# APPENDIX A: USACE WETLAND DETERMINATION DATA FORMS

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/17/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A1
Investigator(s): JMM KMP	Section, Township, Range:	T1N R17E S12	
Landform (hillslope, terrace, etc.): Slope	Local relief (cond	ave, convex, none):	Concave
Slope (%): 2-4 Lat: 41.056935	Long: <u>-82.846773</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes (Ble1B1)	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks:				
Cowardin: PEM				

True Strature (Blat size: 30'	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> ) 1 Juglans nigra	<u>% Cover</u> 5	Species? X	FACU	Number of Dominant Species
				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
	-	= Total Co	ver	
Sapling/Shrub Stratum (Plot size: 15' )		rotar oo		Prevalence Index worksheet:
1. Rosa multiflora	5	Х	FACU	Total % Cover of: Multiply by:
2.		-		OBL species 0 x 1 = 0
				FACW species 90 x 2 = 180
3				FAC species $10$ $x_3 = 30$
4				
5				
5'		= Total Co	ver	UPL species $0$ x 5 = $0$
Herb Stratum (Plot size: 5')	05	V		Column Totals: <u>110</u> (A) <u>250</u> (B)
1. Phalaris arundinacea	65	<u>X</u>	FACW	2.07
2. Polygonum pensylvanicum	25	<u> </u>	FACW	Prevalence Index = B/A =
3. Vernonia gigantea	10		FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
15'	100	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 15' )				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	ver	Present? Yes <u>No</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			

	latrix		Redox Feature				
inches) Color (m				Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
16 <u>10YR 4/2</u>	90	7.5YR 5/6	10	<u> </u>	<u>M</u>	SIL	
rpe: C=Concentration, dric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4 Stratified Layers (A5) 2 cm Muck (A10)	)	\$ \$ L L	atrix, MS=Maske Sandy Gleyed M Sandy Redox (S Stripped Matrix ( Loamy Mucky M Loamy Gleyed N Depleted Matrix	latrix (S4) 5) S6) ineral (F1) latrix (F2)		Indicators for Coast Pra Dark Surf Iron-Mang Very Shal	PL=Pore Lining, M=Matrix. <b>r Problematic Hydric Soils<sup>3</sup>:</b> airie Redox (A16) face (S7) ganese Masses (F12) llow Dark Surface (TF12) kplain in Remarks)
Depleted Below Dark Thick Dark Surface (/ Sandy Mucky Minera 5 cm Mucky Peat or I	A12) I (S1) Peat (S3)	) F C	Redox Dark Sur Depleted Dark S Redox Depressio	face (F6) urface (F7	)	wetland h	hydrophytic vegetation and ydrology must be present, sturbed or problematic.
	erved):						
estrictive Layer (if obs						Hydric Soil Pr	resent? Yes <u>×</u> No
estrictive Layer (if obs						Hydric Soil Pr	resent? Yes X No
estrictive Layer (if obs Type: Depth (inches): emarks:						Hydric Soil Pr	resent? Yes <u>X</u> No
Estrictive Layer (if obs Type: Depth (inches): emarks: TOROLOGY						Hydric Soil Pr	resent? Yes <u>X</u> No
estrictive Layer (if obs Type: Depth (inches): emarks: //DROLOGY /etland Hydrology Indi	cators:		that apply)				resent? Yes <u>X</u> No Indicators (minimum of two require
Estrictive Layer (if obs Type: Depth (inches): emarks: DROLOGY etland Hydrology Indi	cators: um of one is r	equired: check all Wa Aqu Tru Hyo Oxi	that apply) ter-Stained Lea uatic Fauna (B1 e Aquatic Plants drogen Sulfide C idized Rhizosph esence of Reduc	3) s (B14) Odor (C1) eres on Liv		Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat	
	cators: um of one is r ?) 32) 4) Aerial Imager	equired: check all Wa Aqu Tru Hyo Oxi Pre Rec Thi y (B7) Gar	ter-Stained Lea uatic Fauna (B1 le Aquatic Plant drogen Sulfide C idized Rhizosph	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surface</u> <u>Drainag</u> Dry-Se <u>Crayfis</u> (C3) <u>Saturat</u> <u>Stunted</u> 6) <u>X</u> Geomo	Indicators (minimum of two requin e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) eh Burrows (C8) tion Visible on Aerial Imagery (C9
Estrictive Layer (if obs Type: Depth (inches): Emarks: TOROLOGY etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C Eld Observations:	cators: um of one is r 2) 32) 4) Aerial Imager Concave Surfa	equired: check all Wa Aqu Tru Hyc Oxi Pre Rec Thi y (B7) Gai ce (B8) Oth	ter-Stained Lea uatic Fauna (B1 de Aquatic Plants drogen Sulfide C dized Rhizosph esence of Reduc cent Iron Reduc n Muck Surface uge or Well Data her (Explain in R	3) s (B14) Odor (C1) eres on Liv eed Iron (C- tion in Tille (C7) a (D9) eemarks)	4) d Soils (Ce	<u>Secondary</u> <u>Surface</u> <u>Drainag</u> Dry-Se <u>Crayfis</u> (C3) <u>Saturat</u> <u>Stunted</u> 6) <u>X</u> Geomo	Indicators (minimum of two requin e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 d or Stressed Plants (D1) orphic Position (D2)
estrictive Layer (if obs Type: Depth (inches): emarks:	cators: um of one is r 2) 32) 4) Aerial Imager Concave Surfa	equired: check all Wa Aqu Tru Hyc Oxi Pre Rec Thi y (B7) Gar ce (B8) Oth	ter-Stained Lea uatic Fauna (B1 le Aquatic Plant drogen Sulfide C idized Rhizosph esence of Reduc cent Iron Reduc n Muck Surface uge or Well Dat her (Explain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (Co	<u>Secondary</u> <u>Surface</u> <u>Drainag</u> Dry-Se <u>Crayfis</u> (C3) <u>Saturat</u> <u>Stunted</u> 6) <u>X</u> Geomo	Indicators (minimum of two requin e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 d or Stressed Plants (D1) orphic Position (D2)
astrictive Layer (if obs Type: Depth (inches): emarks: TOROLOGY atland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Nater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C eld Observations: urface Water Present? fater Table Present? aturation Present?	cators: um of one is r 2) 32) 4) Aerial Imager Concave Surfa Yes Yes	equired: check all Wa Aqu Tru Hyc Oxi Pre Rec Thi y (B7) Gai ce (B8) Oth	ter-Stained Lea uatic Fauna (B1 e Aquatic Plants drogen Sulfide C idized Rhizosph sence of Reduc cent Iron Reduc n Muck Surface uge or Well Data ner (Explain in R epth (inches):	3) s (B14) Odor (C1) eres on Liv eres on Liv eres on Liv tion in Tille (C7) a (D9) emarks)	4) d Soils (Cd	Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted 6) X Geomo X FAC-No	Indicators (minimum of two requin e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 d or Stressed Plants (D1) orphic Position (D2)
estrictive Layer (if obs Type: Depth (inches): emarks: //DROLOGY /etland Hydrology Indi rimary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B1) Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on	cators: um of one is r 2) 32) 4) Aerial Imager 20 4) Yes Yes Yes	equired: check all Wa Aqu Tru Hyo Oxi Pre Rec Rec Thi y (B7) Gai ce (B8) Oth No _X De No _X De No _X De	ter-Stained Lea uatic Fauna (B1 e Aquatic Plants drogen Sulfide C idized Rhizosph esence of Reduc cent Iron Reduc n Muck Surface uge or Well Data ner (Explain in R epth (inches): epth (inches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (Co	Secondary Surface Drainag Dry-Se Crayfis (C3) Sturted Sturted 50 X Geomo X FAC-No Nand Hydrology P	Indicators (minimum of two requines e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/17/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A1-UP
Investigator(s): JMM KMP	Section, Township, Range:	T1N R17E S12	
Landform (hillslope, terrace, etc.): Flat	Local relief (conc	ave, convex, none):	Convex
Slope (%): 0-3 Lat: 41.057015°	Long: <u>-82.846392°</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 percent	ent slopes (Ble1B1)	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NO X NO X NO X	Is the Sampled Area within a Wetland?	Yes	_ No_X
Remarks: Upland sample plot					

\_\_\_\_\_

Absolute	Dominan	t Indicator	Dominance Test worksheet:
% Cover	Species?	Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: _0 (A)
			Total Number of Dominant
			Species Across All Strata:(B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		wor	
	- 10(a) 00	VCI	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
			FACU species x 4 =
	- Total Ca		UPL species x 5 =
	- Total Co	ver	·
90	Х	UPL	Column Totals: (A) (B)
10		FACU	Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
100	= Total Co	ver	be present, unless disturbed or problematic.
			Hydrophytic
			Vegetation
			Present? Yes No X
	90 10 10 100	= Total Co	= Total Cover

Depth	Matrix		Redo	k Features			
(inches)	Color (moist)	%	Color (moist)	%Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 4/4	100				SIL	
	Concentration, D=Deple	etion, RM=Re	duced Matrix, MS	=Masked Sand Gra	ains.		re Lining, M=Matrix.
Histoso Histic E Histic E Histic E Hydroge Stratifie C cm Me Deplete Thick D Sandy M 5 cm Me	pipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) uck (A10) ed Below Dark Surface oark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S3)		Sandy R Stripped Loamy N Loamy C Depleted Redox D Depleted	Sleyed Matrix (S4) Redox (S5) Matrix (S6) Mucky Mineral (F1) Sleyed Matrix (F2) d Matrix (F3) Dark Surface (F6) d Dark Surface (F7) Depressions (F8)		Coast Prairie R Dark Surface (S Loron-Manganes Very Shallow D Other (Explain)  Indicators of hydro wetland hydrolo	67) e Masses (F12) Park Surface (TF12)
Restrictive	Layer (if observed):		-			Hydric Soil Present	? Yes No
	iches):						
	nches):						
Depth (in Remarks:	DGY						
Depth (in Remarks: YDROLC Wetland Hy	OGY vdrology Indicators:		check all that an			Secondary India	ators (minimum of two required
Depth (in Remarks: YDROLC Wetland Hy Primary Indi	OGY /drology Indicators: icators (minimum of or	ne is required:					
Depth (in Remarks: YDROLC Wetland Hy Primary Indi Surface	OGY vdrology Indicators:	ne is required;		ned Leaves (B9)		<u>Secondary Indica</u> Surface Soil Drainage Pa	

\_\_\_\_ Hydrogen Sulfide Odor (C1)

\_\_\_\_ Thin Muck Surface (C7)

\_\_\_ Gauge or Well Data (D9)

Presence of Reduced Iron (C4)

\_\_\_\_ Recent Iron Reduction in Tilled Soils (C6)

_	Dry-Season	vvater	able	

- \_\_\_ Crayfish Burrows (C8)
- \_\_\_\_ Oxidized Rhizospheres on Living Roots (C3) \_\_\_\_ 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 _>	Depth (inches):				
Water Table Present?	Yes	No _>	Depth (inches):				
Saturation Present?	Yes	No _>	Depth (inches):	Wetland Hydrology Present?	Yes	No	<u>×</u>
(includes capillary fringe)							

Remarks:

\_\_\_ Water Marks (B1)

\_\_\_ Drift Deposits (B3)

\_\_\_ Iron Deposits (B5)

\_\_\_ Algal Mat or Crust (B4)

\_ Sediment Deposits (B2)

\_\_\_ Inundation Visible on Aerial Imagery (B7)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A4
Investigator(s): JMM KMP	Section, Township, Range:	T2N R17E S32	
Landform (hillslope, terrace, etc.): Slope	Local relief (cond	ave, convex, none):	Concave
	Long: <u>-82.929647</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes (Ble1B1)	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: _1 (A)
2				Total Number of Dominant
3				Species Across All Strata: _2(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size: 15' )		rotar oo		Prevalence Index worksheet:
1. Rosa multiflora	5	Х	FACU	Total % Cover of:Multiply by:
2.				OBL species 0 x 1 = 0
3				EACW species $90$ $x_2 = 180$
				FAC species $5$ $x_3 = 15$
4				FACU species $5$ $x = 20$
5			·	
Herb Stratum (Plot size: 5' )	5	= Total Co	ver	
1 Phalaris arundinacea	75	х	FACW	Column Totals: <u>100</u> (A) <u>215</u> (B)
2. Solidago gigantea	15		FACW	Prevalence Index = B/A = _2.15
3. Symphyotrichum lanceolatum	- 15		FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
	95	= Total Co		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- 101ai 00	VEI	be present, unless disturbed or problematic.
1				Undrandurtia
2.				Hydrophytic Vegetation
£		= Total Co		Present? Yes X No
Remarks: (Include photo numbers here or on a separate		- Total Co	ver	
Tremaines. (include proto numbers here of on a separate	sneet.)			

epth nches)	Color (moist)	%	Color (moist)	ox Feature	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
-8	10YR 5/2	95	7.5YR 5/6	5	<u>C</u>	M/PL	SIL	
16	10YR 4/2	90	7.5YR 5/6	10	<u> </u>	M/PL	SICL	
	ncentration, D=De	pletion, RN	I=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	Gleved M	atrix (S4)			irie Redox (A16)
	pipedon (A2)			Redox (S			Dark Surfa	
Black His	stic (A3)		Strippe	d Matrix (	S6)		Iron-Mang	anese Masses (F12)
Hydroge	n Sulfide (A4)				ineral (F1)			ow Dark Surface (TF12)
	Layers (A5)		Loamy	Gleyed N	latrix (F2)		Other (Exp	olain in Remarks)
2 cm Mu		(111)	X Deplete					
	l Below Dark Surfa Irk Surface (A12)	ce (A11)		Dark Surf	ace (F6) urface (F7	,	<sup>3</sup> Indicators of I	hydrophytic vegetation and
	lucky Mineral (S1)			Depressio		)		drology must be present,
	cky Peat or Peat (S	53)						turbed or problematic.
trictive L	ayer (if observed	):						
		<i>.</i>						
_							Under Call Day	
Туре:	ches):						Hydric Soil Pre	esent? Yes X No
Type: Depth (inc							Hydric Soil Pre	esent? Yes X No
Type: Depth (inc marks:	shes):						Hydric Soil Pre	esent? Yes <u>X</u> No
Type: Depth (inc marks:	shes):						Hydric Soil Pre	esent? Yes <u>X</u> No
Type: Depth (inc marks: DROLO tland Hyc	ches): GY Irology Indicators		uired; check all that a					esent? Yes X No
Type: Depth (inc marks: DROLO tland Hyc mary Indic Surface	GY frology Indicators ators (minimum of Water (A1)		Water-Sta	ained Lea			<u>Secondary I</u> Surface	ndicators (minimum of two requi Soil Cracks (B6)
Type: Depth (inc marks: DROLO tland Hyc mary Indic Surface <sup>V</sup> High Wa	GY GY drology Indicators ators (minimum of Water (A1) ter Table (A2)		Water-Sta Aquatic F	ained Lear auna (B13	3)		Secondary I <u>Surface</u> <u>X</u> Drainag	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10)
Type: Depth (inc marks: DROLOO tland Hyc mary Indic Surface <sup>1</sup> High Wa Saturatic	GY GY drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3)		Water-Sta Aquatic F True Aqua	ained Lea auna (B13 atic Plants	3) s (B14)		Secondary I Surface X Drainag Dry-Sea	ndicators (minimum of two requi Soil Cracks (B6) ie Patterns (B10) ason Water Table (C2)
Type: Depth (inc marks: DROLOO tland Hyc mary Indic Surface <sup>1</sup> High Wa Saturatic Water M	GY GY Irology Indicators rators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B13 atic Plants Sulfide C	3) s (B14) )dor (C1)		Secondary I Surface X Drainag Dry-Sea Crayfish	ndicators (minimum of two requi Soil Cracks (B6) le Patterns (B10) ason Water Table (C2) n Burrows (C8)
Type: Depth (inc marks: DROLOO tland Hyc mary Indic Surface V High Wa Saturatic Water M Sedimen	GY frology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen X Oxidized	ained Lea auna (B13 atic Plants Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv	•	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (CS
Type: Depth (inc marks: DROLOO tland Hyc mary Indic Surface V High Wa Saturatic Water M Sedimen Drift Dep	GY drology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosphi of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4	4)	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1)
Type: Depth (inc marks: DROLOO tland Hyc Surface V High Wa Saturatic Water Ma Sedimen Drift Dep Algal Ma	GY drology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3) t or Crust (B4)		Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In	ained Lear auna (B13 atic Plants Sulfide C Rhizospho of Reduction Reduction	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) X Geomod	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc marks: DROLOO tland Hyc Saturatic Water Mi Sedimen Drift Dep Algal Ma Iron Dep	GY drology Indicators sators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) nosits (B3) t or Crust (B4) osits (B5)	: one is requ	Water-Sta     Aquatic F     True Aquat     Hydrogen     X Oxidized     Presence     Recent Iro     Thin Mucl	ained Lean auna (B13 atic Plants Sulfide C Rhizosphi of Reduct on Reduct & Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7)	4)	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) X Geomod	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1)
Type: Depth (inc narks: DROLOO tland Hyc nary Indic Surface V High Wa Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic	GY frology Indicators rators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial	: one is requ Imagery (I	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Iro     Thin Mucl 37) _ Gauge or	ained Lean auna (B13 atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) X Geomod	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (CS or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc marks: DROLOO tland Hyc mary Indic Surface 1 High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY drology Indicators rators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) nosits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav	: one is requ Imagery (I	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Ira     Thin Mucl 37) Gauge or	ained Lean auna (B13 atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) X Geomod	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc marks: DROLOO tiland Hyc mary Indic Surface 1 Surface 1 Guidan Hyc mary Indic Surface 1 Surface 1 Guidan Hyc Mater M Saturatic Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY frology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations:	: one is required Imagery (I re Surface	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Ird Thin Much 37) Gauge or (B8) Other (Ex	ained Lean auna (B1) atic Plants Sulfide C Rhizosphe of Reduct on Reduct on Reduct k Surface Well Data plain in R	3) bdor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) X Geomod	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc marks: DROLOO etland Hyc mary Indic Surface V High Wa Saturatic Water M Saturatic Water M Saturatic Water M Saturatic High Wa Saturatic Saturatic Sedimen Inundatic Sparsely Eld Observ rface Wate	GY frology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present?	: one is requ Imagery (I re Surface Yes	Water-Sta Aquatic F Aquatic F Aquatic F Hydrogen X Oxidized Presence Recent Irr Recent Irr (B8) Other (Ex No X Depth (ir	ained Lean auna (B1) atic Plants Sulfide C Rhizosphe of Reduct on Reduct k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary I Surface X Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) X Geomod	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc marks: DROLOO tland Hyc mary Indic Surface 1 Surface 1 Surface 1 Guiden Ma Saturatic Water M Saturatic Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY drology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present? Present?	Imagery (I ve Surface Yes Yes	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Ird Thin Much 37) Gauge or (B8) Other (Ex	ained Lean auna (B1) atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R	3) bdor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary I          Surface         X       Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       X         Geomon         X         FAC-Ne	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)

City/County: Seneca		Sampling Date: 9/19/2018
		Sampling Point: W-A4/5-UP
Section, Township, Range:	T2N R17E S32	
		Convex
Long: <u>-82.929816°</u>		Datum: NAD 83
ent slopes (Ble1B1)	NWI classific	ation: <u>N/A</u>
ear? Yes X No	(If no, explain in R	emarks.)
disturbed? Are "Norm	al Circumstances" p	resent? Yes No X
oblematic? (If needed	, explain any answe	rs in Remarks.)
	Section, Township, Range: Local relief (conc Long: <u>-82.929816°</u> ent slopes (Ble1B1) ear? Yes X No disturbed? Are "Norm	State: OH Section, Township, Range: <u>T2N R17E S32</u> Local relief (concave, convex, none): Long: <u>-82.929816°</u> ent slopes (Ble1B1) NWI classific ear? Yes <u>No</u> (If no, explain in R disturbed? Are "Normal Circumstances" p

