
5. _____	_____	_____	_____				
70% = Total Cover							
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation			
1. <i>Claytonia virginica</i>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	Present? Yes _____ No <u>X</u>			
2. <i>Cardamine concatenata</i>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>				
3. <i>Galium aparine</i>	<u>5%</u>	<u>No</u>	<u>FACU</u>				
4. <i>Erythronium americanum</i>	<u>15%</u>	<u>Yes</u>	<u>UPL</u>				
5. <i>Acer saccharum</i>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>				
6. <i>Fraxinus pennsylvanica</i>	<u>5%</u>	<u>No</u>	<u>FACW</u>				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
9. _____	_____	_____	_____				
10. _____	_____	_____	_____				
11. _____	_____	_____	_____				
12. _____	_____	_____	_____				
13. _____	_____	_____	_____				
14. _____	_____	_____	_____				
15. _____	_____	_____	_____				
16. _____	_____	_____	_____				
17. _____	_____	_____	_____				
18. _____	_____	_____	_____				
19. _____	_____	_____	_____				
20. _____	_____	_____	_____				
85% = Total Cover							
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation			
1. _____	_____	_____	_____	Present? Yes _____ No <u>X</u>			
2. _____	_____	_____	_____				
_____ = Total Cover							
Remarks: (Include photo numbers here or on a separate sheet.)							

SOIL

Sampling Point: woh-244-upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10"	10yr 4/2	100					Silt Loam	
10-20"	10YR 6/3	100					Silty Clay Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.								

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Yes _____	No <input checked="" type="checkbox"/> X
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/28/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-244-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.174497 Long: -82.96016 Datum: NAD83 UTM16N
 Soil Map Unit Name: DmA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet:	
1. <u>Quercus palustris</u>	Absolute % Cover <u>10%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACW</u>	Number of Dominant Species	
2. <u>Ulmus americana</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>	That Are OBL, FACW, or FAC: <u>3</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)	
5. _____	<u>15%</u>	<u>= Total Cover</u>		Percent of Dominant Species	
				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species <u>50%</u> x1 = <u>0.5</u>	
4. _____	_____	_____	_____	FACW species <u>15%</u> x2 = <u>0.3</u>	
5. _____	_____	_____	_____	FAC species _____ x3 = _____	
<u>= Total Cover</u>				FACU species _____ x4 = _____	
				UPL species _____ x5 = _____	
				Column Totals: <u>0.65</u> (A) <u>0.8</u> (B)	
				Prevalence Index = B/A = <u>1.23</u>	
Herb Stratum (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators:	
1. <u>Carex frankii</u>	<u>45%</u>	<u>Yes</u>	<u>OBL</u>	<u>X</u> 1-Rapid Test for Hydrophytic Vegetation	
2. <u>Iris virginica</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	<u>X</u> 2-Dominance Test is >50%	
3. _____	_____	_____	_____	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. _____	_____	_____	_____	4-Morphological Adaptations ¹ (Provide supporting	
5. _____	_____	_____	_____	data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
<u>50%</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
<u>= Total Cover</u>					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-244-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/28/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-245-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.177195 Long: -82.96 Datum: NAD83 UTM16N
 Soil Map Unit Name: BlgA1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Quercus palustris</u>	60%	Yes	FACW	Number of Dominant Species	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>3</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
	60% = Total Cover			That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)				Prevalence Index worksheet:	
				Total % Cover of:	
1. <u>Cephalanthus occidentalis</u>	80%	Yes	OBL	That Are OBL, FACW, or FAC: _____ A/B	
2. _____	_____	_____	_____	OBL species <u>130%</u> x1 = <u>1.3</u>	
3. _____	_____	_____	_____	FACW species <u>60%</u> x2 = <u>1.2</u>	
4. _____	_____	_____	_____	FAC species _____ x3 = _____	
5. _____	_____	_____	_____	FACU species _____ x4 = _____	
	80% = Total Cover			UPL species _____ x5 = _____	
				Column Totals: <u>1.90</u> (A) <u>2.5</u> (B)	
				Prevalence Index = B/A = <u>1.32</u>	
Herb Stratum (Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators:	
				<u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)	
1. <u>Carex frankii</u>	50%	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
	50% = Total Cover				
Woody Vine Stratum (Plot size: <u>30' radius</u>)				Hydrophytic Vegetation	
1. _____	_____	_____	_____	Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
	_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-245-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____		
Saturation Present?	Yes <input checked="" type="checkbox"/> No _____		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic Wind City/County: Republic/Seneca Sampling Date: 4/28/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-246-wet
 Investigator(s): BRH & TPM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.167704 Long: -82.926987 Datum: NAD83 UTM16N
 Soil Map Unit Name: Bgl1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)				Dominance Test worksheet:	
1. <u>Quercus palustris</u>	Absolute % Cover <u>80%</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACW</u>	Number of Dominant Species	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>4</u> (A)	
3. _____	_____	_____	_____	Total Number of Dominant	
4. _____	_____	_____	_____	Species Across All Strata: <u>4</u> (B)	
5. _____	_____	_____	_____	Percent of Dominant Species	
	<u>80%</u> = Total Cover			That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)				Prevalence Index worksheet:	
1. <u>Rosa palustris</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	Total % Cover of:	
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: _____ A/B	
3. _____	_____	_____	_____	OBL species <u>20%</u> x1 = <u>0.2</u>	
4. _____	_____	_____	_____	FACW species <u>105%</u> x2 = <u>2.1</u>	
5. _____	_____	_____	_____	FAC species <u>10%</u> x3 = <u>0.3</u>	
	<u>20%</u> = Total Cover			FACU species <u>5%</u> x4 = <u>0.2</u>	
				UPL species _____ x5 = _____	
				Column Totals: <u>1.40</u> (A) <u>2.8</u> (B)	
				Prevalence Index = B/A = <u>2.00</u>	
Herb Stratum (Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators:	
1. <u>Viola sororia</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	1-Rapid Test for Hydrophytic Vegetation	
2. <u>Leersia virginica</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	<u>X</u> 2-Dominance Test is >50%	
3. <u>Impatiens capensis</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	<u>X</u> 3-Prevalence Index is ≤3.0 ¹	
4. <u>Galium aparine</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
13. _____	_____	_____	_____		
14. _____	_____	_____	_____		
15. _____	_____	_____	_____		
16. _____	_____	_____	_____		
17. _____	_____	_____	_____		
18. _____	_____	_____	_____		
19. _____	_____	_____	_____		
20. _____	_____	_____	_____		
	<u>40%</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30' radius</u>)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
	_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: woh-246-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silt Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.								