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NO X NO X NO X	Is the Sampled Area within a Wetland?	Yes	. №_ <u>×</u> _
Remarks: Upland sample plot					

\_\_\_\_\_

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species	? Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				
5				Percent of Dominant Species That Are OBL_EACW_or_EAC: 0 (A/B)
		= Total Co		That Are OBL, FACW, or FAC: 0 (A/B)
Sapling/Shrub Stratum (Plot size:)			Jver	Prevalence Index worksheet:
1,				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	over	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Glycine max	80	Х	UPL	
2. Setaria faberi	10		FACU	Prevalence Index = B/A =
3. Echinochloa crus-galli	10		FACW	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7.				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
	100	= Total Co		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		10tal 0t		be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		= Total Co		Present? Yes No X
		$= 10 a \cup c$		

nches) Color (m	<u>Matrix</u> oist) %	Color (moist)	x Features % Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
-12 10YR 5/4					SIL
ype: C=Concentration,	D=Depletion, RM=	Reduced Matrix, M	S=Masked Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
, _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4		Sandy I Stripped Loamy	Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Mucky Mineral (F1)		<ul> <li>Coast Prairie Redox (A16)</li> <li>Dark Surface (S7)</li> <li>Iron-Manganese Masses (F12)</li> <li>Very Shallow Dark Surface (TF12)</li> </ul>
Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Thick Dark Surface ( Sandy Mucky Minera 5 cm Mucky Peat or	: Surface (A11) A12) I (S1)	Deplete Redox I Deplete	Gleyed Matrix (F2) d Matrix (F3) Dark Surface (F6) d Dark Surface (F7) Depressions (F8)		Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
estrictive Layer (if obs Type: Depth (inches):					Hydric Soil Present? Yes No _
Remarks:					
YDROLOGY Wetland Hydrology Indi	cators:				
Primary Indicators (minim	um of one is require	ed; check all that ap	oply)		Secondary Indicators (minimum of two re
Surface Water (A1)		Water-Sta	ined Leaves (B9)		Surface Soil Cracks (B6)

 Surface	Soil	Cracks	(B6)	

- \_\_\_ Drainage Patterns (B10)
- \_\_\_ Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- \_\_\_\_ Oxidized Rhizospheres on Living Roots (C3) \_\_\_\_ Saturation Visible on Aerial Imagery (C9)
  - \_\_\_\_ Stunted or Stressed Plants (D1)
  - \_\_\_ Geomorphic Position (D2)
  - \_\_\_\_ FAC-Neutral Test (D5)

#### \_\_\_ Drift Deposits (B3) Presence of Reduced Iron (C4) \_\_\_\_ Algal Mat or Crust (B4) \_\_\_\_ Recent Iron Reduction in Tilled Soils (C6) \_\_\_ Iron Deposits (B5) \_\_\_\_ Thin Muck Surface (C7) \_\_\_\_ Inundation Visible on Aerial Imagery (B7) \_\_\_ Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Yes \_\_\_\_\_ No X Depth (inches): \_\_\_ Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_ Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_ Wetland Hydrology Present? Yes \_\_\_\_\_ No \_\_\_\_ Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

\_\_\_\_ Aquatic Fauna (B13)

\_\_\_\_ True Aquatic Plants (B14)

\_\_\_\_ Hydrogen Sulfide Odor (C1)

Remarks:

\_\_\_\_ High Water Table (A2)

\_\_\_ Sediment Deposits (B2)

\_\_\_\_ Saturation (A3)

\_\_\_ Water Marks (B1)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A5
Investigator(s): JMM KMP	Section, Township, Range:	T2N R17E S32	
Landform (hillslope, terrace, etc.): Slope	Local relief (conc	ave, convex, none):	Concave
Slope (%): 0-5 Lat: 41.090003	Long: -82.927616		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes (Ble1B1)	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	, explain any answei	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

#### **VEGETATION** – Use scientific names of plants.

	Absolute		Indicator	Dominance Test worksheet	:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC	c: <u>2</u>	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	3	(B)
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC	670/	(A/B)
451		= Total Co	ver			
Sapling/Shrub Stratum (Plot size: 15' )				Prevalence Index workshee	et:	
1. Rubus occidentalis	5	<u>X</u>	FACU	Total % Cover of:	Multiply by:	-
2				OBL species	x 1 =	_
3				FACW species	x 2 =	_
4				FAC species	x 3 =	_
5				FACU species	x 4 =	_
	5	= Total Co	ver	UPL species	x 5 =	
Herb Stratum (Plot size: 5' )				Column Totals:		_
1. Phalaris arundinacea	55	<u>X</u>	FACW			_ (-/
2. Scirpus atrovirens	10		OBL	Prevalence Index = B/A	7 =	_
3. Symphyotrichum lanceolatum	5		FAC	Hydrophytic Vegetation Ind	icators:	
4. Carex scoparia	5		FACW	1 - Rapid Test for Hydrop	ohytic Vegetation	
5. Juncus tenius	20	Х	FAC	X 2 - Dominance Test is >5	50%	
6. Daucus carota	5		UPL	3 - Prevalence Index is ≤	3.0 <sup>1</sup>	
7				4 - Morphological Adapta	ations <sup>1</sup> (Provide sup	porting
8				data in Remarks or or	a separate sheet)	
				Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	n)
9						
10	100	= Total Co		<sup>1</sup> Indicators of hydric soil and		nust
Woody Vine Stratum (Plot size:)		= Total Co	ver	be present, unless disturbed	or problematic.	
1,				Hydrophytic		
2.				Vegetation	,	
		= Total Co	ver	Present? Yes X	No	
Remarks: (Include photo numbers here or on a separate						
,	,					

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 3/2	100					SIL	
2-8	10YR 5/2	80	7.5YR 4/6	10	С	M/PL	CL	
	7.5Y 5/6	10						
8-16	10YR 5/2	70	7.5YR 4/6	15	С	M/PL	C	
	7.5Y 5/6	15						
		oletion, RI	M=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil								r Problematic Hydric Soils <sup>3</sup> :
Histosol				-	atrix (S4)			airie Redox (A16)
	pipedon (A2)			Redox (S	,		Dark Surf	
	istic (A3) en Sulfide (A4)			d Matrix (				ganese Masses (F12)
_ , •	d Layers (A5)				ineral (F1) latrix (F2)			llow Dark Surface (TF12) plain in Remarks)
	uck (A10)		77	ed Matrix				
	d Below Dark Surfac	e (A11)		Dark Surf				
	ark Surface (A12)				urface (F7	)	<sup>3</sup> Indicators of	hydrophytic vegetation and
	Aucky Mineral (S1)			Depressio		, 		ydrology must be present,
5 cm Mi	ucky Peat or Peat (S	3)					unless dis	sturbed or problematic.
	Layer (if observed)	:						
	Layer (if observed)	:						
Restrictive		:					Hydric Soil Pr	esent? Yes X No
Restrictive Type: Depth (in		:					Hydric Soil Pr	esent? Yes X No
Restrictive Type: Depth (in	ches):	:					Hydric Soil Pr	esent? Yes X No
Restrictive Type: Depth (in Remarks:	ches):						Hydric Soil Pr	esent? Yes X No
Restrictive Type: Depth (in Remarks:	ches): DGY drology Indicators		uired: check all that a	pply)				esent? Yes X No Indicators (minimum of two required)
Restrictive Type: Depth (in Remarks:	ches): DGY drology Indicators		uired: check all that a Water-Sta		ves (B9)		<u>Secondary</u> Surface	
Restrictive Type: Depth (in Remarks:	ches): PGY drology Indicators cators (minimum of c			ained Lea			<u>Secondary</u>	Indicators (minimum of two required)
Restrictive Type: Depth (in Remarks:	ches): DGY drology Indicators cators (minimum of of Water (A1) ater Table (A2)		Water-Sta	ained Lea auna (B1	3)		<u>Secondary</u> Surface X Drainag	Indicators (minimum of two required) e Soil Cracks (B6)
Restrictive Type: Depth (in Remarks:  TYDROLO Wetland Hy Primary India Surface High Wa Saturati	ches): DGY drology Indicators cators (minimum of of Water (A1) ater Table (A2)		Water-Sta Aquatic F True Aqu Hydrogen	ained Lea auna (B1) atic Plants Sulfide C	3) s (B14) Ddor (C1)		<u>Secondary</u> Surface X Drainag Dry-Se Crayfis	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10)
	Ches): OGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqu	ained Lea auna (B1) atic Plants Sulfide C	3) s (B14) Ddor (C1)	ring Roots	Secondary Surface X Drainag Dry-Se Crayfis	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2)
Restrictive Type: Depth (in Remarks: TyDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedime	Ches): PGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydrogen X Oxidized	ained Lea auna (B1) atic Plants Sulfide C Rhizosph	3) s (B14) Ddor (C1)		Secondary Surface XDrainag Dry-Se Crayfis (C3)Saturat	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) ch Burrows (C8)
Restrictive Type: Depth (in Remarks:  TyDROLO  TyDROLO  TyDROLO  Retland Hy Primary India Surface High Wa Saturati Water M Sedimei Drift De	ches): GGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv	4)	<u>Secondary</u> <u>Surface</u> <u>X</u> Drainag <u>Dry-Se</u> <u>Crayfis</u> (C3) <u>Sturfac</u>	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9)
Restrictive Type: Depth (in Remarks:  TYDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedime C Drift De Algal Ma	ches): GGY drology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduction Reduction	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille	4)	<u>Secondary</u> <u>Surface</u> <u>X</u> Drainag Dry-Se <u>Crayfis</u> (C3) <u>Sturted</u> 5) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Restrictive Type: Depth (in Remarks:  TYDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedimei Drift De Algal Ma Iron Dep	ches): GGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	: one is req	Water-Sta     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7)	4)	<u>Secondary</u> <u>Surface</u> <u>X</u> Drainag Dry-Se <u>Crayfis</u> (C3) <u>Sturted</u> 5) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Restrictive Type: Depth (in Remarks:  TYDROLO Vetland Hy Primary India C Surface C High Wa Saturati Water M Sedime C Drift De Algal Ma Iron De Inundati Sparsel	ches): GGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav	: one is req Imagery (	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) _ Gauge or	ained Lea auna (B1) atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data	3) s (B14) Odor (C1) eres on Liv red Iron (C- tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surface</u> <u>X</u> Drainag Dry-Se <u>Crayfis</u> (C3) <u>Sturted</u> 5) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Restrictive Type: Depth (in Remarks:  TYDROLO  TYDROLO  TYDROLO  Wetland Hy Primary IndiaSurfaceHigh WaSaturatiWater MSedimeDrift DeAlgal MaIron DeInundatiSparsel  Field Obser	ches): drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations:	inagery (	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge or     (B8) Other (Ex	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc on Reduc k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) eemarks)	4) d Soils (C	<u>Secondary</u> <u>Surface</u> <u>X</u> Drainag Dry-Se <u>Crayfis</u> (C3) <u>Sturted</u> 5) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Restrictive Type: Depth (in Remarks:  TYDROLO  TyDR	ches): GGY drology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations: ter Present?	: one is req Imagery ( e Surface /es	Water-Sta Aquatic F Aquatic F Hydrogen X Oxidized Presence Recent In Thin Muc B7) Gauge or (B8) Other (Ex No X Depth (ir	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc bn Reduc k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	<u>Secondary</u> <u>Surface</u> <u>X</u> Drainag Dry-Se <u>Crayfis</u> (C3) <u>Sturted</u> 5) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Restrictive Type: Depth (in Remarks:  TYDROLO  TYDROLO  TYDROLO  Wetland Hy Primary IndiaSurfaceHigh WaSaturatiWater MSedimeDrift DeAlgal MaIron DeInundatiSparsel  Field Obser	ches): GGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations: ter Present?	Imagery ( e Surface /es	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge or     (B8) Other (Ex	ained Lea auna (B1 atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv eres on Liv eres on Liv tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary          Surface         X         Drainag         Dry-Se         Crayfis         (C3)         Sturted         Sturted         K         Geomo         X         FAC-N	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)

Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date:	9/27/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point:	W-A36
Investigator(s): JMM KMP	Section, Township, Range:	T1N R17E S5		
Landform (hillslope, terrace, etc.): Terrace	Local relief (conc	ave, convex, none):	Concave	
Slope (%): 0 Lat: <u>41.078587</u>	Long: <u>-82.926929</u>		Datum: NAD 8	3
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Norm	nal Circumstances" p	resent? Yes $\geq$	<no< td=""></no<>
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed	, explain any answei	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks: Cowardin: PEM				

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: _1 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
··		= Total Co	wor	That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- 10tai 00	vei	Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
				FACW species x 2 =
3				FAC species x 2 =
4			·	
5				FACU species x 4 =
Hart Otrature (Distaires 5'		= Total Co	ver	UPL species x 5 =
<u>Herb Stratum</u> (Plot size: <u>5</u> ') 1. Phalaris arundinacea	90	х	FACW	Column Totals: (A) (B)
2. Apocynum cannabinum				Developed Index - D/A -
	_ 5		FAC	Prevalence Index = B/A =
3. Dipsacus fullonum	_ <u>5</u>		FACU	Hydrophytic Vegetation Indicators:
4				X 1 - Rapid Test for Hydrophytic Vegetation
5				$\underline{X}$ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9			·	
10	400			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 5' )	100	= Total Co	ver	be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	Matrix	0/		ox Featur		12	- Tautura Damada
(inches)	Color (moist)	%	Color (moist)	%_	_ Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u> Remarks
0-8	10YR 4/2	95	7.5YR 5/6	_ 5	C	M	
8-16	10YR 4/2	90	7.5YR 5/6	10	_ <u>C</u>	<u>M</u>	
		epletion, RI	M=Reduced Matrix, N	/S=Maske	ed Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Histoso Histic I Black I Hydrog Stratifi 2 cm M Deplet Thick I Sandy 5 cm M	il Indicators: ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10) ted Below Dark Surfa Dark Surface (A12) Mucky Mineral (S1) Mucky Peat or Peat (	S3)	Sandy Stripp Loamy Loamy X Deplet Redox Deplet	Redox (S ed Matrix ( Mucky M Gleyed M red Matrix Dark Sur	(S6) lineral (F1) Matrix (F2) (F3) face (F6) Surface (F7	)	Indicators for Problematic Hydric Soils <sup>3</sup> : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Type: _	e Layer (if observed	1):					Hydric Soil Present? Yes X No
Remarks:							
YDROL	OGY						
Wetland H	ydrology Indicator	s:					
		f one is req	uired; check all that a	apply)			Secondary Indicators (minimum of two requir
	e Water (A1)		Water-St	ained Lea	ives (B9)		Surface Soil Cracks (B6)
X High V	Vater Table (A2)		Aquatic F	auna (B1	3)		Drainage Patterns (B10)
	tion (A3)		True Aqu	atic Plant	s (B14)		Dry-Season Water Table (C2)
X Satura							
	Marks (B1)		Hydroge	n Sulfide (	Odor (C1)		Crayfish Burrows (C8)
Water	Marks (B1) ent Deposits (B2)				Odor (C1) ieres on Liv	ving Roots	
Water Sedim			Oxidized	Rhizosph		•	
Water Sedim Drift D	ent Deposits (B2)		Oxidized Presence	Rhizosph e of Reduc	eres on Liv	4)	ts (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)

Inundation Visible on A	erial Imagery (B7)	_ Gauge or Well Data (D9)		
Sparsely Vegetated Co	ncave Surface (B8)	Other (Explain in Remarks)		
Field Observations:				
Surface Water Present?	Yes 🗶 No 🔜	Depth (inches): 2		
Water Table Present?	Yes 🗶 No 🔜	Depth (inches): 0		
Saturation Present? (includes capillary fringe)	Yes X No	Depth (inches): 0	Wetland Hydrology Present? Yes X N	No
Describe Recorded Data (st	ream gauge, monitoring	g well, aerial photos, previous	inspections), if available:	
Demedies				
Remarks:				

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/2	20/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-	
Investigator(s): JMM KMP	Section, Township, Range:	T1N R17E S5		
Landform (hillslope, terrace, etc.): Flat field		cave, convex, none):	Convex	
	Long: -82.926923		Datum: NAD 83	
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norn	nal Circumstances" p	resent? Yes X	_ No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answei	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	sampling point locat	tions, transects	, important feat	ures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No_X
Remarks: Upland sample plot					

20'	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> )	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Number of Dominant Species
1		That Are OBL, FACW, or FAC: _0(A)
2		Total Number of Dominant
3		Species Across All Strata: 1 (B)
4		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: 0% (A/B)
15'	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' )		Prevalence Index worksheet:
1		Total % Cover of: Multiply by:
2		OBL species x 1 =
3		FACW species x 2 =
4		FAC species x 3 =
5		FACU species x 4 =
E'	= Total Cover	UPL species x 5 =
Herb Stratum (Plot size: 5' )		Column Totals: (A) (B)
1. Glycine max	<u>100 X UPL</u>	
2		Prevalence Index = B/A =
3		Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0 <sup>1</sup>
7.		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9		
10		1
Woody Vine Stratum (Plot size: 5')	100 = Total Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1)		
		Hydrophytic Vegetation
2	= Total Cover	Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate	sheet.)	