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

Remarks:

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"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Gauge or Well Data (D9)
	<input type="checkbox"/> Other (Explain in Remarks)

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-247-upk
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.1649 Long: -82.9275 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus palustris</i>	40%	Yes	FACW	Number of Dominant Species
2. <i>Tilia americana</i>	20%	Yes	FACU	That Are OBL, FACW, or FAC: <u>3</u> (A)
3. <i>Prunus avium</i>	20%	Yes	FACU	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	80% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)				Prevalence Index worksheet:
1. <i>Prunus avium</i>	10%	Yes	FACU	Total % Cover of: _____ Multiply by: _____
2. <i>Tilia americana</i>	10%	Yes	FACU	That Are OBL, FACW, or FAC: <u>43%</u> (A/B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	20% = Total Cover			

<u>Herb Stratum</u> (Plot size: 5' radius)				Prevalence Index worksheet:
1. <i>Cornus racemosa</i>	30%	Yes	FAC	Total % Cover of: _____ Multiply by: _____
2. <i>Toxicodendron radicans</i>	50%	Yes	FAC	That Are OBL, FACW, or FAC: _____ A/B
3. <i>Galium aparine</i>	20%	No	FACU	OBL species _____ x1 = _____
4. <i>Geum vernum</i>	10%	No	FACU	FACW species <u>40%</u> x2 = <u>0.8</u>
5. <i>Rumex crispus</i>	5%	No	FAC	FAC species <u>100%</u> x3 = <u>3</u>
6. <i>Symphytotrichum lanceolatum</i>	10%	No	FAC	FACU species <u>90%</u> x4 = <u>3.6</u>
7. <i>Geum canadense</i>	5%	No	FAC	UPL species _____ x5 = _____
8. _____	_____	_____	_____	Column Totals: <u>2.30</u> (A) <u>7.4</u> (B)
9. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.22</u>
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	130% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)				Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-247-upk

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		
0-20"	10yr 4/2	100					Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u> X </u>	Depth (inches): <u> N/A </u>	Wetland Hydrology Present? Yes _____ No <u> X </u>
Water Table Present?	Yes _____ No <u> X </u>	Depth (inches): <u> >18" </u>	
Saturation Present?	Yes _____ No <u> X </u>	Depth (inches): <u> >18" </u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-247-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.164799 Long: -82.926031 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)				Dominance Test worksheet:			
	Absolute % Cover	Dominant Species?	Indicator Status				
1. <i>Quercus palustris</i>	90%	Yes	FACW	Number of Dominant Species			
2. <i>Tilia americana</i>	5%	No	FACU	That Are OBL, FACW, or FAC: <u>3</u> (A)			
3. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)			
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)			
5. _____							
95% = Total Cover							
Sapling/Shrub Stratum (Plot size: 15' radius)							
1. _____							
2. _____							
3. _____							
4. _____							
5. _____							
				Prevalence Index worksheet:			
				Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B			
				OBL species _____ x1 = _____ FACW species <u>150%</u> x2 = <u>3</u> FAC species <u>40%</u> x3 = <u>1.2</u> FACU species <u>10%</u> x4 = <u>0.4</u> UPL species _____ x5 = _____ Column Totals: <u>2.00</u> (A) <u>4.6</u> (B)			
				Prevalence Index = B/A = <u>2.30</u>			
Herb Stratum (Plot size: 5' radius)							
1. <i>Elymus virginicus</i>	60%	Yes	FACW				
2. <i>Toxicodendron radicans</i>	40%	Yes	FAC				
3. <i>Galium aparine</i>	5%	No	FACU				
4. _____							
5. _____							
6. _____							
7. _____							
8. _____							
9. _____							
10. _____							
11. _____							
12. _____							
13. _____							
14. _____							
15. _____							
16. _____							
17. _____							
18. _____							
19. _____							
20. _____							
105% = Total Cover							
Woody Vine Stratum (Plot size: 30' radius)							
1. _____							
2. _____							
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____			

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

SOIL

Sampling Point: woh-247-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	N/A
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	3"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Surface
(includes capillary fringe)			

Wetland Hydrology Present?	
Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-248-upl
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.16004 Long: -82.9265 Datum: NAD83 UTM16N
 Soil Map Unit Name: DmA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species <u>5%</u> x3 = <u>0.15</u> FACU species <u>105%</u> x4 = <u>4.2</u> UPL species <u>15%</u> x5 = <u>0.75</u> Column Totals: <u>1.25</u> (A) <u>5.1</u> (B) Prevalence Index = B/A = <u>4.08</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Lonicera maackii</i>	5%	No	UPL	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Rosa multiflora</i>	10%	No	FACU	
3. <i>Rubus occidentalis</i>	10%	No	UPL	
4. <i>Dactylis glomerata</i>	20%	No	FACU	
5. <i>Schedonorus arundinaceus</i>	50%	Yes	FACU	
6. <i>Solidago altissima</i>	25%	Yes	FACU	
7. <i>Poa pratensis</i>	5%	No	FAC	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
125% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-248-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.160285 Long: -82.928318 Datum: NAD83 UTM16N
 Soil Map Unit Name: DmA NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <u>Sambucus nigra</u>	10%	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
10% = Total Cover				
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators:
1. <u>Phalaris arundinacea</u>	40%	Yes	FACW	
2. <u>Carex vulpinoidea</u>	50%	Yes	FACW	
3. <u>Elymus virginicus</u>	20%	No	FACW	
4. <u>Cirsium arvense</u>	5%	No	FACU	
5. <u>Ulmus americana</u>	5%	No	FACW	
6. <u>Symphytotrichum lanceolatum</u>	10%	No	FAC	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
130% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-250-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.154625 Long: -82.92384 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>5%</u> x1 = <u>0.05</u> FACW species <u>55%</u> x2 = <u>1.1</u> FAC species <u>30%</u> x3 = <u>0.9</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.90</u> (A) <u>2.05</u> (B) Prevalence Index = B/A = <u>2.28</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Phalaris arundinacea</i>	5%	No	FACW	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>Carex vulpinoidea</i>	50%	Yes	FACW	
3. <i>Juncus effusus</i>	5%	No	OBL	
4. <i>Cornus racemosa</i>	5%	No	FAC	
5. <i>Barbarea vulgaris</i>	5%	No	FAC	
6. <i>Symphytotrichum lanceolatum</i>	20%	Yes	FAC	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
90% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-250-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