0-12       10YR 4/4       100       SIL         Image: Single Sin	Depth (inchor)	<u>Matrix</u> Color (moist)	%	<u></u>	Toxture	Remarks
Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils?         Histosce (A1)	0-12					Remarks
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histic Epipedon (A2)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron-Manganese Masses (F12)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Gieyed Matrix (F2)       Other (Explain in Remarks)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         3 andy Mucky Mineral (S1)       Redox Dark Surface (F6)       Thick Dark Surface (A12)       Depleted Dark Surface (F7) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         estrictive Layer (if observed):       Type:						
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)						
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)				Poducod Matrix MS=Macked Sand Crains		-Poro Liping M-Metrix
				Reduced Matrix, MS-Masked Sand Grains.		
Sandy Mucky Mineral (S1)	Histoso Histic I Black I Hydrog Stratifi 2 cm M Deplet	ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10) ed Below Dark Surfac	e (A11)	Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	Coast Prairi Dark Surfac Iron-Mangai Very Shallov Other (Expla	e Redox (A16) e (S7) nese Masses (F12) w Dark Surface (TF12) ain in Remarks)
Type:	Sandy	Mucky Mineral (S1)	3)		wetland hyd	rology must be present,
Depth (inches):       Hydric Soil Present? Yes       No         Remarks:       Primary Indicators:       No       No         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two referred to the secondary In	Restrictive	e Layer (if observed):				
YDROLOGY         Yetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regimers)	Type: _				Hudria Cail Drea	ent? Yes No_X
YDROLOGY         Vetland Hydrology Indicators:         'rimary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two regimes)	Depth (i	inches):			Hydric Soli Pres	ent? res No
Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two regimes in the secondary Indite Advection Indicators (minimum of two regi	YDROLO	OGY				
Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)	Vetland H	ydrology Indicators:				
High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)	rimary Inc	dicators (minimum of o	ne is requir	ed; check all that apply)	Secondary Inc	dicators (minimum of two require
Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)	Surfac	e Water (A1)		Water-Stained Leaves (B9)	Surface S	Soil Cracks (B6)
Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)	_ •					
Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)	_	. ,				. ,
_ Drift Deposits (B3)       _ Presence of Reduced Iron (C4)       _ Stunted or Stressed Plants (D1)         _ Algal Mat or Crust (B4)       _ Recent Iron Reduction in Tilled Soils (C6)       _ Geomorphic Position (D2)	_					• •
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)					· / <u> </u>	• • • •
	_					. ,
Iron Deposite (Bb) Din Muck Surface (C7) EAC-Neutral Test (D5)		. ,		Thin Muck Surface (C7)	· <u> </u>	

\_\_\_\_ FAC-Neutral Test (D5)

\_\_\_ Inundation Visible on Aerial Imagery (B7) \_\_\_\_ Gauge or Well Data (D9) \_\_\_\_ Sparsely Vegetated Concave Surface (B8) \_\_\_\_ Other (Explain in Remarks) Field Observations: Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_ Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_ Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_ Wetland Hydrology Present? Yes \_\_\_\_ No X Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/27/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point: W-A35
Investigator(s): JMM KMP	Section, Township, Range:	T2N R17E S31	
Landform (hillslope, terrace, etc.): Slope	Local relief (conc	ave, convex, none):	Concave
Slope (%): <u>3-5</u> Lat: <u>41.087859</u>	Long: -82.942252		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly		al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answei	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: _2(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
				FACU species x 4 =
5		= Total Co		UPL species x 5 =
Herb Stratum (Plot size: 5')		- 10tal C0	vei	Column Totals:         (A)         (B)
1. Phalaris arundinacea	50	Х	FACW	
2 Echinochloa crus-galli	30	X	FACW	Prevalence Index = B/A =
3 Cyperus esculentus	10		FACW	Hydrophytic Vegetation Indicators:
4. Rumex crispus	10		FAC	1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
5				$3$ - Prevalence Index is $\leq 3.0^1$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	100	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth (inches)	Matrix Color (moist)	% (	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8			50101 (1110151) 5YR 5/6	3	C	 M	SIL	
B-16			5YR 4/6	- 0/7	- <del>C</del>	M	SICL	
			/111 4/0					
Type: C=0	Concentration, D=Depleti	on, RM=Red	luced Matrix, N	– /IS=Maske	d Sand Gr	ains.	<sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.
	I Indicators:							for Problematic Hydric Soils <sup>3</sup> :
Histose	ol (A1)		Sandy	Gleyed M	atrix (S4)		Coast	Prairie Redox (A16)
	Epipedon (A2)			Redox (S				Surface (S7)
_	Histic (A3)			ed Matrix (	,			langanese Masses (F12)
_ , ,	gen Sulfide (A4)				ineral (F1)			Shallow Dark Surface (TF12)
	ed Layers (A5) /luck (A10)		1	Gleyed N ed Matrix			Other	(Explain in Remarks)
_	ed Below Dark Surface (A	A11)		Dark Surf				
	Dark Surface (A12)	,			urface (F7	)	<sup>3</sup> Indicators	s of hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio				d hydrology must be present,
_ 5 cm M	Aucky Peat or Peat (S3)						unless	s disturbed or problematic.
estrictive	e Layer (if observed):							
Type: _			2 m					- · · · · ·
Depth (i	nches):		_				Hydric Soil	Present? Yes X No
							1	
emarks:								
emarks:								
emarks:								
emarks:								
emarks:								
	DGY							
DROL								
(DROL)	ydrology Indicators:	is required.	check all that a	anniv)			Second	ary Indicators (minimum of two require
(DROL)	ydrology Indicators: dicators (minimum of one	is required;						ary Indicators (minimum of two require
<b>DROL</b> (etland H rimary Inc _ Surfac	ydrology Indicators: dicators (minimum of one e Water (A1)	is required;	Water-St	ained Lea	, ,		Sur	face Soil Cracks (B6)
<b>DROLO</b> Ietland H rimary Inc Surfac High V	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2)	is required:	Water-St Aquatic F	ained Lea auna (B1	3)		X Sur	face Soil Cracks (B6) inage Patterns (B10)
(DROLO /etland H rimary Inc Surfac High W Satura	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3)	is required;	Water-St Aquatic F True Aqu	ained Lea Fauna (B1 Plants	3) s (B14)		X Sur Dra Dry	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)
<b>(DROL)</b> <b>/etland H</b> rimary Inc Surfac High W Satura Water	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1)	is required;	Water-St Aquatic F True Aqu Hydroge	ained Lea Fauna (B1) natic Plants n Sulfide C	3) s (B14) Odor (C1)	ing Roots	Sur X Dra Dry Cra	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)
<b>/DROLO</b> /etland H rimary Inc Surfac High V Satura Water Sedim	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	is required:	Water-St     Aquatic F     True Aqu     Hydroger     Oxidized	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv		— Sur <u>X</u> Dra — Dry — Cra (C3) _ Sat	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)
<b>/DROLO</b> /etland H rimary Inc Surfac High W Satura Water Sedimu Drift D	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	is required:	Water-St Aquatic F True Aqu Hydroged Oxidized	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv red Iron (C4	4)	(C3) Stur Cra	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
Primary Inc Surfac High V Satura Water Sedimo Drift Do Algal M	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	is required:	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent In	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosphi of Reductor ron Reductor	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	(C3) Sur (C3) Sat (C3) Sat (C3) Sat (C3) Sat (C3) Stur (C3)	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland H Surfac High V Satura Satura Sedimu Sedimu Drift Du Algal M Iron De	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille (C7)	4)	(C3) Sur (C3) Sat (C3) Sat (C3) Sat (C3) Sat (C3) Stur (C3)	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)

Sparsely Vegetated Con	cave Surface (B8)	Other (Explain in Remarks)			
Field Observations:					
Surface Water Present?	Yes No _X	_ Depth (inches):			
Water Table Present?	Yes No _X	_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No _X	_ Depth (inches):	Wetland Hydrology Present?	Yes X	No
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, previous inspec	tions), if available:		
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/27/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point: W-A35
Investigator(s): JMM KMP	Section, Township, Range:	T2N R17E S31	
Landform (hillslope, terrace, etc.): Slope	Local relief (conc	ave, convex, none):	Concave
Slope (%): <u>3-5</u> Lat: <u>41.087859</u>	Long: -82.942252		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly		al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answei	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: _2(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
				FACU species x 4 =
5		= Total Co		UPL species x 5 =
Herb Stratum (Plot size: 5')		- 10tal C0	vei	Column Totals:         (A)         (B)
1. Phalaris arundinacea	50	Х	FACW	
2 Echinochloa crus-galli	30	X	FACW	Prevalence Index = B/A =
3 Cyperus esculentus	10		FACW	Hydrophytic Vegetation Indicators:
4. Rumex crispus	10		FAC	1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
5				$3$ - Prevalence Index is $\leq 3.0^1$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	100	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth (inches)	Matrix Color (moist)	% (	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-8			50101 (1110151) 5YR 5/6	3	C	 M	SIL		
B-16			5YR 4/6	- 0/7	- <del>C</del>	M	SICL		
			/111 4/0						
Type: C=0	Concentration, D=Depleti	on, RM=Red	luced Matrix, N	– /IS=Maske	d Sand Gr	ains.	<sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.	
	I Indicators:							for Problematic Hydric Soils <sup>3</sup> :	
Histose	ol (A1)		Sandy	Gleyed M	atrix (S4)		Coast	Prairie Redox (A16)	
	Epipedon (A2)			Redox (S				Surface (S7)	
_	Histic (A3)			ed Matrix (	,			langanese Masses (F12)	
_ , ,	gen Sulfide (A4)				ineral (F1)			Shallow Dark Surface (TF12)	
	ed Layers (A5) /luck (A10)		1	Gleyed N ed Matrix			Other	(Explain in Remarks)	
_	ed Below Dark Surface (A	A11)		Dark Surf					
	Dark Surface (A12)	,			urface (F7	)	<sup>3</sup> Indicators	s of hydrophytic vegetation and	
	Mucky Mineral (S1)			Depressio			wetland hydrology must be present,		
_ 5 cm M	Aucky Peat or Peat (S3)						unless disturbed or problematic.		
estrictive	e Layer (if observed):								
Type: _			2 s					- · · · · ·	
Depth (i	nches):		_				Hydric Soil	Present? Yes X No	
							1		
emarks:									
emarks:									
emarks:									
emarks:									
emarks:									
	DGY								
DROL									
(DROL)	ydrology Indicators:	is required.	check all that a	anniv)			Second	ary Indicators (minimum of two require	
(DROL)	ydrology Indicators: dicators (minimum of one	is required;						ary Indicators (minimum of two require	
<b>DROL</b> (etland H rimary Inc _ Surfac	ydrology Indicators: dicators (minimum of one e Water (A1)	is required;	Water-St	ained Lea	, ,		Sur	face Soil Cracks (B6)	
<b>DROLO</b> Ietland H rimary Inc Surfac High V	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2)	is required:	Water-St Aquatic F	ained Lea auna (B1	3)		X Sur	face Soil Cracks (B6) inage Patterns (B10)	
(DROLO /etland H rimary Inc Surfac High W Satura	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3)	is required;	Water-St Aquatic F True Aqu	ained Lea Fauna (B1 Plants	3) s (B14)		X Sur Dra Dry	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)	
<b>(DROL)</b> <b>/etland H</b> rimary Inc Surfac High W Satura Water	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1)	is required;	Water-St Aquatic F True Aqu Hydroge	ained Lea Fauna (B1) natic Plants n Sulfide C	3) s (B14) Odor (C1)	ing Roots	Sur X Dra Dry Cra	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)	
<b>/DROLO</b> /etland H rimary Inc Surfac High V Satura Water Sedim	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	is required:	Water-St     Aquatic F     True Aqu     Hydroger     Oxidized	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv		— Sur <u>X</u> Dra — Dry — Cra (C3) _ Sat	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)	
<b>/DROLO</b> /etland H rimary Inc Surfac High W Satura Water Sedimu Drift D	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	is required:	Water-St Aquatic F True Aqu Hydroged Oxidized	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv red Iron (C4	4)	(C3) Stur Cra	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)	
Primary Inc Surfac High V Satura Water Sedimo Drift Do Algal M	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	is required:	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent In	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosphi of Reductor ron Reductor	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	(C3) Sur (C3) Sat (C3) Sat (C3) Sat (C3) Sat (C3) Stur (C3)	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)	
YDROLO Vetland H Surfac High V Satura Satura Sedimu Sedimu Drift Du Algal M Iron De	ydrology Indicators: dicators (minimum of one e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille (C7)	4)	(C3) Sur (C3) Sat (C3) Sat (C3) Sat (C3) Sat (C3) Stur (C3)	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)	

Sparsely Vegetated Con	cave Surface (B8)	Other (Explain in Remarks)			
Field Observations:					
Surface Water Present?	Yes No _X	_ Depth (inches):			
Water Table Present?	Yes No _X	_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No _X	_ Depth (inches):	Wetland Hydrology Present?	Yes X	No
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, previous inspec	tions), if available:		
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca Sampling Date: 9/18/20	18
Applicant/Owner: Seneca Wind LLC	State: OH Sampling Point: W-A2	
Investigator(s): JMM KMP	Section, Township, Range: <u>T2N R17E S27</u>	
Landform (hillslope, terrace, etc.): Depressional	Local relief (concave, convex, none): Concave	
Slope (%): 0 Lat: 41.104408	Long: -82.897392 Datum: NAD 83	
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	eent slopes (Ble1B1) NWI classification: N/A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes X No	
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed, explain any answers in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PFO			

	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30</u> )	<u>% Cover</u> 5	Species?	<u>Status</u>	Number of Dominant Species	
1. Acer rubrum				That Are OBL, FACW, or FAC: _7 (A)	
2. Quercus palustris	25	<u>X</u>	FACW	Total Number of Dominant	
3. Ulmus americana	15	Χ	FACW	Species Across All Strata: 8 (B)	
4					
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 88% (A/B)	
	45	= Total Cov		That Are OBL, FACW, or FAC: (A/B)	
Sapling/Shrub Stratum (Plot size: 15' )		- 10(a) 000		Prevalence Index worksheet:	
1. Ulmus americana	10	Х	FACW	Total % Cover of:Multiply by:	
2. Rosa multiflora	5	X	FACU	OBL species x 1 =	
				FACW species x 2 =	
3					
4				FAC species x 3 =	
5				FACU species x 4 =	
Herb Stratum (Plot size: <u>5'</u> )	15	= Total Cov	ver	UPL species x 5 =	
	25	х	OBL	Column Totals: (A) (B)	
1. Boehmeria cylindrica					
2. Microstegium vimineum	30	<u>X</u>	FAC	Prevalence Index = B/A =	
3. Toxicodendron radicans	15	<u> </u>	FAC	Hydrophytic Vegetation Indicators:	
4				1 - Rapid Test for Hydrophytic Vegetation	
5				Z - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
				4 - Morphological Adaptations <sup>1</sup> (Provide supporting	
7				data in Remarks or on a separate sheet)	
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9					
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
Woody Vine Stratum (Plot size: 15' )	70	= Total Cov	ver	be present, unless disturbed or problematic.	
	-	V	<b>F</b> AO		
1. Toxicodendron radicans	5	<u> </u>	FAC	Hydrophytic	
2				Vegetation Present? Yes X No	
		= Total Cov	ver	Present? Yes <u>No</u> No	
Remarks: (Include photo numbers here or on a separate s	sheet.)				

Depth	Matrix			dox Featur			m the absence of in	
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 4/2	85	7.5YR 4/6	15	С	М	SICL	
10-16	10YR 5/2	75	7.5YR 4/6	25	С	М	SICL	
	oncentration, D=De	pletion, RM	I=Reduced Matrix, N	MS=Mask	ed Sand Gr	ains.		=Pore Lining, M=Matrix.
	Indicators:							Problematic Hydric Soils <sup>3</sup> :
Histoso				-	Matrix (S4)			ie Redox (A16)
	pipedon (A2)			Redox (S			Dark Surfac	
	istic (A3)			ed Matrix	. ,			nese Masses (F12)
	en Sulfide (A4) d Layers (A5)				/lineral (F1) Matrix (F2)			w Dark Surface (TF12) ain in Remarks)
	uck (A10)							
_	d Below Dark Surfa	ce (A11)		Dark Su				
	ark Surface (A12)				Surface (F7	)	<sup>3</sup> Indicators of h	ydrophytic vegetation and
	Mucky Mineral (S1)			Depress				Irology must be present,
_ 5 cm M	ucky Peat or Peat (S	\$3)					unless distu	urbed or problematic.
Restrictive	Layer (if observed	):						
Type:								$\checkmark$
Depth (in	ches):						Hydric Soil Pres	sent? Yes X No
YDROLO								
	drology Indicators							
	cators (minimum of	one is requ			(50)			dicators (minimum of two require
	Water (A1)			tained Lea	. ,		1	Soil Cracks (B6)
	ater Table (A2)			Fauna (B1	,		_ •	Patterns (B10)
	on (A3)			uatic Plant				son Water Table (C2)
_	Aarks (B1)				Odor (C1)		_ /	Burrows (C8)
	nt Deposits (B2)				neres on Liv			on Visible on Aerial Imagery (C9)
_	posits (B3)				ced Iron (C			or Stressed Plants (D1) ohic Position (D2)
	at or Crust (B4)				ction in Tille	a Solis (C		
_	posits (B5) ion Visible on Asriel	Imagen (		ck Surface			A FAC-Net	utral Test (D5)
	ion Visible on Aerial y Vegetated Conca		·	r Well Dat				
		e Surrace	(D0) Utner (E	xplain in F	(emarks)			
ield Obser		Vaa	No X Depth (	in chech's				
Vater Table		Yes				_		ж. ¥
Saturation P		Yes		inches): _		_	land Hydrology Pre	esent? Yes X No _

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

Remarks:

(includes capillary fringe)

Project/Site: Seneca Wind Project	City/County: Seneca	Sampling Date: <u>9/18/2018</u>
Applicant/Owner: Seneca Wind LLC	Stat	e: OH Sampling Point: W-A2-UP
Investigator(s): JMM KMP	Section, Township, Range: <u>T2N</u>	R17E S27
Landform (hillslope, terrace, etc.): Flat	Local relief (concave, o	convex, none): <u>Convex</u>
Slope (%): 0 Lat: 41.104188°	Long: <u>-82.897140°</u>	Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes (Ble1B1)	NWI classification: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes X No (If n	o, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Cir	cumstances" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed, expl	ain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NO X NO X NO X	Is the Sampled Area within a Wetland?	Yes	No X
Remarks: Upland sample plot					

\_\_\_\_\_

	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3	_			Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL_EACW_or_EAC: 0 (A/B)
				That Are OBL, FACW, or FAC: 0 (A/B)
Sapling/Shrub Stratum (Plot size:)		= Total Co	Jver	Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species         x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	over	UPL species x 5 =
Herb Stratum (Plot size: 5')		- 10(a) 0(		Column Totals: (A) (B)
1. Glycine max	85	Х	UPL	
2 Setaria faberi	10		FACU	Prevalence Index = B/A =
3. Echinochloa crus-galli	5		FACW	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	100			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	100	= Total Co	over	be present, unless disturbed or problematic.
1				I hadro a basti a
				Hydrophytic Vegetation
2		= Total Co		Present? Yes <u>No X</u>

Profile Description: (Describe to the d	epth needed to document the indicator or confi	rm the absence of indicators.)
Depth Matrix	Redox Features	_
(inches) Color (moist) %	Color (moist)%Type <sup>1</sup> Loc <sup>2</sup>	Texture Remarks
0-12 10YR 4/4 100		SIL
<sup>1</sup> Type: C=Concentration D=Depletion R	M=Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histosof (AT) Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
_ , , , ,	_ , , , , , , ,	
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	31
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive Layer (if observed):		
Туре:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is rec	uired: check all that apply)	Secondary Indicators (minimum of two required)

Primary Indicators (minimum of one is required; che	eck all that apply)	Secondary Indicators (minimum of two required)		
Surface Water (A1)	_ Water-Stained Leaves (B9)	Surface Soil Cracks (B6)		
High Water Table (A2)	_ Aquatic Fauna (B13)	Drainage Patterns (B10)		
Saturation (A3)	True Aquatic Plants (B14)	Dry-Season Water Table (C2)		
Water Marks (B1)	Water Marks (B1) Hydrogen Sulfide Odor (C1)			
Sediment Deposits (B2)	Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3)			
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	_ Recent Iron Reduction in Tilled Soi	ls (C6) Geomorphic Position (D2)		
Iron Deposits (B5)	_ Thin Muck Surface (C7)	FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)	_ Gauge or Well Data (D9)			
Sparsely Vegetated Concave Surface (B8)	_ Other (Explain in Remarks)			
Field Observations:				
Surface Water Present? Yes No X	Depth (inches):			
Water Table Present? Yes No X	Depth (inches):			
	Depth (inches):	Wetland Hydrology Present? Yes No		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring	g weir, aenai photos, previous inspecti	ons), il avaliable.		
Remarks:				

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09272018					
Applicant/Owner: Seneca Wind, LLC	S	State: OH	Sampling Point: W-B14					
Investigator(s): CV, JB	Section, Township, Range: T2	2N R17E S27						
Landform (hillslope, terrace, etc.): Depression	Local relief (concave	e, convex, none):	Concave					
Slope (%): 0-2 Lat: 41.101753	Long: <u>-82.881445</u>		Datum: NAD 83					
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slope		NWI classifica	ation: None					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)								
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal	Circumstances" p	resent? Yes 🔀 No					
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, ex	xplain any answer	rs in Remarks.)					