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"/>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-251-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.15388 Long: -82.924978 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>30%</u> x1 = <u>0.3</u> FACW species <u>15%</u> x2 = <u>0.3</u> FAC species <u>30%</u> x3 = <u>0.9</u> FACU species <u>20%</u> x4 = <u>0.8</u> UPL species _____ x5 = _____ Column Totals: <u>0.95</u> (A) <u>2.3</u> (B) Prevalence Index = B/A = <u>2.42</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Schedonorus arundinaceus</i>	20%	Yes	FACU	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Carex frankii</i>	20%	Yes	OBL	
3. <i>Juncus effusus</i>	10%	No	OBL	
4. <i>Phalaris arundinacea</i>	15%	Yes	FACW	
5. <i>Poa pratensis</i>	15%	Yes	FAC	
6. <i>Symphytotrichum lanceolatum</i>	15%	Yes	FAC	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
95% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-251-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :	Test Indicators of Hydric Soils:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

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"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-252-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.155971 Long: -82.925997 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>60%</u> x1 = <u>0.6</u> FACW species <u>30%</u> x2 = <u>0.6</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.90</u> (A) <u>1.2</u> (B) Prevalence Index = B/A = <u>1.33</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Scirpus atrovirens</i>	10%	No	OBL	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Euthamia graminifolia</i>	5%	No	FACW	
3. <i>Juncus effusus</i>	50%	Yes	OBL	
4. <i>Phalaris arundinacea</i>	25%	Yes	FACW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
90% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
= Total Cover				

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

SOIL

Sampling Point: woh-252-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	No	<input type="checkbox"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

Project/Site:	Republic		City/County:	Republic/Seneca		Sampling Date:	5/10/2017	
Applicant/Owner:	Apex Clean Energy		State:	OH	Sampling Point:	woh-253-wet		
Investigator(s):	Ben Hess & Dave Glista		Section, Township, Range:					
Landform (hillslope, terrace, etc.):	Bankslope		Local relief (concave, convex, none): concave					
Slope (%):	2%	Lat:	41.158551	Long:	-82.926246	Datum:	NAD83 UTM16N	
Soil Map Unit Name: Blg1B1						NWI classification:	none	

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

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes <u> X </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>			
Remarks:					

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Quercus palustris</i>	90%	Yes	FACW
2.				
3.				
4.				
5.				
		90%	= Total Cover	

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

Herb Stratum (Plot size: 5' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Symphotrichum lanceolatum</i>	2%	No	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
		2%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
			= 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:
That Are OBL, FACW, or FAC:	A/B
OBL species	x1 =
FACW species	x2 =
FAC species	x3 =
FACU species	x4 =
UPL species	x5 =
Column Totals:	
0.92 (A)	1.86 (B)

Prevalence Index = B/A = 2.02

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Midwest Region (Updated 20170221)

SOIL

Sampling Point: woh-253-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	N/A
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	3"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Surface
(includes capillary fringe)			
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-254-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): 2% Lat: 41.154505 Long: -82.928498 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <i>Quercus palustris</i>		90%	Yes	FACW	
2. <i>Quercus bicolor</i>		15%	No	FACW	
3. _____					
4. _____					
5. _____					
		105%	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)					Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>110%</u> x2 = <u>2.2</u> FAC species <u>30%</u> x3 = <u>0.9</u> FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>1.40</u> (A) <u>3.1</u> (B) Prevalence Index = B/A = <u>2.21</u>
1. <i>Cornus racemosa</i>		30%	Yes	FAC	
2. <i>Quercus palustris</i>		5%	No	FACW	
3. _____					
4. _____					
5. _____					
		35%	= Total Cover		
Herb Stratum (Plot size: 5' radius)					Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
13. _____					
14. _____					
15. _____					
16. _____					
17. _____					
18. _____					
19. _____					
20. _____					
			= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)					Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____					
2. _____					
			= Total Cover		

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

SOIL

Sampling Point: woh-254-wet

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		
0-20"	10yr 5/2	95	10yr 5/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	N/A
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	3"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Surface
(includes capillary fringe)			
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-255-upl
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 41.168259 Long: -82.947398 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1A1 NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No _____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed?