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes_X No
Remarks: PFO			

20'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30'		Species?		Number of Dominant Species
1. Quercus palustris	20	X	FACW	That Are OBL, FACW, or FAC: (A)
2. Acer saccharinum	10	Х	FACW	Total Number of Deminent
3. Ulmus americana	5		FACW	Total Number of Dominant Species Across All Strata: 6 (B)
4				
				Percent of Dominant Species
5	35	= Total Cov		That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- Total Cov	/er	Prevalence Index worksheet:
1. Ulmus americana	5	Х	FACW	Total % Cover of: Multiply by:
2				OBL species x 1 =
				FACW species x 2 =
3				FAC species x 2 =
4	·			
5				FACU species x 4 =
Herb Stratum (Plot size:)	10	= Total Cov	/er	UPL species x 5 =
<u>1</u> Microstegium vimineum	30	х	FAC	Column Totals: (A) (B)
2. Phalaris arundinacea	25	X	FACW	Prevalence Index = B/A =
3. Scirpus cyperinus	5		FACW	Hydrophytic Vegetation Indicators:
4. Carex grayii	5		FACW	1 - Rapid Test for Hydrophytic Vegetation
5				$\ge$ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	<u></u>			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>15'</u> )	65	= Total Cov	/er	be present, unless disturbed or problematic.
1. Toxicondendron radicans	5	Х	FAC	Hydrophytic
2.				Vegetation
<b>•</b> ••	5	= Total Cov	/er	Present? Yes X No
Remarks: (Include photo numbers here or on a separate				1
	,			

Depth (inches)	Matrix Color (moist)	%	Color (moist)	dox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure Remarks
0-4	10YR 4/2		5YR 4/6	5	C	M	SIL	
4-16	10YR 4/2	80 7.	5YR 4/6	20	C	M	SICL	
	oncentration, D=Deple	etion, RM=Re	duced Matrix,	 MS=Maske	ed Sand Gr	ains.		ocation: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils <sup>3</sup> :
•			Sand	Cloved	latrix (CA)			Coast Prairie Redox (A16)
Histosol Histic F	pipedon (A2)			y Gleyed N y Redox (S				Dark Surface (S7)
_	istic (A3)			ed Matrix (	,			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky M	ineral (F1)		_	Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N			_	Other (Explain in Remarks)
Deplete Thick Da Sandy M	uck (A10) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S3)		Redo Deple	ted Matrix x Dark Sur ted Dark S x Depressi	face (F6) Surface (F7	)	,	licators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive	Layer (if observed):							
Туре:			_					
Type: Depth (in	iches):		-				Hydr	ic Soil Present? Yes <u>X</u> No
Type: Depth (in			-				Hydr	ic Soil Present? Yes <u>X</u> No
Type: Depth (in Remarks:	oches):		-				Hydr	ic Soil Present? Yes <u>X</u> No
Type: Depth (in Remarks: YDROLO Vetland Hy	DGY drology Indicators:		-	200(4)				
Type: Depth (in Remarks: YDROLO Vetland Hy Primary Indi	OGY drology Indicators: cators (minimum of on						<u>S</u>	econdary Indicators (minimum of two requ
Type: Depth (in Remarks: YDROLO Vetland Hy Primary India Surface	DGY drology Indicators: cators (minimum of on Water (A1)		Water-S	tained Lea				econdary Indicators (minimum of two requ
Type: Depth (in Remarks: YDROLO Vetland Hy Primary Indi Surface High Wa	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2)		Water-S Aquatic	tained Lea Fauna (B1	3)		<u>S</u>	econdary Indicators (minimum of two requ ∠ Surface Soil Cracks (B6) ∠ Drainage Patterns (B10)
Type: Depth (in temarks: YDROLO Vetland Hy trimary Indio Surface High Wa Saturati	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3)		Water-S Aquatic True Aq	tained Lea Fauna (B1 uatic Plant	3) s (B14)		<u>S</u>	econdary Indicators (minimum of two requ
Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturati Water M	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-S Aquatic True Aq Hydroge	tained Lea Fauna (B1 uatic Plant en Sulfide (	3) s (B14) Ddor (C1)	ring Roots		econdary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Saturati Saturati Saturati Water M Sedime	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-S Aquatic True Aq Hydroge Oxidized	tained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph	3) s (B14) Ddor (C1) eres on Liv	-		econdary Indicators (minimum of two reques Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3)
Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water-S Aquatic True Aq Hydroge Oxidized	tained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C	4)	(C3)	econdary Indicators (minimum of two requession of two requessions of two requests
Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturati Water M Sedimei Drift De Algal Ma	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-S Aquatic True Aq Hydroge Oxidized Recent	tained Lea Fauna (B1 uatic Plant on Sulfide C I Rhizosph e of Reduc Iron Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille	4)	(C3)	econdary Indicators (minimum of two requ ✓ Surface Soil Cracks (B6) ✓ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C8) _ Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2)
Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary India Saturati Gaturati Water M Saturati Urift De Algal Ma Iron Dep	DGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	ie is required;	Water-S Aquatic True Aq Hydroge Oxidized Recent Thin Mu	tained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7)	4)	(C3)	econdary Indicators (minimum of two requession of two requessions of two requests

 Yes
 No
 X
 Depth (inches):

 Yes
 No
 X
 Depth (inches):

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_

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

Surface Water Present? Water Table Present?

Saturation Present? (includes capillary fringe)

Remarks:

Wetland Hydrology Present? Yes X No \_\_\_\_

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/27/2018						
Applicant/Owner: Seneca Wind, LLC			Sampling Point: W-B14 UP						
Investigator(s): CV, JB	Section, Township, Range:	T2N R17E S27							
Landform (hillslope, terrace, etc.): Depression		cave, convex, none):	Linear						
Slope (%): 0-2 Lat: 41.101924	Long: -82.881315		Datum: NAD 83						
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slope		NWI classific	ation: None						
Are climatic / hydrologic conditions on the site typical for this time of ye	Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)								
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes X No						
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)						

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

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

#### **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> )		Species? X		Number of Dominant Species
1. Ulmus americana	20		FACW	That Are OBL, FACW, or FAC: _4 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				(-/
5				Percent of Dominant Species
5	00	T 0		That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )	20	= Total Cov	ver	Prevalence Index worksheet:
1. Ulmus americana	5	x	FACW	Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	5	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5')		rotar oo		Column Totals: (A) (B)
1. Microstegium vimineum	30	Х	FAC	
2 Phalaris arundinacea	20	X	FACW	Prevalence Index = B/A =
3. Carex grayi	5		FACW	Hydrophytic Vegetation Indicators:
	· —			1 - Rapid Test for Hydrophytic Vegetation
4				
5				$\mathbf{X}$ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Manda Marco Charters (District	55	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

L

Depth(inches)	Matrix Color (moist)	%	Color (moist)	x Features %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	YR 4/2	100					SIL	
					_			
		oletion, RM=R	educed Matrix, M	S=Masked	Sand Gra	ains.		ion: PL=Pore Lining, M=Matrix.
Thick Dark Su	lon (A2) (A3) Ilfide (A4) vers (A5) A10) ow Dark Surfac		Sandy I Stripped Loamy Deplete Redox	Gleyed Ma Redox (S5 d Matrix (S Mucky Min Gleyed Ma d Matrix (F Dark Surfa d Dark Su Depressior	) 6) heral (F1) htrix (F2) <sup>-</sup> 3) ce (F6) rface (F7)		Coa Dar Iron Ver Oth <sup>3</sup> Indicat wetl	ors for Problematic Hydric Soils <sup>3</sup> : ast Prairie Redox (A16) k Surface (S7) -Manganese Masses (F12) y Shallow Dark Surface (TF12) er (Explain in Remarks) ors of hydrophytic vegetation and and hydrology must be present, ess disturbed or problematic.
	r (if observed)	:						
Restrictive Layer Type: Depth (inches)			_				Hydric S	oil Present? Yes <u>No X</u>
Restrictive Layer Type: Depth (inches)							Hydric S	oil Present? Yes No <u>X</u>
Restrictive Layer Type: Depth (inches) Remarks:			_				Hydric S	oil Present? Yes <u>No X</u>
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY	):		_				Hydric S	oil Present? Yes <u>No X</u>
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrolo	):			oply)				oil Present? Yes No
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrolo	): pgy Indicators: s (minimum of o er (A1)			ined Leave			<u>Seco</u> i	
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY YDROLOGY Netland Hydrolo Primary Indicators Surface Wate	): ogy Indicators: s (minimum of c er (A1) Table (A2)		Water-Sta Aquatic Fa	ined Leave			<u>Secon</u> S	ndary Indicators (minimum of two required
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T	): ogy Indicators: s (minimum of of er (A1) Table (A2) (3)		Water-Sta Aquatic Fa	ined Leave auna (B13) atic Plants	(B14)		<u>Seco</u> S C C	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Saturation (A)	by Indicators: s (minimum of d er (A1) "able (A2) (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ined Leave auna (B13) atic Plants	(B14) lor (C1)	ing Roots	<u>Secon</u> S C C	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water Ti Saturation (A: Water Marks Sediment Dej Drift Deposits	by Indicators: s (minimum of of er (A1) Table (A2) (B1) eposits (B2) s (B3)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leave auna (B13) atic Plants Sulfide Oc	(B14) lor (C1) res on Livi	-	<u>Secon</u> S C C (C3) S S	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY YDROLOGY Netland Hydrolo Primary Indicators Surface Wate High Water T Saturation (A' Water Marks Sediment Dep Drift Deposits Algal Mat or (A'	by Indicators: s (minimum of c er (A1) Table (A2) (B1) (B1) posits (B2) s (B3) Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leave auna (B13) atic Plants Sulfide Oc Rhizospher	(B14) lor (C1) res on Livi d Iron (C4	4)	<u>Secon</u> S C C (C3) S S 5) G	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Restrictive Layer Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water T Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	): pgy Indicators: s (minimum of c er (A1) Table (A2) (B1) (B1) (B1) (B2) s (B3) Crust (B4) s (B5)	: one is required	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc	ined Leave auna (B13) atic Plants Sulfide Oc Rhizospher of Reduce	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled	4)	<u>Secon</u> S C C (C3) S S 5) G	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Restrictive Layer Type: Depth (inches) Remarks: IYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water T Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Via	by Indicators: s (minimum of c er (A1) Table (A2) (B1) (B1) posits (B2) s (B3) Crust (B4)	: one is required Imagery (B7)	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck Gauge or	ined Leave auna (B13) atic Plants Sulfide Oc Rhizospher of Reduce on Reducto surface ( Well Data	(B14) dor (C1) res on Livi d Iron (C4 on in Tilled C7) (D9)	4)	<u>Secon</u> S C C (C3) S S 5) G	ndary 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)

Field Observations:						
Surface Water Present?	Yes	_ No _X	Depth (inches):			
Water Table Present?	Yes	_ No _X	Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	_ No _X_	Depth (inches):	Wetland Hydrology Present?	Yes	<u>No_X</u>
Describe Recorded Data (st	ream gauge, i	monitoring v	vell, aerial photos, previous inspe	ctions), if available:		
Remarks:						

City/County: Seneca Sampling Date: 092720	018
State: OH Sampling Point: W-B13	3
Section, Township, Range: Reed	
Local relief (concave, convex, none): Concave	
Long: -82.877788 Datum: NAD 83	
ent slopes NWI classification: None	
ear? Yes X No (If no, explain in Remarks.)	
disturbed? Are "Normal Circumstances" present? Yes X No	o
oblematic? (If needed, explain any answers in Remarks.)	
	State: OHSampling Point: W-B13 Local relief (concave, convex, none): Concave Long:82.877788Datum: NAD 83 Datum: NAD 83 NONVI classification: None year? Yes XNo(If no, explain in Remarks.) ly disturbed? Are "Normal Circumstances" present? Yes XNo

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X No
Remarks: PFO			

#### **VEGETATION** – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute	Dominant		Dominance Test worksheet:
1. Acer rubrum	20	Species? X	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
		<u> </u>	FACU	That Are OBL, FACW, or FAC: _4(A)
2. <u>Tilia americana</u>	$-\frac{5}{10}$	<u> </u>	FACU	Total Number of Dominant
3. Ulmus americana				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 67% (A/B)
15'	35	= Total Cov	ver	
Sapling/Shrub Stratum (Plot size: 15' )		.,		Prevalence Index worksheet:
1. Fraxinus americana		<u>X</u>	FACU	Total % Cover of:Multiply by:
2. Cornus florida	_ 5	<u>X</u>	FACU	OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	10	= Total Cov	ver	UPL species x 5 =
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)
1. Microstegium vimineum	30	Х	FAC	
2. Pilea pumila	25	Х	FACW	Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
				Z - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 <sup>1</sup>
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	55	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

I

Depth	Matrix			ox Featur		. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks	
)-7	10YR 4/2	90	2.5YR 5/8	10		M		
7-16	10YR 4/2	80	2.5YR 5/8	20	<u>C</u>	M	<u>SIL</u>	
	Concentration, D=De	pletion, R	M=Reduced Matrix, N	IS=Maske	d Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils	_3.
			Candu	Claused M	-			5.
Histoso Histic F	pipedon (A2)			Redox (S	atrix (S4)		Coast Prairie Redox (A16) Dark Surface (S7)	
	listic (A3)			ed Matrix (			Iron-Manganese Masses (F12)	
	en Sulfide (A4)				ineral (F1)		Very Shallow Dark Surface (TF12)	
	d Layers (A5)				latrix (F2)		Other (Explain in Remarks)	
2 cm M	uck (A10)		X Deplet	ed Matrix	(F3)			
	d Below Dark Surfa	ce (A11)		Dark Sur			3	
	ark Surface (A12)			Depleted Dark Surface (F7) Redox Depressions (F8)		<sup>3</sup> Indicators of hydrophytic vegetation and	1	
	Mucky Mineral (S1) ucky Peat or Peat (\$	33)	Redox	Depressi	ons (F8)		wetland hydrology must be present, unless disturbed or problematic.	
	Layer (if observed	-						
Type:		,.					×	
Depth (in	iches):						Hydric Soil Present? Yes X	o
Remarks:								
YDROLC								
	drology Indicators							
Primary Indi	cators (minimum of	one is req	uired; check all that a	pply)			Secondary Indicators (minimum of two	required
_ Surface	_ Surface Water (A1) X Water-Stained Leaves (B9)				Surface Soil Cracks (B6)			
_ High Water Table (A2) Aquatic Fauna (B13)					Drainage Patterns (B10)			
Saturation (A3) True Aquatic Plants (B14)					Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor (C1)						Crayfish Burrows (C8)	l. Jun	
_	nt Deposits (B2)				eres on Liv	•	· · —	ry (C9)
	posits (B3)				ed Iron (C		Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (						d Soils (C	6) X Geomorphic Position (D2)	

X FAC-Neutral Test (D5)

#### \_\_\_ Iron Deposits (B5) Thin Muck Surface (C7) \_\_\_ Gauge or Well Data (D9) Inundation Visible on Aerial Imagery (B7) X Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Yes \_\_\_\_\_ No X Depth (inches): \_\_\_ Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_ Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_ Saturation Present? Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Seneca Wind	City/County: Seneca	Sampling Date: <u>09/26/2018</u>
Applicant/Owner: Seneca Wind, LLC	State: OH	Sampling Point: <u>W-B13 UP</u>
Investigator(s): <u>CV</u> , JB	Section, Township, Range: Bloom	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex,	none): Linear
Slope (%): 0 Lat: _41.033599	Long: <u>-83.058844</u>	Datum: <u>NAD 83</u>
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded NWI c	lassification: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🔀 No (If no, expla	in in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstar	nces" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any	answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No_X
Remarks:					

Trace Stratum (Distainer 30'	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30') 1 Acer saccharum	5	Species? X	FACU	Number of Dominant Species
	- 5	<del></del>	FAC	That Are OBL, FACW, or FAC: <u>3</u> (A)
2. Acer rubrum				Total Number of Dominant
3				Species Across All Strata:6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50% (A/B)
15'	10	= Total Co	ver	
Sapling/Shrub Stratum (Plot size: 15' )		.,		Prevalence Index worksheet:
1. Fraxinus americana	10	<u>X</u>	FACU	Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	10	= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		i otai oo		Column Totals: (A) (B)
1. Ageratina altissima	20	Х	FACU	
2. Pilea pumila	15	Х	FACW	Prevalence Index = B/A =
3. Microstegium vimineum	10	X	FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				_ , , , , , , , , , , , , , , , , , , ,
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
······································	45	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No _X
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist)%Type <sup>1</sup> Loc <sup>2</sup>	
0-6	10YR 3/2	100		
6-16	10YR 4/2	100		
	Concentration, D=De     Indicators:	pletion, RM	=Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
	Epipedon (A2)		Sandy Redox (S5)	Dark Surface (S7)
	Histic (A3)		Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrog	gen Sulfide (A4)		Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
	ed Layers (A5)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	/luck (A10)		Depleted Matrix (F3)	
	ed Below Dark Surfac	ce (A11)	Redox Dark Surface (F6)	3
	Dark Surface (A12)		Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
_ ,	Mucky Mineral (S1)	22	Redox Depressions (F8)	wetland hydrology must be present,
	Aucky Peat or Peat (S • Layer (if observed)			unless disturbed or problematic.
	Eayer (II Observed)			
Type:	nahaa);			Hydric Soil Present? Yes NoX
	nches):			
Remarks:				
YDROL	DGY			
Netland H	ydrology Indicators	:		
Primary Ind	dicators (minimum of	one is requi	red; check all that apply)	Secondary Indicators (minimum of two require
Surface	e Water (A1)		Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High W	Vater Table (A2)		Aquatic Fauna (B13)	Drainage Patterns (B10)
Satura	tion (A3)		True Aquatic Plants (B14)	Dry-Season Water Table (C2)
Water	Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sedime	ent Deposits (B2)		s (C3) Saturation Visible on Aerial Imagery (C9)	

Presence of Reduced Iron (C4)

\_\_\_\_ Thin Muck Surface (C7)

\_\_\_ Gauge or Well Data (D9)

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_

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

\_\_\_\_ Recent Iron Reduction in Tilled Soils (C6)

Remarks:

\_\_\_ Drift Deposits (B3)

\_\_\_ Iron Deposits (B5)

Field Observations:

Surface Water Present?

Water Table Present?

Saturation Present? (includes capillary fringe)

\_\_\_\_ Algal Mat or Crust (B4)

\_\_\_\_ Inundation Visible on Aerial Imagery (B7)

\_\_\_\_ Sparsely Vegetated Concave Surface (B8) \_\_\_\_ Other (Explain in Remarks)

\_\_\_\_ Stunted or Stressed Plants (D1)

Wetland Hydrology Present? Yes \_\_\_\_ No X

\_\_\_ Geomorphic Position (D2)

\_\_\_\_ FAC-Neutral Test (D5)

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09272018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B12
Investigator(s): <u>CV</u> , JB	Section, Township, Range:	Reed	
Landform (hillslope, terrace, etc.): Depression	Local relief (cond	ave, convex, none):	Concave
Slope (%): 2-5 Lat: 41.102735	Long: <u>-82.878477</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks:				

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: _3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
· · · · · · · · · · · · · · · · · · ·		= Total Co		UPL species          x 5 =
Herb Stratum (Plot size: 5')		- 10tai 00	Vei	
1. Microstegium vimineum	35	Х	FAC	Column Totals: (A) (B)
2 Symphyotrichum pilosum	25	X	FAC	Prevalence Index = B/A =
3. Pilea pumila	15		FACW	Hydrophytic Vegetation Indicators:
A Phalaris arundinacea	20	X	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Impatiens capensis	5		FACW	$\overline{X}$ 2 - Dominance Test is >50%
				$3$ - Prevalence Index is $\leq 3.0^{1}$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	100	= Total Co	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			

		to the de	epth needed to docu			or confir	m the absence	of indicators.)	
Depth (inchor)	Matrix Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
<u>(inches)</u> 0-2	10YR 3/2	100		70		LUC	Mk	Remarks	
2-4	10YR 4/2	90	2.5YR 5/8	10		М	SIL		
4-16	10YR 5/1	85	2.5YR 5/8	15	C	М	SIL		
	oncentration, D=De	pletion, RI	M=Reduced Matrix, N	 //S=Maske	ed Sand Gr	ains.		PL=Pore Lining, M=Matrix.	
Histoso			Sandy	Cloved M	Aatrix (S4)			Prairie Redox (A16)	
	pipedon (A2)			Redox (S				Surface (S7)	
	listic (A3)			ed Matrix	,			anganese Masses (F12)	
	en Sulfide (A4)				lineral (F1)			hallow Dark Surface (TF12)	
_ , ,	d Layers (A5)				Matrix (F2)		Other (Explain in Remarks)		
X 2 cm M	uck (A10)			ed Matrix					
Deplete	d Below Dark Surfac	ce (A11)	Redox	Dark Sur	face (F6)				
Thick D	ark Surface (A12)		Deplet	ed Dark S	Surface (F7	)	<sup>3</sup> Indicators	of hydrophytic vegetation and	
Sandy M	Mucky Mineral (S1)		Redox	Depressi	ons (F8)		wetland hydrology must be present,		
5 cm M	ucky Peat or Peat (S	33)					unless	disturbed or problematic.	
Restrictive	Layer (if observed)	:							
Туре:							Hydric Soil	Present? Yes X No	
Depth (in	iches):						Thyune con		
Remarks:									
HYDROLC									
	drology Indicators								
		one is req	uired; check all that a				Seconda	ary Indicators (minimum of two required)	
1.1	Water (A1)		X Water-St	X Water-Stained Leaves (B9)			Surf	ace Soil Cracks (B6)	
	ater Table (A2)		Aquatic F	Aquatic Fauna (B13)				nage Patterns (B10)	
X Saturati	. ,			atic Plant				Season Water Table (C2)	
	/larks (B1)		Hydroger	Hydrogen Sulfide Odor (C1)				fish Burrows (C8)	
Sedime	nt Deposits (B2)		Oxidized	Rhizosph	eres on Liv	Living Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift De	posits (B3)		Presence	e of Reduc	ced Iron (C	4)		nted or Stressed Plants (D1)	
Algal M	at or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)				(C6) $\underline{X}$ Geomorphic Position (D2)		

X	Geomorphic	Position
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X	<b>FAC-Neutral</b>	Test	(D5)	
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Iron Deposits (B5)	_	Thin Muck Surface (C7)	X FAC-Neutral Test (D5)	
Inundation Visible on Ae	erial Imagery (B7)	Gauge or Well Data (D9)		
Sparsely Vegetated Cor	ncave Surface (B8) _	Other (Explain in Remarks)		
Field Observations:				
Surface Water Present?	Yes 🗶 No 🔙	Depth (inches): 0.5	_	
Water Table Present?	Yes X No	Depth (inches): 0	_	
Saturation Present? (includes capillary fringe)	Yes X No	Depth (inches): 0	Wetland Hydrology Present? Yes X No	_
Describe Recorded Data (str	eam gauge, monitorin	g well, aerial photos, previous inspe	ections), if available:	
Remarks:				

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date:	09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point:	W-B12 UP
Investigator(s): CV, JB	Section, Township, Range: B			
Landform (hillslope, terrace, etc.): Depression	Local relief (conca	ve, convex, none):	Linear	
Slope (%): 0 Lat: 41.102848	Long: -82.878402		Datum: NAD 8	3
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fro	equently flooded	NWI classifica	ation: None	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norma	l Circumstances" p	resent? Yes 🔿	< No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, o	explain any answer	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	_ No_X
Remarks:					

Tree Stratum (Plot size: <u>30'</u> )	Absolute	Dominant Species?		Dominance Test worksheet:
1. Acer saccharum	<u>5</u>	X	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2. Celtis occidentalis	5	x	FACU	That Are OBL, FACW, OF FAC (A)
				Total Number of Dominant Species Across All Strata: 6 (B)
3				Species Across All Strata:6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 15' )	10	= Total Cov	/er	Prevalence Index worksheet:
1. Fraxinus americana	5	Х	FACU	Total % Cover of: Multiply by:
2				OBL species         x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
···		= Total Cov		UPL species x 5 =
Herb Stratum (Plot size: 5' )		- 101ai 000		Column Totals:         (A)         (B)
1. Ageratina altissima	20	Х	FACU	
2. Pilea pumila	15	X	FACW	Prevalence Index = B/A =
3. Microstegium vimineum	10	Х	FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7.				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.				
	45	= Total Cov	/er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		10101 000		be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
		= Total Cov	ver	Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	cription: (Describe Matrix	to the depth		x Feature						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-4	10YR 3/2	100					SIL			
4-16	10YR 4/2	100					SIL			
	-									
<sup>1</sup> Type: C=0	Concentration, D=De	pletion, RM=R	educed Matrix, M	S=Masked	Sand Gra	iins.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix.		
Hydric Soil	Indicators:							roblematic Hydric Soils <sup>3</sup> :		
Histoso	ol (A1)		Sandy	Gleyed Ma	atrix (S4)		Coast Prairie	e Redox (A16)		
Histic E	pipedon (A2)			Redox (S5			Dark Surface	e (S7)		
Black H	listic (A3)		Strippe	d Matrix (S	66)		Iron-Mangar	iese Masses (F12)		
Hydrog	en Sulfide (A4)		Loamy	Mucky Mir	neral (F1)		Very Shallow	v Dark Surface (TF12)		
Stratifie	ed Layers (A5)		Loamy	Gleyed Ma	atrix (F2)		Other (Expla	in in Remarks)		
2 cm M	luck (A10)		Deplete	d Matrix (I	F3)					
Deplete	ed Below Dark Surfa	ce (A11)	Redox	Dark Surfa	ace (F6)					
Thick D	ark Surface (A12)		Deplete	Depleted Dark Surface (F7) <sup>3</sup> Indicators of hydrophytic vegeta						
	Mucky Mineral (S1)		Redox	Redox Depressions (F8)				wetland hydrology must be present,		
	lucky Peat or Peat (S						unless distur	bed or problematic.		
Restrictive	Layer (if observed	):								
Type:										
Depth (in	nches):						Hydric Soil Prese	ent? Yes <u>No X</u>		
Remarks:										
IYDROLO	DGY									
Wetland Hy	drology Indicators	:								
Primary Ind	icators (minimum of	one is require	d; check all that ap	oply)			Secondary Ind	licators (minimum of two required		
Surface	e Water (A1)		Water-Sta	Water-Stained Leaves (B9)			Surface S	oil Cracks (B6)		
High W	High Water Table (A2)			auna (B13	)		Drainage	Patterns (B10)		
Saturation (A3)			True Aqua	tic Plants	(B14)		Dry-Seaso	on Water Table (C2)		
Water Marks (B1)			Hydrogen		. ,		Crayfish Burrows (C8)			
Sediment Deposits (B2)				Oxidized Rhizospheres on Living Roots (0				Visible on Aerial Imagery (C9)		
	Drift Deposits (B3)			Presence of Reduced Iron (C4)				r Stressed Plants (D1)		
Algal M		Recent Iron Reduction in Tilled Soils (C6)				nic Position (D2)				
	posits (B5)		Thin Muck				· _ ·	ral Test (D5)		
	tion Visible on Aerial	Imagery (R7)								
	ly Vegetated Concav									
				Jan III Re	inans)					
	valions.									
Field Obse		V	Dauth (	ah a a b						
	ter Present?		o Depth (in o Depth (in			-				

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_

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

Saturation Present? (includes capillary fringe)

Remarks:

Wetland Hydrology Present? Yes \_\_\_\_\_ No  $\_$  X

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/18/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A3
Investigator(s): JMM KMP	Section, Township, Range:	T2N R17E S21	
Landform (hillslope, terrace, etc.): Terrace	Local relief (conc	ave, convex, none):	Concave
Slope (%): 0 Lat: 41.124201	Long: <u>-82.916656</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded (Sh)	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks:				
Cowardin: PEM				

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
1 Cratageus sp.	<u>% Cover</u> 5	Species? X	ND	Number of Dominant Species
				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: _2*(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
15'	5	= Total Cov	ver	
Sapling/Shrub Stratum (Plot size: 15' )		.,		Prevalence Index worksheet:
1. Salix nigra	_ 5	<u> </u>	OBL	Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5.				FACU species x 4 =
	5	= Total Cov	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Phalaris arundinacea	75	Χ	FACW	
2. Cirsium vulgare	5		FACU	Prevalence Index = B/A =
3. Boehmeria cylindrica	10		OBL	Hydrophytic Vegetation Indicators:
4 Equisetum pratense	5		FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Solidago gigantea	5		FACW	∑ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Weeder Vine Stratum (Distainer	100	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			
ND- Not Determined	Logia de la c		11	
*Vegetation not ID'd down to species level not inc	iuded in de	ominance	test	

nches) -7	Color (moist) 10YR 5/2	_ <u>%</u> 95	Color (moist) 7.5YR 4/6	<u>%</u> 5	<u>Type<sup>1</sup></u> C	Loc <sup>2</sup> M/PL	 SL	Remarks
16	10YR 5/2	85	7.5 YR 4/6	15	<u>c</u>	M/PL	LS	
					d Sand Gr		<sup>2</sup> Location: P	I - Poro Lipipo M-Matrix
	Indicators:		I=Reduced Matrix, M	S-Maske	u Sanu Gi	ans.		L=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histoso	(A1)				atrix (S4)		Coast Pra	irie Redox (A16)
Histic E	pipedon (A2)		X Sandy	Redox (S	5)		Dark Surfa	
Black H	istic (A3)			d Matrix (	,			anese Masses (F12)
	en Sulfide (A4)				ineral (F1)			low Dark Surface (TF12)
	d Layers (A5) uck (A10)		X Deplete	Gleyed M	latrix (F2)		Other (Exp	plain in Remarks)
	d Below Dark Surfa	ce (A11)		Dark Surf				
	ark Surface (A12)				urface (F7	)	<sup>3</sup> Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio				drology must be present,
							unless dis	turbed or problematic.
	ucky Peat or Peat (S						unicos dis	turbed of problematic.
	ucky Peat or Peat (S Layer (if observed)							albed of problematic.
strictive	Layer (if observed							
strictive								esent? Yes <u>X</u> No
s <b>trictive</b> Type: Depth (in	Layer (if observed							
strictive Type: Depth (in marks:	Layer (if observed ches):							
strictive Type: Depth (in marks: DROLO tland Hy	Layer (if observed ches): OGY drology Indicators	:					Hydric Soil Pre	esent? Yes <u>X</u> No
strictive Type: Depth (in marks: DROLO tland Hy mary Indi	Layer (if observed ches): OGY drology Indicators cators (minimum of	:	uired; check all that a				Hydric Soil Pre	esent? Yes X No
strictive Type: Depth (in marks: DROLO tland Hy mary Indi Surface	Layer (if observed ches): OGY drology Indicators cators (minimum of Water (A1)	:	Water-Sta	ained Leav			Hydric Soil Pre	esent? Yes X No
strictive Type: Depth (in marks: DROLO DROLO tland Hy mary Indi Surface High Wa	Layer (if observed) ches): OGY drology Indicators cators (minimum of Water (A1) ater Table (A2)	:	Water-Sta Aquatic F	ained Leav auna (B13	3)		Hydric Soil Pre	esent? Yes X No Indicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10)
strictive Type: Depth (in marks: DROLO DROLO tland Hy mary Indi Surface High Wa Saturati	Layer (if observed ches): OGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	:	Water-Sta Aquatic F True Aqu	ained Leav auna (B13 atic Plants	3) s (B14)		Hydric Soil Pre	ndicators (minimum of two requi Soil Cracks (B6) Patterns (B10) ason Water Table (C2)
strictive Type: Depth (in marks: DROLO tland Hy mary Indi Surface High Wa Saturati Water M	Layer (if observed ches): OGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide C	3) s (B14) Odor (C1)	ing Depte	Hydric Soil Pre	esent? Yes X No Indicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8)
strictive Type: Depth (in marks: DROLO tland Hy mary Indi Surface High Wa Saturati Water M Sedime	Layer (if observed ches): OGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe	3) s (B14) odor (C1) eres on Liv	•	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (CS
strictive Type: Depth (in marks: DROLO tland Hy mary Indi Surface High Wa Saturati Water M Sedime Drift De	Layer (if observed ches): GGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4	4)	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS o Stressed Plants (D1)
strictive Type: Depth (in marks: DROLO tland Hy mary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M:	Layer (if observed ches): GGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS or Stressed Plants (D1) rphic Position (D2)
strictive Type: Depth (in marks: DROLO tland Hy mary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M: Iron Dej	Layer (if observed ches): GGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is requ	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In Thin Muc	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct & Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7)	4)	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS o Stressed Plants (D1)
strictive Type: Depth (in marks: DROLO DROLO tland Hy mary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dej Inundat	Layer (if observed ches): GGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	: one is requ Imagery (I	<ul> <li>Water-Sta</li> <li>Aquatic F</li> <li>True Aquatic F</li> <li>Hydrogen</li> <li>Mydrogen</li> <li>Oxidized</li> <li>Presence</li> <li>Recent Indiana</li> <li>Thin Mucl</li> <li>Gauge or</li> </ul>	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct k Surface Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS or Stressed Plants (D1) rphic Position (D2)
strictive Type: Depth (in marks: DROLO DROLO tiland Hy mary Indi Surface High Wa Saturati	Layer (if observed ches): GGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav	: one is requ Imagery (I	<ul> <li>Water-Sta</li> <li>Aquatic F</li> <li>True Aquatic F</li> <li>Hydrogen</li> <li>Mydrogen</li> <li>Oxidized</li> <li>Presence</li> <li>Recent Indiana</li> <li>Thin Mucl</li> <li>Gauge or</li> </ul>	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct k Surface Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS or Stressed Plants (D1) rphic Position (D2)
strictive Type: Depth (in marks: DROLO stland Hy mary Indi Surface High Wa Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati	Layer (if observed ches): drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations:	: one is requ Imagery (I re Surface	<ul> <li>Water-Sta</li> <li>Aquatic F</li> <li>True Aquatic F</li> <li>Hydrogen</li> <li>Mydrogen</li> <li>Oxidized</li> <li>Presence</li> <li>Recent Indiana</li> <li>Thin Mucl</li> <li>Gauge or</li> </ul>	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS or Stressed Plants (D1) rphic Position (D2)
strictive Type: Depth (in marks: DROLC etland Hy mary Indi Surface High Wa Saturati Water M Saturati Water M Saturati Saturati Utand Hy Saturati Saturati Utand Hy Saturati Satura	Layer (if observed ches): GGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations: ter Present?	: one is required Imagery (I re Surface	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Ird Thin Muc 37) Gauge or (B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (CS or Stressed Plants (D1) rphic Position (D2)

Project/Site: Seneca Wind Project	City/County: Seneca	Sampling Date: 9/18/2018	
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A3-UP
Investigator(s): JMM KMP	Section, Township, Range:	T2N R17E S21	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conc	ave, convex, none):	Convex
Slope (%): 0-5 Lat: 41.124413°	Long: <u>-82.916565°</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded (Sh)	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _X Yes No _X Yes No _X	Is the Sampled Area within a Wetland?	Yes	_ No_X
Remarks:				

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	、 ,
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Taraxacum officinale	25	Х	FACU	
2. Phleum pratense	20	Х	FACU	Prevalence Index = B/A =
3. Dactylis glomerata	15	Х	FACU	Hydrophytic Vegetation Indicators:
4. Trifolium pratense	15	X	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Aueen annes lace	10		UPL	2 - Dominance Test is >50%
6 Achillea millefolium	5		FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	90			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	30	= Total Co	ver	be present, unless disturbed or problematic.
1				Undrandutia
2				Hydrophytic Vegetation
£		= Total Co		Present? Yes No X
Remarks: (Include photo numbers here or on a separate		- 10(a) 00	VGI	

Profile Description: (Describe to the depth ne		dicator or conf	rm the absence of in	dicators.)
Depth <u>Matrix</u>	Redox Features	- 1 . 2		-
	color (moist) %	Type <sup>1</sup> Loc <sup>2</sup>		Remarks
<u>0-8</u> <u>10YR 4/3</u> <u>100</u>				
<u>8-16</u> <u>10YR 5/4</u> <u>100</u>				
		<u> </u>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Red	uced Matrix, MS=Masked \$	Sand Grains.	<sup>2</sup> Location: PL	=Pore Lining, M=Matrix.
Hydric Soil Indicators:				Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed Matr	rix (S4)	Coast Prair	ie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)		Dark Surfac	ce (S7)
Black Histic (A3)	Stripped Matrix (S6	5)	Iron-Manga	nese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mine	eral (F1)	Very Shallo	w Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Mat		Other (Expl	ain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3			
Depleted Below Dark Surface (A11)	Redox Dark Surfac	. ,	3	
Thick Dark Surface (A12)	Depleted Dark Surf	. ,		ydrophytic vegetation and
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redox Depressions	s (F8)		Irology must be present, urbed or problematic.
Restrictive Layer (if observed):				arbed of problematic.
			Hydric Soil Pres	sent? Yes No
Depth (inches): Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of one is required; of	check all that apply)		Secondary In	dicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves	s (B9)	Surface \$	Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)		Drainage	e Patterns (B10)
Saturation (A3)	True Aquatic Plants (B	B14)	Dry-Seas	son Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odd	or (C1)	Crayfish	Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizosphere	es on Living Roo	ts (C3) Saturatio	n Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced	Iron (C4)	Stunted of	or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction	n in Tilled Soils (	C6) Geomorp	phic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C	(7)	FAC-Neu	utral Test (D5)
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (I	D9)		
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Rem			
Field Observations:				
Surface Water Present? Yes No	X Depth (inches):			
	X Depth (inches):			
	X Depth (inches):		etland Hydrology Pre	esent? Yes <u>No X</u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor				

Project/Site: Seneca Wind Project	City/County: Seneca Sampling Date: 9/19/20	)18
Applicant/Owner: Seneca Wind LLC	State: OH Sampling Point: W-A8	
Investigator(s): JMM KMP	Section, Township, Range: T2N R16E S25	
Landform (hillslope, terrace, etc.): Linear	Local relief (concave, convex, none): Concave	
Slope (%): 0 Lat: 41.110156	Long: -82.970844 Datum: NAD 83	
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, free	equently flooded (Sh) NWI classification: N/A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes X Normal Circumstances	·
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed, explain any answers in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PSS			

### **VEGETATION** – Use scientific names of plants.

30'	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30'</u> )		Species?		Number of Dominant Species	
1. Populus deltoides	10	<u> </u>	FAC	That Are OBL, FACW, or FAC: _6 (A)	
2				Total Number of Dominant	
3				Species Across All Strata: 6 (B)	
4				(1)	
5				Percent of Dominant Species	
	10	= Total Cov		That Are OBL, FACW, or FAC: 100% (A/	3)
Sapling/Shrub Stratum (Plot size: 15' )		= Total Cov	/er	Prevalence Index worksheet:	
1. Salix nigra	15	Х	OBL	Total % Cover of: Multiply by:	
2. Cornus racemosa	10	X	FAC	OBL species         x 1 =	
3. Rubus occidentalis	5		FACU	FACW species         x 2 =	
	<u> </u>				
4				FAC species x 3 =	
5				FACU species x 4 =	
Herb Stratum (Plot size: <u>5'</u> )	30	= Total Cov	/er	UPL species x 5 =	
	15	v	FAC	Column Totals: (A) (B	5)
1. Ambrosia trifida		<u>X</u>			
2. Eupatorium perfoliatum	10	_X	OBL	Prevalence Index = B/A =	-
<sub>3.</sub> Verbena hastata	5		FACW	Hydrophytic Vegetation Indicators:	
4. Solidago gigantea	15	Х	FACW	1 - Rapid Test for Hydrophytic Vegetation	
5				2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporti	ng
8				data in Remarks or on a separate sheet)	
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9					
10	45			<sup>1</sup> Indicators of hydric soil and wetland hydrology must	5 m.s.
Woody Vine Stratum (Plot size:)	45	= Total Cov	/er	be present, unless disturbed or problematic.	
1				Hydrophytic	
2				Vegetation Present? Yes X No	
		= Total Cov	/er		
Remarks: (Include photo numbers here or on a separate s	sheet.)				