Are "Normal Circumstances" present? Yes X No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus palustris</i>	30%	Yes	FACW	
2. <i>Carya ovata</i>	10%	No	FACU	
3. <i>Quercus rubra</i>	25%	Yes	FACU	
4. <i>Fagus grandifolia</i>	10%	No	FACU	
5. <i>Ostrya virginiana</i>	10%	No	FACU	
85% = Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius)				Prevalence Index worksheet:
1. <i>Viburnum prunifolium</i>	50%	Yes	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
50% = Total Cover				
Herb Stratum (Plot size: 5' radius)				Hydrophytic Vegetation Indicators:
1. <i>Carex blanda</i>	30%	Yes	FAC	
2. <i>Leersia virginica</i>	10%	Yes	FACW	
3. <i>Carex frankii</i>	5%	No	OBL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
13. _____				
14. _____				
15. _____				
16. _____				
17. _____				
18. _____				
19. _____				
20. _____				
45% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-255-upl

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		
0-4"	10yr 3/1	100					Silt Loam	
4-20"	10yr 7/3						Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u> X </u>	Depth (inches): <u> N/A </u>	Wetland Hydrology Present? Yes _____ No <u> X </u>
Water Table Present?	Yes _____ No <u> X </u>	Depth (inches): <u> >18" </u>	
Saturation Present?	Yes _____ No <u> X </u>	Depth (inches): <u> >18" </u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-255-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Summit _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.168209 Long: -82.947152 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____		
Wetland Hydrology Present?	Yes <u>X</u>	No _____		

Remarks: _____

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus palustris</i>	90%	Yes	FACW	Number of Dominant Species
2. <i>Quercus bicolor</i>	15%	No	FACW	That Are OBL, FACW, or FAC: <u>6</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
4. _____	_____	_____	_____	Percent of Dominant Species
5. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
	105% = Total Cover			

<u>Sapling/Shrub Stratum</u> (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <i>Fraxinus pennsylvanica</i>	5%	No	FACW	Total % Cover of: _____ Multiply by: _____
2. <i>Toxicodendron radicans</i>	20%	Yes	FAC	That Are OBL, FACW, or FAC: _____ A/B
3. <i>Quercus palustris</i>	50%	Yes	FACW	OBL species <u>75%</u> x1 = <u>0.75</u>
4. _____	_____	_____	_____	FACW species <u>165%</u> x2 = <u>3.3</u>
5. _____	_____	_____	_____	FAC species <u>45%</u> x3 = <u>1.35</u>
	75% = Total Cover			FACU species _____ x4 = _____
				UPL species _____ x5 = _____
				Column Totals: <u>2.85</u> (A) <u>5.4</u> (B)
				Prevalence Index = B/A = <u>1.89</u>

<u>Herb Stratum</u> (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>Carex tribuloides</i>	50%	Yes	OBL	1-Rapid Test for Hydrophytic Vegetation
2. <i>Toxicodendron radicans</i>	25%	Yes	FAC	<u>X</u> 2-Dominance Test is >50%
3. <i>Galium tinctorium</i>	25%	Yes	OBL	<u>X</u> 3-Prevalence Index is ≤3.0 ¹
4. <i>Phalaris arundinacea</i>	5%	No	FACW	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	105% = Total Cover			

<u>Woody Vine Stratum</u> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes <u>X</u> No _____
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-255-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	10yr 3/1	100					Mucky Loam	
5-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Hydric Soil Present?	Yes	No
	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:		Wetland Hydrology Present?	Yes	No
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
(includes capillary fringe)				

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-256-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Summit _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.167434 Long: -82.946612 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Quercus palustris</i>	60%	Yes	FACW		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)
2. <i>Quercus bicolor</i>	20%	No	FACW	
3. <i>Acer rubrum</i>	70%	Yes	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
150% = Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species <u>10%</u> x1 = <u>0.1</u> FACW species <u>80%</u> x2 = <u>1.6</u> FAC species <u>70%</u> x3 = <u>2.1</u> FACU species <u>5%</u> x4 = <u>0.2</u> UPL species _____ x5 = _____ Column Totals: <u>1.65</u> (A) <u>4</u> (B) Prevalence Index = B/A = <u>2.42</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Carex gracillima</i>	5%	Yes	FACU	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Carex tribuloides</i>	10%	Yes	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
15% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-256-wet

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		
0-20"	10yr 5/2	95	10yr 5/6	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	N/A
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	3"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Surface
(includes capillary fringe)			