Depth inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
-6	10YR 4/2	100					SIL	
-16	10YR 4/2	95	7.5YR 5/6	5	С	М	SIL	
		bletion, RN	I=Reduced Matrix, N	IS=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
dric Soil	Indicators:						Indicators for	or Problematic Hydric Soils <sup>3</sup> :
_ Histosol				Gleyed Ma				rairie Redox (A16)
-	pipedon (A2)			Redox (St				rface (S7)
-	istic (A3) en Sulfide (A4)			d Matrix ( Mucky Mi				nganese Masses (F12) allow Dark Surface (TF12)
	d Layers (A5)			Gleyed M				Explain in Remarks)
-	uck (A10)		X Deplet					
Deplete	d Below Dark Surfac	e (A11)		Dark Surfa				
-	ark Surface (A12)			ed Dark Su		)		of hydrophytic vegetation and
- ,	lucky Mineral (S1)		Redox	Depressio	ons (F8)			hydrology must be present,
_ 5 cm Mi	icky Peat or Peat (S							
otriotivo	•	,					uniess u	listurbed or problematic.
	Layer (if observed)	,						isturbed or problematic.
Туре:	Layer (if observed)	,					Hydric Soil P	
Type: Depth (in	•	,						
Type: Depth (in	Layer (if observed)	,						
Type: Depth (in marks:	Layer (if observed) ches):							
Type: Depth (in emarks: DROLO etland Hy	Ches): GY drology Indicators:						Hydric Soil F	Present? Yes <u>X</u> No
Type: Depth (in emarks: DROLO etland Hy imary India	Ches): GY drology Indicators: cators (minimum of c		uired: check all that a				Hydric Soil P	Present? Yes X No
Type: Depth (in emarks: DROLO etland Hy imary India Surface	GY drology Indicators: cators (minimum of of Water (A1)		Water-Sta	ained Leav			Hydric Soil P	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6)
Type: Depth (in marks: DROLO etland Hy imary India Surface High Wa	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Leav auna (B13	3)		Hydric Soil F	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqu	ained Leav auna (B13 atic Plants	6) (B14)		Hydric Soil F	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Water M	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants n Sulfide O	3) (B14) dor (C1)	ving Roots	Hydric Soil F Secondar Surfa Drain Dry-S XCrayfi	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) iseason Water Table (C2) ish Burrows (C8)
Type: Depth (in emarks: DROLO etland Hy imary India Surface Surface Saturatia Saturatia Water M Sediment	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger Oxidized	ained Leav auna (B13 atic Plants n Sulfide O Rhizosphe	3) (B14) dor (C1) eres on Liv		Hydric Soil F	Present?       Yes       No         y Indicators (minimum of two requires (minimum of two requir
Type: Depth (in emarks: DROLO etland Hy imary India Surface Surface Surface Surface Surface Surface Surface Surface Surface 	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Leav auna (B13 atic Plants n Sulfide O Rhizosphe e of Reduce	3) (B14) dor (C1) eres on Liv ed Iron (C4	4)	Hydric Soil F	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Saturatia Saturatia Sedimenta Sedimenta Drift Del Algal Matical	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Leav auna (B13 atic Plants n Sulfide O Rhizosphe	) (B14) dor (C1) eres on Liv ed Iron (C- ion in Tille	4)	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunte 6) X Geom	Present?       Yes       No         y Indicators (minimum of two requires (minimum of two requir
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Saturatia Sedimen Drift Dep Algal Ma Iron Dep	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	pne is requ	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc	ained Leav auna (B13 atic Plants n Sulfide O Rhizosphe of Reduce on Reduct	) (B14) dor (C1) eres on Liv ed Iron (C- ion in Tille (C7)	4)	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunte 6) X Geom	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ed or Stressed Plants (D1) horphic Position (D2)
Type: Depth (in emarks: DROLO etland Hy imary India 	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	i i i i i i i i i i i i i i i i i i i	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent In     Thin Muc 37) Gauge or	ained Leav Fauna (B13 atic Plants on Sulfide O Rhizosphe on Reduct k Surface	(B14) dor (C1) eres on Liv ed Iron (C- ion in Tille (C7) (C9)	4)	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunte 6) X Geom	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ed or Stressed Plants (D1) horphic Position (D2)
Type: Depth (in emarks: <b>DROLO</b> etland Hy imary India Surface High Wa Saturatia Water M Sedimen Nyater M Sedimen Iron Dep Inundati Sparsely	GY GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav	i i i i i i i i i i i i i i i i i i i	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent In     Thin Muc 37) Gauge or	ained Leav Fauna (B13 atic Plants on Sulfide O Rhizosphe on Reduct k Surface	(B14) dor (C1) eres on Liv ed Iron (C- ion in Tille (C7) (C9)	4)	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunte 6) X Geom	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ed or Stressed Plants (D1) horphic Position (D2)
Type: Depth (in emarks: TDROLO etland Hy imary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely eld Obser	Ches):	i one is requ Imagery (I e Surface	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent In     Thin Muc 37) Gauge or	ained Leav fauna (B13 atic Plants o Sulfide O Rhizosphe of Reduce on Reducti k Surface Well Data cplain in Re	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) (D9) emarks)	4) d Soils (C	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunte 6) X Geom	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ed or Stressed Plants (D1) horphic Position (D2)
Type: Depth (in emarks: (DROLO /etland Hy rimary India Surface High Wa Saturatia Saturatia Water M Sedimea Nurface Mater Iron Dep Inundatia Sparsely ield Obser uurface Water	GY GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	Imagery (I e Surface /es	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent Ir     Thin Muc     Thin Muc     Gauge or     (B8) Other (Ex     No X Depth (ii     No X Depth (ii	ained Leav fauna (B13 atic Plants on Sulfide O Rhizosphe on Reduct k Surface ( Well Data cplain in Re nches):	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) (D9) emarks)	4) d Soils (C	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunte 6) X Geom	Present? Yes X No y Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ed or Stressed Plants (D1) horphic Position (D2)
Type: Depth (in emarks: //DROLO /etland Hy rimary India Surface High Wa Saturatia Saturatia Vater M Saturatia Nater M Saturatia Nater M Iron Dep Iron Dep Inundatia Iron Dep Inundatia Sparsely ield Obser uurface Wat /ater Table aturation P	GY GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	Imagery (I e Surface /es	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent Ir     Thin Muc 37) Gauge or (B8) Other (Ex No X Depth (iii	ained Leav fauna (B13 atic Plants on Sulfide O Rhizosphe on Reduct k Surface ( Well Data cplain in Re nches):	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) (D9) emarks)	4) d Soils (C	Hydric Soil F Secondar Surfa Drain. Dry-S X Crayf (C3) Satur Stunt 6) X Geom X FAC-	Present? Yes X No y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9 ed or Stressed Plants (D1) horphic Position (D2)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018	}
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A8-UP	)
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S25		
Landform (hillslope, terrace, etc.): Flat field		ave, convex, none):	Convex	
Slope (%): 0 Lat: 41.110189	Long: <u>-82.970769</u>		Datum: NAD 83	
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly		al Circumstances" p	oresent? Yes No	×
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	ls the Sampled Area within a Wetland?	Yes	No <u>X</u>
Remarks: Upland sample plot					

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)		- 10(a) 00		Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
				FACU species x 4 =
5				
Herb Stratum (Plot size: 5' )		= Total Co	over	UPL species x 5 =
1. Trifolium pratense	20	х	FACU	Column Totals: (A) (B)
2. Setaria faberi	5		FACU	Prevalence Index = B/A =
3. Dactylis glomerata	10	X	FACU	Hydrophytic Vegetation Indicators:
A Phleum pratense	15	X	FACU	1 - Rapid Test for Hydrophytic Vegetation
"				
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
	00	= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				be present, unless disturbed or problematic.
1	·			Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes No
Remarks: (Include photo numbers here or on a separate	sheet.)			1

Profile Des Depth	Matri	x			ox Feature				
(inches)	Color (moist)		Col	or (moist)	%	_Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 4/4	100						SIL	
	-								
						·			
	Concentration, D=[ I Indicators:	Depletion, R	RM=Reduc	ed Matrix, M	S=Masked	d Sand Gra	ains.		PL=Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :
				0	0	1			
Histoso					Gleyed Ma				rairie Redox (A16)
	Epipedon (A2) Histic (A3)				Redox (S5 d Matrix (S				rface (S7) nganese Masses (F12)
	jen Sulfide (A4)				Mucky Mi	,			allow Dark Surface (TF12)
	ed Lavers (A5)				Gleyed M				Explain in Remarks)
	luck (A10)				ed Matrix (				
	ed Below Dark Sur	face (A11)			Dark Surfa				
Thick D	Dark Surface (A12)	)		Deplete	ed Dark Su	urface (F7)		<sup>3</sup> Indicators of	of hydrophytic vegetation and
Sandy	Mucky Mineral (S1	1)		Redox	Depressio	ns (F8)		wetland	hydrology must be present,
5 cm M	lucky Peat or Peat	(S3)						unless d	listurbed or problematic.
Restrictive	Layer (if observe	ed):							
Type:								Undein Call D	No. X
	nches):		_					Hydric Soil P	Present? Yes <u>No X</u>
								Hydric Soil P	Present? Yes <u>No X</u>
Depth (i								Hydric Soil F	Present? Yes <u>No X</u>
Depth (i								Hydric Soil F	Present? Yes <u>No X</u>
Depth (i								Hydric Soil P	Present? Yes <u>No X</u>
Depth (i								Hydric Soil F	Present? Yes <u>No X</u>
Depth (ii Remarks:	nches):							Hydric Soil F	Present? Yes <u>No X</u>
Depth (ii Remarks: YDROLO	nches):							Hydric Soil P	Present? Yes <u>No X</u>
Depth (ii Remarks: YDROLC	nches): DGY ydrology Indicato	ors:		eck all that a	pply)				
Depth (ii Remarks: YDROLO Wetland H Primary Ind	nches): DGY ydrology Indicato licators (minimum d	ors:				es (B9)		Secondar	y Indicators (minimum of two required
Depth (ii Remarks: YDROL( Wetland Hy Primary Ind Surface	DGY ydrology Indicato icators (minimum e Water (A1)	ors:		_ Water-Sta	ined Leav			<u>Secondar</u> Surfa	y Indicators (minimum of two required ce Soil Cracks (B6)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface High W	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2)	ors:		_ Water-Sta _ Aquatic F	ained Leav auna (B13	)		<u>Secondar</u> Surfa Drain	<u>y Indicators (minimum of two required</u> ce Soil Cracks (B6) age Patterns (B10)
Depth (ii Remarks: YDROLC Wetland Hy Primary Ind Surface High W Saturat	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3)	ors:		_ Water-Sta _ Aquatic F _ True Aqua	ained Leav auna (B13 atic Plants	) (B14)		<u>Secondar</u> Surfa Drain Dry-S	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface High W Saturat Water	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1)	ors:		_ Water-Sta _ Aquatic F _ True Aqua _ Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	) (B14) dor (C1)	ing Roots	<u>Secondar</u> Surfa Drain Dry-S Crayf	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) eeason Water Table (C2) ish Burrows (C8)
Depth (ii Remarks: YDROLO Vetland H Primary Ind Surface High W Saturat Saturat Saturat Saturat	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	ors:		Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	) (B14) dor (C1) eres on Liv	•	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
Depth (ii Remarks: YDROLO Wetland H Primary Ind Surface High W Satural Satural Satural U Satural Drift De	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	ors:		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	nined Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	) (B14) dor (C1) eres on Liv ed Iron (C4	4)	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Saturt Sturt	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	DGY ydrology Indicato iicators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4)	ors:		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti	) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tille	4)	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geor	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface High W Satural Satural Sedime Drift De Algal M Iron De	DGY ydrology Indicato iicators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5)	o <b>rs:</b> of one is rea	quired: che 	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iro Thin Mucl	auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti < Surface (	) (B14) dor (C1) eres on Liv ed Iron (C4 fon in Tilleo (C7)	4)	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geor	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) tion Visible on Aer	ors: of one is rea	quired: che 	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl Gauge or	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti Surface ( Well Data	(B14) dor (C1) eres on Liv ed Iron (C4 fon in Tilled (C7) (D9)	4)	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geor	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Drift De Algal M Iron De Inunda Sparse	DGY ydrology Indicato icators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) tion Visible on Aer	ors: of one is rea	quired: che 	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iro Thin Mucl	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti Surface ( Well Data	(B14) dor (C1) eres on Liv ed Iron (C4 fon in Tilled (C7) (D9)	4)	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geor	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (ii Remarks: YDROLO Wetland H Primary Ind Surface High W Saturat Water I Saturat Unift De Algal M Iron De Inunda Sparse Field Obse	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) tion Visible on Aer ely Vegetated Concer rrvations:	ors: of one is red ial Imagery cave Surfac	quired: che 	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl Gauge or Other (Ex	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti s Surface ( Well Data plain in Re	(B14) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tilled (C7) (D9) emarks)	l) d Soils (Cl	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geor	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (ii Remarks: YDROLO Wetland Hy Primary Ind Surface Water I Sedime Sedime Algal M Iron De Inunda Sparse Field Obse Surface Wa	DGY ydrology Indicato licators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aer ely Vegetated Concer- strvations: ater Present?	o <b>rs:</b> of one is red ial Imagery cave Surfac Yes	quired: che 	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru Gauge or Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti Surface ( Well Data plain in Re	(B14) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tilled (C7) (D9) emarks)	l) d Soils (Co	<u>Secondar</u> Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geor	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (ii Remarks: YDROLO Vetland H Primary Ind Surface High W Saturat Saturat Saturat Unift De Algal M Iron De Inunda Sparse Field Obse	DGY ydrology Indicator icators (minimum e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Marks (B1) eposits (B3) Marks (B1) eposits (B3) fat or Crust (B4) eposits (B5) tion Visible on Aer ely Vegetated Concernations: ater Present? e Present?	o <b>rs:</b> of one is red ial Imagery cave Surfac Yes Yes	quired: che 	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl Gauge or Other (Ex	auna (B13 atic Plants Sulfide O Rhizosphe of Reduce Surface ( Well Data plain in Re uches):	(B14) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tilled (C7) (D9) emarks)	l) d Soils (Co	Secondar          Secondar         Surfa         Dry-S         Crayfi         (C3)       Sturta         Sturta         6)       Georn         FAC-1	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/18/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A7
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S24	
Landform (hillslope, terrace, etc.): Terrace	Local relief (cond	cave, convex, none):	Concave
Slope (%): 0 Lat: 41.113430	Long: <u>-82.967275</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded (Sh)	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norn	nal Circumstances" p	resent? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks:				

	Absolute	Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	4	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	4	(B)
4						. ,
5				Percent of Dominant Species	100%	(A/B)
		= Total Cov		That Are OBL, FACW, or FAC:		(A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- 10(a) 000		Prevalence Index worksheet:		
1. Cornus amomum	10	Х	OBL	Total % Cover of:	Multiply by:	
2.				OBL species	x 1 =	_
3				FACW species	x 2 =	
4				FAC species		
5				FACU species		
		= Total Cov		UPL species		
Herb Stratum (Plot size: <u>5'</u> )		- 10141 001		Column Totals: (		
1. Typha latifolia	35	Х	OBL			_ (0)
2. Leersia oryzoides	25	X	OBL	Prevalence Index = B/A	=	_
3 Solidago gigantea	5		FACW	Hydrophytic Vegetation India	cators:	
4. Ambrosia trifida	5		FAC	X 1 - Rapid Test for Hydroph	vtic Vegetation	
5. Echinochloa crus-galli	5		FACW	X 2 - Dominance Test is >50		
6. Phalaris arundinacea	25	X	FACW	3 - Prevalence Index is ≤3		
				4 - Morphological Adaptati		orting
7				data in Remarks or on a	a separate sheet)	Sorting
8				Problematic Hydrophytic V	egetation <sup>1</sup> (Explai	n)
9						
10				<sup>1</sup> Indicators of hydric soil and we	etland hydrology n	nust
	100	= Total Cov	ver	be present, unless disturbed or		luot
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Yes X	No	
		= Total Cov	ver			
Remarks: (Include photo numbers here or on a separate s	sheet.)					

Profile Des	cription: (Describe	to the dep	th needed to docu	ment the	e indicator	or confir	m the absence of	indicators.)
Depth	Matrix			ox Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-8	10YR 4/2	90	7.5YR 4/6	10	_ <u>C</u>	M/PL	SL	
8-16	10YR 4/2	85	7.5YR 4/6	15	С	M/PL	SCL	
			2					
<sup>1</sup> Type: C=C	Concentration, D=De	letion RM	=Reduced Matrix M	IS=Maske	ed Sand G	ains	<sup>2</sup> Location: F	PL=Pore Lining, M=Matrix.
	Indicators:		Treduced Matrix, W	10-1110510		anis.		r Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy	Gleved M	Aatrix (S4)			airie Redox (A16)
	pipedon (A2)			Redox (S			Dark Surf	
	listic (A3)			ed Matrix				ganese Masses (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky N	lineral (F1)		Very Sha	llow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loamy	Gleyed N	Matrix (F2)		Other (Ex	plain in Remarks)
	uck (A10)			ed Matrix	. ,			
	ed Below Dark Surface	ce (A11)		Dark Sur			3	
	ark Surface (A12)				Surface (F7	)		hydrophytic vegetation and
	Mucky Mineral (S1) lucky Peat or Peat (S	(3)	Redox	Depressi	ons (F8)			ydrology must be present, sturbed or problematic.
	Layer (if observed)							surbed of problematic.
Type:		•						
	nches):						Hydric Soil Pr	esent? Yes X No
	icites).							
Remarks:								
IYDROLC	DGY							
Wetland Hy	drology Indicators	:						
Primary Indi	icators (minimum of	one is requi	red; check all that a	(pply)			Secondary	Indicators (minimum of two required)
X Surface	e Water (A1)		Water-St	ained Lea	ves (B9)			e Soil Cracks (B6)
	ater Table (A2)		Aquatic F					ge Patterns (B10)
X Saturati			True Aqu		,			ason Water Table (C2)
	Marks (B1)				Odor (C1)			h Burrows (C8)
Sedime	ent Deposits (B2)		X Oxidized		. ,	ving Roots		tion Visible on Aerial Imagery (C9)
	eposits (B3)				ced Iron (C			d or Stressed Plants (D1)
Algal M	lat or Crust (B4)				tion in Tille		6) X Geomo	orphic Position (D2)
Iron De	posits (B5)		Thin Muc					eutral Test (D5)
	tion Visible on Aerial	Imagery (B			· ·			
Sparsel	ly Vegetated Concav	e Surface (	B8) Other (Ex	plain in F	Remarks)			
Field Obse	rvations:							
Surface Wa	ter Present?	res_X	No Depth (i	nches): 2				
Water Table			No Depth (i					
Saturation F			No Depth (i			Wet	and Hydrology P	resent? Yes X No
(includes ca	apillary fringe)							
Describe Re	ecorded Data (stream	n gauge, mo	onitoring well, aeria	photos, p	previous in	spections)	, if available:	

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018	
Applicant/Owner: Seneca Wind LLC	S	State: OH	Sampling Point: W-A6&7-L	JP
Investigator(s): _JMM KMP	Section, Township, Range: T2	N R16E S24		
Landform (hillslope, terrace, etc.): Flat field	Local relief (concave		Convex	
Slope (%): 0 Lat: _41.090126°	Long: -82.929816°		Datum: NAD 83	
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perce	ent slopes (Ble1B1)	NWI classifica	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes X No (I	If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal	Circumstances" p	resent?Yes No 🗡	<
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, ex	xplain any answer	s in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NO X NO X NO X	Is the Sampled Area within a Wetland?	Yes	No X
Remarks: Upland sample plot					

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	over	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	over	UPL species x 5 =
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)
1. Glycine max	80	Χ	UPL	
2. Setaria faberi	10		FACU	Prevalence Index = B/A =
3. Echinochloa crus-galli	10		FACW	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	100	= Total Co	wor	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- 10(a) 00		be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		= Total Co	ver	Present? Yes No
Remarks: (Include photo numbers here or on a separate	-	10101 00		

(inches)	Matrix Color (moist)	%	Color (moist)	ox Feature: %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 5/4	100					SIL	
	Concentration, D=Depl	letion, RM=R	educed Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :
			Sandy		triv (CA)			airie Redox (A16)
Histoso Histic F	Epipedon (A2)			Gleyed Ma Redox (S5				face (S7)
	listic (A3)			d Matrix (S				iganese Masses (F12)
	en Sulfide (A4)			Mucky Mir	,			allow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loamy	Gleyed Ma	atrix (F2)		Other (E:	xplain in Remarks)
_	luck (A10)			ed Matrix (I				
	ed Below Dark Surface	e (A11)		Dark Surfa			3 and and and an	
	ark Surface (A12) Mucky Mineral (S1)			ed Dark Su Depressio				f hydrophytic vegetation and hydrology must be present,
	lucky Peat or Peat (S3	3)		Depression	15 (10)			isturbed or problematic.
	Layer (if observed):							
								×
Restrictive Type:							Hydric Soil P	resent? Yes No
Restrictive Type: Depth (ir							Hydric Soil P	resent? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks:	nches):						Hydric Soil P	resent? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks:	nches):		_				Hydric Soil P	resent? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks: YDROLC Wetland Hy	nches):			oply)				resent? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind	DGY ydrology Indicators:			pply)	es (B9)		Secondary	
Restrictive Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface	DGY ydrology Indicators: icators (minimum of or		Water-Sta				<u>Secondary</u>	/ Indicators (minimum of two require
Restrictive Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W	DGY ydrology Indicators: icators (minimum of or e Water (A1)		Water-Sta Aquatic F	ined Leave	)		<u>Secondary</u> Surfac Draina	r Indicators (minimum of two require the Soil Cracks (B6)
Restrictive Type: Depth (ir Remarks: YDROLC Yetland Hy Primary Indi Surface High W Saturat	DGY ydrology Indicators: icators (minimum of or e Water (A1) /ater Table (A2)		Water-Sta Aquatic F True Aqua	ained Leav auna (B13)	) (B14)		<u>Secondary</u> <u>Surfac</u> Draina Dry-Se	<u>r Indicators (minimum of two require</u> ze Soil Cracks (B6) age Patterns (B10)
Restrictive Type: Depth (ir Remarks: YDROLC YUROLC Vetland Hy Primary Indi Surface High W Saturat Water M	DGY ydrology Indicators: icators (minimum of or e Water (A1) /ater Table (A2) ition (A3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Leave auna (B13) atic Plants Sulfide Oo Rhizosphe	) (B14) dor (C1) res on Liv	-	<u>Secondary</u> <u>Surfac</u> Draina <u>Dry-Se</u> Crayfis	<u>r Indicators (minimum of two require</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)
Restrictive Type: Depth (ir Remarks: YDROLC YDROLC Wetland Hy Primary Ind Saturat High W Saturat Water M Sedime Drift De	DGY ydrology Indicators: icators (minimum of or e Water (A1) dater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce	) (B14) dor (C1) res on Liv ed Iron (C4	4)	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Dry-Se</u> <u>Crayfis</u> (C3) <u>Satura</u> <u>Sturte</u></u>	<u>Indicators (minimum of two require</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Restrictive Type: Depth (ir Remarks: YDROLC YDROLC Netland Hy Primary Ind Surface High W Saturat Water M Sedime Drift De Algal M	DGY ydrology Indicators: icators (minimum of or e Water (A1) /ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In	auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce	) (B14) dor (C1) res on Liv d Iron (C4 on in Tilled	4)	<u>Secondary</u> Surfac Draina Dry-Se Crayfis (C3) Satura Stunte 6) Geom	<u>Indicators (minimum of two require</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2)
Restrictive Type: Depth (ir Remarks: YDROLC YDROLC Vetland Hy Primary Indi Surface High W Saturat Saturat Sedime Drift De Algal M Iron De	DGY ydrology Indicators: icators (minimum of or e Water (A1) //ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5)	ne is required	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Muc	ined Leave auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce on Reduction Surface (	) (B14) dor (C1) res on Liv d Iron (C4 on in Tilled C7)	4)	<u>Secondary</u> Surfac Draina Dry-Se Crayfis (C3) Satura Stunte 6) Geom	<u>Indicators (minimum of two require</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Restrictive Type: Depth (ir Remarks: YDROLC YDROLC Vetland Hy Primary Indi Saturat High W Saturat Water M Sedime Drift De Algal M Iron De Inundat	DGY ydrology Indicators: icators (minimum of or e Water (A1) /ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	ne is required	Water-Sta Aquatic F Aquatic F Hydrogen Oxidized Presence Recent Ind Gauge or	auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce	) (B14) dor (C1) res on Liv d Iron (C4 on in Tilled C7) (D9)	4)	<u>Secondary</u> Surfac Draina Dry-Se Crayfis (C3) Satura Stunte 6) Geom	<u>Indicators (minimum of two require</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2)

Water Table Present? Saturation Present? (includes capillary fringe)	Yes No _X Yes No _X		Wetland Hydrology Present?	Yes	No_X
	tream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:		
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/18/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A6
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S24	
Landform (hillslope, terrace, etc.): Terrace	Local relief (cond	cave, convex, none):	Concave
Slope (%): 0 Lat: 41.113464	Long: <u>-82.967103</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks: Cowardin: PEM				

	Absolute		t Indicator	Dominance Test workshee	t:	
Tree Stratum (Plot size:)		Species?		Number of Dominant Species	•	
1				That Are OBL, FACW, or FA	C: <u>3</u>	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	3	(B)
4						
5				Percent of Dominant Species That Are OBL, FACW, or FA		(A/B)
		= Total Co	ver			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Sapling/Shrub Stratum (Plot size:)				Prevalence Index workshee	ət:	
1				Total % Cover of:	Multiply by:	-
2				OBL species	x 1 =	_
3				FACW species	x 2 =	_
4				FAC species	x 3 =	
5				FACU species	x 4 =	
		= Total Co	ver	UPL species	x 5 =	
Herb Stratum (Plot size: 5')				Column Totals:		-
1. Typha latifolia	45	Х	OBL			_ (5)
2. Leersia oryzoides	15	Х	OBL	Prevalence Index = B/	A =	_
3. Solidago gigantea	10		FACW	Hydrophytic Vegetation Inc	dicators:	
Ambrosia trifida	10		FAC	X 1 - Rapid Test for Hydro	phytic Vegetation	
5. Echinochloa crus-galli	5		FACW	X 2 - Dominance Test is >		
6. Phalaris arundinacea	15	X	FACW	3 - Prevalence Index is s		
				4 - Morphological Adapta		porting
7				data in Remarks or o	n a separate sheet)	portang
8				Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	in)
9						
10	400			<sup>1</sup> Indicators of hydric soil and	wetland hydrology r	nust
Woody Vine Stratum (Plot size:)	100	= Total Co	ver	be present, unless disturbed	or problematic.	
1				Hydrophytic Vegetation		
2				Present? Yes	<u>No</u>	
		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sneet.)					

		to the de	pth needed to docu					
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2	90	7.5YR 4/6	10	C	MPL	SL	
8-16	10YR 4/2	85	7.5YR 4/6	15	- <u>-</u>	MPL	SCL	
	10111 4/2		1.011( 4/0					
1Tuno: C=C				S-Maaka	d Sand Cr		<sup>2</sup> l agation: <b>F</b>	PL = Poro Lipipa M=Motrix
Hydric Soil			I=Reduced Matrix, M	S-Maske	u Sanu Gi	ans.		PL=Pore Lining, M=Matrix. r Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	Gleved M	atrix (S4)			airie Redox (A16)
	oipedon (A2)		X Sandy				Dark Surf	
	istic (A3)			d Matrix (				ganese Masses (F12)
	en Sulfide (A4)				ineral (F1)			llow Dark Surface (TF12)
Stratified	d Layers (A5)		Loamy	Gleyed N	latrix (F2)		Other (Ex	plain in Remarks)
_	uck (A10)			ed Matrix	. ,			
	d Below Dark Surfac	ce (A11)		Dark Surf			3	
	ark Surface (A12)				urface (F7	)		hydrophytic vegetation and
_ /	/lucky Mineral (S1) ucky Peat or Peat (S	3)	Redox	Depressio	DIIS (FO)			ydrology must be present, sturbed or problematic.
	Layer (if observed)							subed of problemate.
	,,	-						
I vpe:								
Type: Depth (in	ches):						Hydric Soil Pr	esent? Yes X No
Depth (in Remarks:	ches):						Hydric Soil Pr	esent? Yes <u>X</u> No
Depth (in	ches):						Hydric Soil Pr	esent? Yes X No
Depth (in							Hydric Soil Pr	esent? Yes <u>X</u> No
Depth (in Remarks: HYDROLO Wetland Hy	GY drology Indicators							
Depth (in Remarks: HYDROLO Wetland Hy	GY drology Indicators		uired; check all that a	pply)				esent? Yes X No
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface	<b>GY</b> drology Indicators cators (minimum of Water (A1)		Water-Sta	ained Lea			<u>Secondary</u> Surface	Indicators (minimum of two required) e Soil Cracks (B6)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1	3)		<u>Secondary</u> Surface Draina	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface High Wa X Saturatio	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqua	ained Lea auna (B1 atic Plants	3) s (B14)		<u>Secondary</u> Surface Draina Dry-Se	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface X High Wa Saturatio Water M	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B1) atic Plants Sulfide C	3) s (B14) Odor (C1)		<u>Secondary</u> Surface Draina Dry-Se X Crayfis	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatio Water M Sedimen	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen X Oxidized	ained Lea auna (B1 atic Plants Sulfide C Rhizosph	3) s (B14) odor (C1) eres on Liv		<u>Secondary</u> <u>Surfact</u> Draina <u>Dry-Se</u> X Crayfis (C3) Satura	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9)
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatio Water M Sedimen Drift Dep	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) odor (C1) eres on Liv ed Iron (C4	4)	<u>Secondary</u> <u>Surface</u> Draina <u>Dry-See</u> X Crayfis (C3) Satura Stuntee	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta     Aquatic F     True Aqua     True Aqua     Hydrogen     X Oxidized     Presence     Recent In	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	<u>Secondary</u> <u>Surface</u> <u>Draina</u> <u>Dry-Se</u> <u>X</u> Crayfis (C3) <u>Satura</u> <u>Stunte</u> (6) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	<u>one is req</u> u	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Inc     Thin Mucl	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7)	4)	<u>Secondary</u> <u>Surface</u> <u>Draina</u> <u>Dry-Se</u> <u>X</u> Crayfis (C3) <u>Satura</u> <u>Stunte</u> (6) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial	<u>one is requ</u> Imagery (l	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Iro Gauge or Gauge or	ained Lea auna (B1) atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data	3) b (B14) b dor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surface</u> <u>Draina</u> <u>Dry-Se</u> <u>X</u> Crayfis (C3) <u>Satura</u> <u>Stunte</u> (6) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (in Remarks: <b>IYDROLO</b> Wetland Hy Primary India Surface High Wa X Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati Sparsely	<b>GY</b> drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav	<u>one is requ</u> Imagery (l	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Iro Thin Mucl 37) Gauge or	ained Lea auna (B1) atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data	3) b (B14) b dor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surface</u> <u>Draina</u> <u>Dry-Se</u> <u>X</u> Crayfis (C3) <u>Satura</u> <u>Stunte</u> (6) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations:	one is requ Imagery (I ve Surface	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Ird Thin Mucl 37) Gauge or (B8) Other (Ex	ained Lea auna (B1 atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data plain in R	3) b (B14) b dor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surface</u> <u>Draina</u> <u>Dry-Se</u> <u>X</u> Crayfis (C3) <u>Satura</u> <u>Stunte</u> (6) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	Imagery (l ve Surface Yes	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Iru Thin Mucl Thin Mucl (B8) Other (Ex No X Depth (ir	ained Lear auna (B1) atic Plants Sulfide C Rhizosph of Reduc on Reduc on Reduc k Surface Well Data plain in R	3) b (B14) b dor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surface</u> <u>Draina</u> <u>Dry-Se</u> <u>X</u> Crayfis (C3) <u>Satura</u> <u>Stunte</u> (6) <u>X</u> Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (in Remarks: HYDROLO Wetland Hy Primary India Surface High Wa Saturatia Water M Orift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	Imagery (I ve Surface Yes Yes	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Ira Thin Much 37) Gauge or (B8) Other (Ex No X Depth (ir No Depth (ir	ained Lea auna (B1) atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R nches): nches):	3) b (B14) b dor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4) d Soils (C	Secondary Surface Draina Dry-See X Crayfis (C3) Satura Stuntee 56) X Geomod X FAC-N	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (in Remarks: TYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat Water Table Saturation P	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present? Present?	Imagery (I ve Surface Yes Yes	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Iru Thin Mucl Thin Mucl (B8) Other (Ex No X Depth (ir	ained Lea auna (B1) atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R nches): nches):	3) b (B14) b dor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4) d Soils (C	Secondary Surface Draina Dry-See X Crayfis (C3) Satura Stuntee 56) X Geomod X FAC-N	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (in: Remarks: IYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present? Present? pillary fringe)	Imagery (I ve Surface Yes Yes _X Yes _X	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent Ira Thin Much 37) Gauge or (B8) Other (Ex No X Depth (ir No Depth (ir	ained Lea auna (B1 atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R nches): nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary Surface Draina Dry-See X Crayfis (C3) Satura Stuntee (6) X Geomody K FAC-N Stand Hydrology P	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (in: Remarks: IYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present? Present? pillary fringe)	Imagery (I ve Surface Yes Yes _X Yes _X	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Ira     Thin Mucl 37) Gauge or (B8) Other (Ex No X Depth (ir No Depth (ir No Depth (ir	ained Lea auna (B1 atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R nches): nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary Surface Draina Dry-See X Crayfis (C3) Satura Stuntee (6) X Geomody K FAC-N Stand Hydrology P	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A9
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S25	
Landform (hillslope, terrace, etc.): Linear	Local relief (cond	cave, convex, none):	Concave
Slope (%): 0 Lat: 41.098722	Long: <u>-82.972758</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded (Sh)	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No
Remarks		

Cowardin: PEM

Soils Continued: Glynwood clay loam, 6 to 12 percent slopes, eroded (GwD5C2)

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Phalaris arundinacea	45	Χ	FACW	
2. Apocynum cannabinum	5		FAC	Prevalence Index = B/A =
3. Leersia oryzoides	25	Х	OBL	Hydrophytic Vegetation Indicators:
4. Solidago gigantea	5		FACW	∠ 1 - Rapid Test for Hydrophytic Vegetation
5. Ambrosia trifida	5		FAC	2 - Dominance Test is >50%
6. Echinochloa crus-galli	5		FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Polygonum sagittatum	15		OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
10	105	= Total Co		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- 101ai 00	VCI	be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		= Total Co		Present? Yes <u>No</u>
Remarks: (Include photo numbers here or on a separate	sheet.)			

								Sampling Point:
Profile Des	cription: (Describe	to the dep	oth needed to docu	ument the	indicato	or confir	m the absence	of indicators.)
Depth	Matrix		Rec	lox Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2	95	7.5YR 4/6	5	<u> </u>	M	CL	
8-16	10YR 4/2	85	7.5YR 4/6	15	С	М	CL	
				_	_			
							·	
							·	
				_				
<sup>1</sup> Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix, M	AS=Maske	ed Sand G	rains.	<sup>2</sup> Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy	Gleyed N	Aatrix (S4)		Coast	Prairie Redox (A16)
Histic E	pipedon (A2)		Sandy	Redox (S	65)		Dark S	Surface (S7)
Black H	listic (A3)			ed Matrix				anganese Masses (F12)
	en Sulfide (A4)				lineral (F1			hallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2)		Other	(Explain in Remarks)
2 cm M			X Deple					
	ed Below Dark Surface	ce (A11)		Dark Sur			31	of hundred by the second of here and
	ark Surface (A12)				Surface (F7	()		of hydrophytic vegetation and
	Mucky Mineral (S1) ucky Peat or Peat (S	(3)	Kedos	Depressi	ons (Fo)			d hydrology must be present, disturbed or problematic.
	Layer (if observed)							
Type:	,							
	iches):						Hydric Soil	Present? Yes X No
Remarks:								
rtemarks.								
IYDROLC	DGY							
Wetland Hy	drology Indicators	:						
Primary Indi	cators (minimum of	one is requ	ired: check all that a	apply)			Seconda	ary Indicators (minimum of two required)
Surface	Water (A1)		Water-St	ained Lea	ves (B9)		Surf	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic I	Fauna (B1	3)		$\underline{\times}$ Drai	nage Patterns (B10)
Saturati	ion (A3)		True Aqu	uatic Plant	s (B14)		Dry-	Season Water Table (C2)
Water M	/larks (B1)		Hydroge	n Sulfide (	Odor (C1)		Cray	fish Burrows (C8)
Sedime	nt Deposits (B2)		Oxidized	Rhizosph	eres on Li	ving Roots	(C3) Satu	ration Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Presence	e of Reduc	ced Iron (C	(4)	Stur	nted or Stressed Plants (D1)
Algal M	at or Crust (B4)		Recent I	ron Reduc	tion in Till	ed Soils (C	6) X Geo	morphic Position (D2)
Iron De	posits (B5)		Thin Mud	ck Surface	e (C7)		X FAC	-Neutral Test (D5)
Inundat	ion Visible on Aerial	Imagery (B	(7) Gauge o	r Well Dat	a (D9)			
Sparsel	y Vegetated Concav	e Surface (	· _ ·	xplain in F				
Field Obser	rvations:							
Surface Wat	ter Present?	Yes	No X Depth (i	nches):				
Water Table			No X Depth (i					
Saturation F			No X Depth (i				and Hydrolog	y Present? Yes 🗶 No
(includes ca	pillary fringe)							,
Describe Re	ecorded Data (stream	n gauge, m	onitoring well, aeria	l photos, p	previous in	spections)	, if available:	

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC			Sampling Point: W-A9-UP
Investigator(s): _JMM KMP	Section, Township, Range: _	T2N R16E S25	
Landform (hillslope, terrace, etc.): Flat field		ave, convex, none):	Convex
Slope (%): 0 Lat: 41.098468°	Long: -82.972571°		Datum: NAD 83
Soil Map Unit Name: Glynwood clay loam, 6 to 12 percent slop	es, eroded	NWI classifica	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly		al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally provide the second seco	oblematic? (If needed,	explain any answer	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NO X NO X NO X	Is the Sampled Area within a Wetland?	Yes	. № <u>×</u>
Remarks: Upland sample plot					