Wetland Hydrology Present?	
Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-257-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Summit _____ Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.168069 Long: -82.943913 Datum: NAD83 UTM16N
 Soil Map Unit Name: Pa NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	70%	Yes	FAC		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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
70% = Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>127%</u> x2 = <u>2.54</u> FAC species <u>75%</u> x3 = <u>2.25</u> FACU species <u>10%</u> x4 = <u>0.4</u> UPL species _____ x5 = _____ Column Totals: <u>2.12</u> (A) <u>5.19</u> (B) Prevalence Index = B/A = <u>2.45</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <u>Cinna arundinacea</u>	60%	Yes	FACW	Hydrophytic Vegetation Indicators: <u>1</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ <u>4</u> 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>Persicaria maculosa</u>	25%	Yes	FACW	
3. <u>Leersia virginica</u>	25%	Yes	FACW	
4. <u>Floerkea proserpinacoides</u>	10%	No	FACW	
5. <u>Viola sororia</u>	5%	No	FAC	
6. <u>Impatiens capensis</u>	2%	No	FACW	
7. <u>Packera glabella</u>	5%	No	FACW	
8. <u>Galium aparine</u>	2%	No	FACU	
9. <u>Phlox divaricata</u>	2%	No	FACU	
10. <u>Geum vernum</u>	3%	No	FACU	
11. <u>Allium canadense</u>	3%	No	FACU	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
142% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-257-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10yr 3/1	100					Silt Loam	
5-20"	10yr 6/1	95	10yr 6/4	5	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Hydric Soil Present? Yes ☒ No ☐

Remarks:

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 type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	N/A
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	8"
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Surface
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-259-upl
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): none
 Slope (%): 15% Lat: 41.1477 Long: -82.943105 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>Prunus avium</i>	30%	Yes	FACU	Number of Dominant Species
2. <i>Ulmus americana</i>	20%	Yes	FACW	That Are OBL, FACW, or FAC: <u>2</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
5. _____	_____	_____	_____	
	50% = Total Cover			

Sapling/Shrub Stratum (Plot size: 15' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <i>Rosa multiflora</i>	20%	Yes	FACU	Total % Cover of: _____ Multiply by: _____
2. <i>Crataegus crus-galli</i>	10%	Yes	FAC	That Are OBL, FACW, or FAC: _____ A/B
3. _____	_____	_____	_____	OBL species _____ x1 = _____
4. _____	_____	_____	_____	FACW species <u>20%</u> x2 = <u>0.4</u>
5. _____	_____	_____	_____	FAC species <u>30%</u> x3 = <u>0.9</u>
	30% = Total Cover			FACU species <u>175%</u> x4 = <u>7</u>
				UPL species _____ x5 = _____
				Column Totals: <u>2.25</u> (A) <u>8.3</u> (B)
				Prevalence Index = B/A = <u>3.69</u>

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>Dactylis glomerata</i>	90%	Yes	FACU	1-Rapid Test for Hydrophytic Vegetation
2. <i>Rubus allegheniensis</i>	20%	No	FACU	2-Dominance Test is >50%
3. <i>Alliaria petiolata</i>	20%	No	FAC	3-Prevalence Index is ≤3.0 ¹
4. <i>Taraxacum officinale</i>	5%	No	FACU	4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <i>Parthenocissus quinquefolia</i>	10%	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
	145% = Total Cover			

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
	_____ = Total Cover			

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

SOIL

Sampling Point: woh-259-upl

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		
0-20"	10yr 5/2	100					Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u> X </u>	Depth (inches):	<u> N/A </u>
Water Table Present?	Yes _____ No <u> X </u>	Depth (inches):	<u> >18" </u>
Saturation Present?	Yes _____ No <u> X </u>	Depth (inches):	<u> >18" </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:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/10/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-259-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.147721 Long: -82.943012 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: PEM1C

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>50%</u> x2 = <u>1</u> FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: <u>0.50</u> (A) <u>1</u> (B) Prevalence Index = B/A = <u>2.00</u>
2. _____				
3. _____				
4. _____				
5. _____				
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Phalaris arundinacea</i>	20%	Yes	FACW	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Persicaria maculosa</i>	30%	Yes	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
13. _____				
14. _____				
15. _____				
16. _____				
17. _____				
18. _____				
19. _____				
20. _____				
50% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____				
= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: woh-259-wet

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		
0-20"	10yr 5/2	90	10yr 3/6	10	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)			

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

Remarks:

Project/Site:	Republic		City/County:	Republic/Seneca		Sampling Date:	5/11/2017	
Applicant/Owner:	Apex Clean Energy		State:	OH	Sampling Point:	woh-260-upl		
Investigator(s):	Ben Hess & Dave Glista		Section, Township, Range:					
Landform (hillslope, terrace, etc.):	Summit		Local relief (concave, convex, none): convex					
Slope (%):			Lat:	41.154211		Long:	-82.954523	
Soil Map Unit Name:	Blg1B1				Datum:	NAD83 UTM16N		
						NWI classification:	none	

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

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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>			
Wetland Hydrology Present?	Yes <u> </u>	No <u> X </u>			
Remarks:					

Tree Stratum (Plot size: 30' radius)				Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>Quercus rubra</i>			20%	No	FACU	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)	
2. <i>Carya ovata</i>			20%	No	FACU			
3. <i>Prunus avium</i>			60%	Yes	FACU			
4. <i>Prunus serotina</i>			10%	No	FACU			
5. _____								
			110%	= Total Cover				

Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Prunus avium</i>	20%	Yes	FACU
2.	<i>Crataegus crus-galli</i>	5%	Yes	FAC
3.				
4.				
5.				
		25%	= Total Cover	

Herb Stratum	(Plot size: 5' radius)			
1. <i>Elymus virginicus</i>	5%	No	FACW	
2. <i>Arctium minus</i>	2%	No	FACU	
3. <i>Alliaria petiolata</i>	5%	No	FAC	
4. <i>Fragaria virginiana</i>	35%	Yes	FACU	
5. <i>Erythronium americanum</i>	15%	No	UPL	
6. <i>Podophyllum peltatum</i>	30%	Yes	FACU	
7. <i>Rubus occidentalis</i>	15%	No	UPL	
8. <i>Galium aparine</i>	5%	No	FACU	
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
	112%	= Total Cover		

Woody Vine Stratum (Plot size: 30' radius)				
1.				
2.				
				= 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:
That Are OBL, FACW, or FAC:	A/B
OBL species	x1 =
FACW species 5%	x2 = 0.1
FAC species 10%	x3 = 0.3
FACU species 202%	x4 = 8.08
UPL species 30%	x5 = 1.5
Column Totals: 2.47 (A)	9.98 (B)
Prevalence Index = B/A = 4.04	

- _____ 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.

Hydrophytic Vegetation Present?	Yes	No	X
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SOIL

Sampling Point: woh-260-upl

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		
0-20"	10yr 5/3	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators ³ :		Test Indicators of Hydric Soils:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes _____ No <u> X </u>	Depth (inches):	<u> N/A </u>
Water Table Present?	Yes _____ No <u> X </u>	Depth (inches):	<u> >18" </u>
Saturation Present?	Yes _____ No <u> X </u>	Depth (inches):	<u> >18" </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:			

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Republic City/County: Republic/Seneca Sampling Date: 5/11/2017
 Applicant/Owner: Apex Clean Energy State: OH Sampling Point: woh-260-wet
 Investigator(s): Ben Hess & Dave Glista Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 41.154216 Long: -82.955003 Datum: NAD83 UTM16N
 Soil Map Unit Name: Blg1B1 NWI classification: none

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: 15' radius) _____				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ That Are OBL, FACW, or FAC: _____ A/B OBL species _____ x1 = _____ FACW species <u>90%</u> x2 = <u>1.8</u> FAC species <u>7%</u> x3 = <u>0.21</u> FACU species <u>10%</u> x4 = <u>0.4</u> UPL species _____ x5 = _____ Column Totals: <u>1.07</u> (A) <u>2.41</u> (B) Prevalence Index = B/A = <u>2.25</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' radius) _____				
1. <i>Phalaris arundinacea</i>	90%	Yes	FACW	Hydrophytic Vegetation Indicators: <u>X</u> 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 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. <i>Barbarea vulgaris</i>	2%	No	FAC	
3. <i>Solidago altissima</i>	10%	No	FACU	
4. <i>Geum canadense</i>	5%	No	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
107% = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) _____				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				

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

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in

Case No(s). 17-2295-EL-BGN

Summary: Application Exhibit F Appendix H - Part 10 of 14 electronically filed by Teresa Orahod on behalf of Sally W. Bloomfield