\_\_\_\_\_

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co		UPL species x 5 =
Herb Stratum (Plot size: <u>5</u> )		rotar oo		Column Totals: (A) (B)
1. Glycine max	100	Х	UPL	
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
		= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No X
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	Matrix		Redo	ox Features			
(inches)	Color (moist)	%	Color (moist)	%Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 4/4	100				SIL	
	Concentration, D=Deple	tion, RM=F	Reduced Matrix, M	S=Masked Sand Gr	ains.		ore Lining, M=Matrix.
Histosc Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy 5 cm M	ol (A1) Epipedon (A2) Histic (A3) en Sulfide (A4) ed Layers (A5) Huck (A10) ed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Hucky Peat or Peat (S3)		Sandy Strippe Loamy Loamy Deplete Redox Deplete	Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Mucky Mineral (F1) Gleyed Matrix (F2) ed Matrix (F3) Dark Surface (F6) ed Dark Surface (F7 Depressions (F8)		Coast Prairie Dark Surface Iron-Mangane Very Shallow Other (Explain <sup>3</sup> Indicators of hyd wetland hydro	Redox (A16) (S7) se Masses (F12) Dark Surface (TF12)
Туре:	Layer (if observed):					Hydric Soil Preser	nt? Yes NoX
IYDROLO							

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

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018	
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A12	
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S36		_
Landform (hillslope, terrace, etc.): Slope	Local relief (conc	ave, convex, none):	Concave	
Slope (%): 0-3 Lat: 41.089012	Long: <u>-82.972068</u>		Datum: NAD 83	
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes <u>X</u> No	_
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _5 (A)
2				Total Number of Dominant
3				Species Across All Strata: _5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		i otai oo		Column Totals: (A) (B)
1. Scirpus atrovirens	15	Х	OBL	
2. Juncus effusus	15	Х	OBL	Prevalence Index = B/A =
3. Echinochloa crus-galli	20	Х	FACW	Hydrophytic Vegetation Indicators:
4. Panicum dichotomiflorum	15	Х	FACW	X 1 - Rapid Test for Hydrophytic Vegetation
5. Carex frankii	20	Х	OBL	2 - Dominance Test is >50%
6. Symphyotrichum racemosum	10		FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Euthamia graminifolia	5		FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8. Agrimonia parviflora	5		FACW	data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.				
···	105	= Total Co	Ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- 10(a) 00	VCI	be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes X No
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
-8	10YR 4/2	95	7.5YR 4/6	5	С	MPL	SIL	
-16	10YR 4/2	90	7.5YR 4/6	10	С	MPI	SIL	
		oletion, RM	I=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
	Indicators:							r Problematic Hydric Soils <sup>3</sup> :
_ Histosol				Gleyed M				airie Redox (A16)
_	pipedon (A2)			Redox (S			Dark Sur	• •
	istic (A3) en Sulfide (A4)			d Matrix (	ineral (F1)			ganese Masses (F12) llow Dark Surface (TF12)
	d Layers (A5)			Gleyed M				(plain in Remarks)
_	uck (A10)		X Deplete	ed Matrix (	(F3)			,
Deplete	d Below Dark Surfac	ce (A11)		Dark Surf				
_ Thick Da	ark Surface (A12)		Deplete	ed Dark S	urface (F7	)	<sup>3</sup> Indicators of	hydrophytic vegetation and
	lucky Mineral (S1)		Redox	Depressio	ons (F8)			ydrology must be present,
_ 5 cm Mu	ucky Peat or Peat (S	3)					unless di	sturbed or problematic.
-	• •	,						
	Layer (if observed)	,						
Туре:	Layer (if observed)	:					Hydric Soil Pr	
Туре:	• •	:					Hydric Soil Pr	
Type: Depth (in	Layer (if observed)	:					Hydric Soil Pr	
Type: Depth (in emarks: DROLO	Layer (if observed) ches):						Hydric Soil Pr	
Type: Depth (in emarks: DROLO etland Hy	Ches): GY drology Indicators	:						resent? Yes <u>X</u> No
Type: Depth (in emarks: DROLO etland Hy	Ches): GY drology Indicators	:	uired; check all that a					
Type: Depth (in emarks: DROLO etland Hy imary India _ Surface	GY drology Indicators cators (minimum of o Water (A1)	:	Water-Sta	ained Leav			<u>Secondary</u> Surfac	resent? Yes X No Indicators (minimum of two require e Soil Cracks (B6)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa	GY drology Indicators cators (minimum of e Water (A1) ater Table (A2)	:	Water-Sta Aquatic F	ained Leav auna (B13	3)		<u>Secondary</u> Surfac Draina	resent? Yes X No Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3)	:	Water-Sta Aquatic F True Aqua	ained Leav auna (B13 atic Plants	3) s (B14)		Secondary Surfac Draina Dry-Se	resent? Yes X No Indicators (minimum of two requir e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Water M	Layer (if observed) ches): drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	3) 5 (B14) 9dor (C1)		Secondary Surfac Draina Dry-Se Crayfis	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Type: Depth (in emarks: DROLO etland Hy imary India Surface Surface Saturatia Saturatia Water M Sediment	Layer (if observed) ches): drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	3) 5 (B14) 9dor (C1) eres on Liv		<u>Secondary</u> Surfac Draina Dry-Se Crayfis s (C3) Satura	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Water M Sedimei Drift Dep	GY drology Indicators cators (minimum of a water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduc	3) s (B14) odor (C1) eres on Liv ed Iron (C	4)	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Dry-Se</u> <u>Crayfis</u> (C3) <u>Satura</u> <u>Stunte</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Saturatia Saturatia Sedimenta Sedimenta Drift Del Algal Matical	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct	3) s (B14) odor (C1) eres on Liv ed Iron (C cion in Tille	4)	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Crayfis</u> (C3) <u>Satura</u> Stunte (6) <u>Geome</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Type: Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Saturatia Water M Sedimen Drift Dep Algal Ma Iron Dep	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is requ	Water-Sta     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface	3) s (B14) odor (C1) eres on Liv ed Iron (C tion in Tille (C7)	4)	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Crayfis</u> (C3) <u>Satura</u> Stunte (6) <u>Geome</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Type: Depth (in emarks: DROLO etland Hy imary India 	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial	: one is requ Imagery (I	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent In     Thin Mucl 37) _ Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	3) 5 (B14) Door (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Crayfis</u> (C3) <u>Satura</u> Stunte (6) <u>Geome</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Type: Depth (in emarks: TDROLO etland Hy imary India Surface High Wa Saturatia Vater M Sedimen Naturatia Drift Dep Iron Dep Inundatia Sparsely	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav	: one is requ Imagery (I	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent In     Thin Mucl 37) _ Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	3) 5 (B14) Door (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9)	4)	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Crayfis</u> (C3) <u>Satura</u> Stunte (6) <u>Geome</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Type: Depth (in emarks: DROLO etland Hy imary India Surface Surface Surface Surface Surface Surface   	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations:	inagery (I Imagery (I re Surface	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In Thin Mucl 37) Gauge or (B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	B) (B14) Odor (C1) eres on Live ed Iron (C tion in Tille (C7) a (D9) emarks)	4) d Soils (C	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Crayfis</u> (C3) <u>Satura</u> Stunte (6) <u>Geome</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Type: Depth (in emarks: <b>'DROLO</b> <b>'DROLO</b> <b>'dtland Hy</b> <b>'dtland Hy</b> <b>'dtlan</b>	Layer (if observed) ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	Imagery (I re Surface	Water-Sta Aquatic F Aquatic F Aquatic F Hydrogen X Oxidized Presence Recent In Recent In Gauge or (B8) Other (Ex No X Depth (ir	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	B) (B14) (C1) eres on Live ed Iron (C tion in Tille (C7) (C7) (D9) emarks)	4) d Soils (C	<u>Secondary</u> <u>Surfac</u> <u>Draina <u>Crayfis</u> (C3) <u>Satura</u> Stunte (6) <u>Geome</u></u>	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Type: Depth (in emarks: //DROLO /etland Hy rimary India Surface High Wa Saturatia Saturatia Sedimen Drift Dep Algal Ma Iron Dep Inundati Sparsely ield Obser	GY GY drology Indicators cators (minimum of a water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present? Present?	Imagery (I e Surface fes	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In Thin Mucl 37) Gauge or (B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re nches):	3) 5 (B14) 5 (B14) 5 (C1) 6 eres on Liv ed Iron (C 1 con in Tille (C7) 6 (D9) 6 emarks)	4) d Soils (C	Secondary Surfac Draina Dry-Se (C3) Satura Stunte (6) Geomo K FAC-N	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC			Sampling Point: W-A12-UP
Investigator(s): _JMM KMP	Section, Township, Range:		
Landform (hillslope, terrace, etc.): Flat field		ave, convex, none):	Convex
Slope (%): 0 Lat: 41.109140°	Long: <u>-83.028380°</u>		Datum: NAD 83
Soil Map Unit Name: Glynwood clay loam, 6 to 12 percent slop	es, eroded	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	_ No X _ No X _ No X	Is the Sampled Area within a Wetland?	Yes	No_X
Remarks: Upland sample plot					

### **VEGETATION** – Use scientific names of plants.

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		i otai oo		Column Totals: (A) (B)
1. Glycine max	100	Х	UPL	(-)
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:		= Total Co	ver	be present, unless disturbed or problematic.
1				
				Hydrophytic Vegetation
2				Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
Remarks. (include proto numbers here of on a separate	sileet.)			
1				

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Depth	Matrix	%	<u>Redox Features</u> Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Tautum	Demedia
(inches) 0-12	_ <u>Color (moist)</u> 10YR 4/4	100	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	_ <u>Texture</u> SIL	Remarks
J-12		100			
		letion, RM=	Reduced Matrix, MS=Masked Sand Grains.		⊧Pore Lining, M=Matrix.
Histoso Histic E Black H Hydrog	il Indicators: ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) <i>I</i> uck (A10)		<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> </ul>	Coast Prairie Dark Surfac Iron-Mangar Very Shalloo	roblematic Hydric Soils <sup>3</sup> : e Redox (A16) e (S7) nese Masses (F12) w Dark Surface (TF12) ain in Remarks)
Deplete Thick I Sandy 5 cm N	ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) /lucky Peat or Peat (S3	3)	<ul> <li> Depleted Matrix (F3)</li> <li> Redox Dark Surface (F6)</li> <li> Depleted Dark Surface (F7)</li> <li> Redox Depressions (F8)</li> </ul>	wetland hydr	rdrophytic vegetation and rology must be present, rbed or problematic.
Type:	e Layer (if observed):			Hydric Soil Pres	ent? Yes <u>No X</u>
Remarks:					
YDROLO	OGY				
Vetland H	ydrology Indicators:				
Primary Ind	dicators (minimum of o	ne is require	ed; check all that apply)	Secondary Inc	dicators (minimum of two required
Surface	e Water (A1)		Water-Stained Leaves (B9)	Surface S	Soil Cracks (B6)
_ High W	Vater Table (A2)		Aquatic Fauna (B13)	Drainage	Patterns (B10)
_ Satura	tion (A3)		True Aquatic Plants (B14)	Dry-Seas	on Water Table (C2)
Water	Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish I	Burrows (C8)
_ Sedime	ent Deposits (B2)		Oxidized Rhizospheres on Living Roots	s (C3) Saturation	n Visible on Aerial Imagery (C9)
_ Drift De	eposits (B3)		Presence of Reduced Iron (C4)	Stunted o	r Stressed Plants (D1)
Algal N	Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (0)	C6) Geomorp	hic Position (D2)

Inundation Visible on A	erial Imagery (B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Co	oncave Surface (B8)	Other (Explain in Remarks	5)		
Field Observations:					
Surface Water Present?	Yes No	X Depth (inches):			
Water Table Present?	Yes No	X Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No	X Depth (inches):	Wetland Hydrology Present?	Yes	No <u>×</u>
Describe Recorded Data (s	tream gauge, monitor	ing well, aerial photos, previous	s inspections), if available:		
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A13
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S35	
Landform (hillslope, terrace, etc.): floodplain	Local relief (conc	ave, convex, none):	concave
Slope (%): 0 Lat: 41.085575	Long: <u>-82.986255</u>		Datum: NAD 83
Soil Map Unit Name: Chagrin silt loam, occasionally flooded		NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X No
Remarks:			
Cowardin: PEM			

	Absolute		Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC	: 3	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	4	(B)
4				Descent of Descinent Origina		
5				Percent of Dominant Species That Are OBL, FACW, or FAC	75%	(A/B)
		= Total Co	ver			()
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet	::	
1. <mark>Salix nigra</mark>	10	<u>X</u>	OBL	Total % Cover of:	Multiply by:	_
2. <u>Rosa multiflora</u>	5	<u>X</u>	FACU	OBL species	x 1 =	_
3				FACW species	x 2 =	_
4				FAC species	x 3 =	_
5				FACU species		
	15	= Total Co	ver	UPL species		
Herb Stratum (Plot size: 5')		10101 00		Column Totals:		_
1. Phalaris arundinacea	45	Х	FACW			_ (0)
2. Impatiens capensis	15		FACW	Prevalence Index = B/A	=	_
3. Polygonum setaceum	5		OBL	Hydrophytic Vegetation Indi	cators:	
4 Ambrosia trifida	5		FAC	1 - Rapid Test for Hydrop	hytic Vegetation	
5. Leerzia oryzoides	20	X	OBL	X 2 - Dominance Test is >50	0%	
6. Boehmeria cylindrica	10		OBL	3 - Prevalence Index is ≤3	3.0 <sup>1</sup>	
				4 - Morphological Adaptat		porting
7				data in Remarks or on	a separate sheet)	5
8				Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	n)
9						
10	400			<sup>1</sup> Indicators of hydric soil and w	vetland hydrology n	nust
Woody Vine Stratum (Plot size:)	100	= Total Co	ver	be present, unless disturbed of	or problematic.	
1				Hydrophytic Vegetation		
2				Present? Yes X	No	
		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate s	sneet.)					

Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (moist)	lox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 4/2		.5YR 4/6	15	C	M/PL	SICL	Relians
0-16					- <del>0</del>	M/PL		
0-16	10YR 4/2	75 7	.5YR 4/6	25			SICL	
	oncentration, D=Depl	letion, RM=R	educed Matrix, N	//S=Maske	d Sand Gr	ains.		on: PL=Pore Lining, M=Matrix.
			Candu	Claused	atrix (CA)			
Histoso Histic E	pipedon (A2)			Gleyed M Redox (S				st Prairie Redox (A16) Surface (S7)
	istic (A3)		_ ,	ed Matrix (	·			Manganese Masses (F12)
_	en Sulfide (A4)				ineral (F1)			Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	Gleyed N	latrix (F2)			r (Explain in Remarks)
_ 2 cm M	uck (A10)		X Deplet	ed Matrix	(F3)			
	d Below Dark Surface	e (A11)		Dark Sur	. ,			
_	ark Surface (A12)				urface (F7	)		ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Redox	Depressi	ons (F8)			ind hydrology must be present,
5 Cm M	ucky Peat or Peat (S3	-					unies	ss disturbed or problematic.
	l aver (if observed):							
Restrictive	Layer (if observed):							
estrictive			-				Hydric So	oil Present? Yes X No
Restrictive Type: Depth (in			_				Hydric So	oil Present? Yes X No
Restrictive Type: Depth (in Remarks:	ches):						Hydric So	oil Present? Yes <u>X</u> No
Restrictive Type: Depth (in Remarks:	ches):						Hydric So	oil Present? Yes <u>X</u> No
Restrictive Type: Depth (in Remarks: YDROLO Vetland Hy	ches): DGY drology Indicators:							
Restrictive Type: Depth (in Remarks: YDROLO Vetland Hy Primary Indi	ches): DGY drology Indicators: cators (minimum of o				(E0)		<u>Secon</u>	dary Indicators (minimum of two requi
Restrictive Type: Depth (in Remarks: YDROLO Yetland Hy Primary Indi Surface	ches): DGY drology Indicators: cators (minimum of o Water (A1)		Water-St	ained Lea			<u>Secon</u>	dary Indicators (minimum of two requinurface Soil Cracks (B6)
Sestrictive Type: Depth (in Remarks:  YDROLC Vetland Hy Primary Indi Surface High Wa	ches): IGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2)		Water-St Aquatic F	ained Lea Fauna (B1	3)		<u>Secon</u> Su Dr	dary Indicators (minimum of two requinurface Soil Cracks (B6) rainage Patterns (B10)
Restrictive Type: Depth (in Remarks: YDROLO Vetland Hy Primary Indi Surface High Wa Saturati	Ches): DGY drology Indicators: <u>cators (minimum of o</u> Water (A1) ater Table (A2) on (A3)		Water-St Aquatic F True Aqu	ained Lea Fauna (B1 uatic Plants	3) s (B14)		<u>Secon</u> Su Dr Dr	dary Indicators (minimum of two requi urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2)
	ches): PGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-St Aquatic F True Aqu Hydroge	ained Lea Fauna (B1 uatic Plants n Sulfide C	3) s (B14) Odor (C1)	ing Roots	<u>Secon</u> Su Dr Dr XCr	dary Indicators (minimum of two requi urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Saturati Saturati Sedime	ches): PGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-St Aquatic F True Aqu Hydroge X Oxidized	ained Lea Fauna (B1 uatic Plants n Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv	-	<u>Secon</u> Su Dr Dr XCr (C3)Sa	dary Indicators (minimum of two requi urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Saturati Saturati Sedime Drift De	ches): PGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water-St Aquatic F True Aqu Hydroge X Oxidized	ained Lea Fauna (B1 latic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4	4)	<u>Secon</u> Su Dr Dr XCr (C3)St St	dary Indicators (minimum of two requi urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9 unted or Stressed Plants (D1)
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Saturati Sedime Drift De Algal Ma	ches): PGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-St Aquatic F True Aqu Hydroge X Oxidized Presence Recent I	ained Lea Fauna (B1 latic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	<u>Secon</u> Su Dr Dr Dr Cr (C3)St St 5) <u>X</u> Ge	dary Indicators (minimum of two requi urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8

Sparsely Vegetated Co	ncave Surface	(B8)	Other (Explain in Rema	arks)	
Field Observations:					
Surface Water Present?			Depth (inches):		
Water Table Present?	Yes	. № <u>×</u>	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):	Wetland Hydrology Present?	Yes X No
Describe Recorded Data (st	ream gauge, r	nonitoring v	vell, aerial photos, previ	ious inspections), if available:	
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018	
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A13-UP	
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S35		
Landform (hillslope, terrace, etc.): Slope	Local relief (conc	ave, convex, none):	Convex	
Slope (%): 0-3 Lat: 41.085598°	Long: <u>-82.986407°</u>		Datum: NAD 83	
Soil Map Unit Name: Chagrin silt loam, occasionally flooded		NWI classific	ation: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	present? Yes X No	_
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)	

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

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

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				
5				Percent of Dominant Species
		= Total Co		That Are OBL, FACW, or FAC: 0 (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- Total Co	ver	Prevalence Index worksheet:
1. Rubus allegheniensis	5		FACU	Total % Cover of: Multiply by:
				OBL species         x 1 =
2				FACW species x 2 =
3				
4				FAC species x 3 =
5				FACU species x 4 =
5'		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')	75	V	וחו	Column Totals: (A) (B)
1. <u>Maiz</u>	75	<u>X</u>	UPL	
2. Setaria faberi	10		FACU	Prevalence Index = B/A =
3. Solodago canadensis	5		FACU	Hydrophytic Vegetation Indicators:
4. Dactylis glomerata	5		FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Phleum pratense	5		FACU	2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	100	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				· · · · · · · · · · · · · · · · · · ·
1				Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate	sheet.)			

(inches)	Matrix Color (moist) %	<u></u>	Texture Remarks
-12	10YR 4/4 100		SIL
	Concentration, D=Depletion, RM=F	Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
_ Histosc		Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
	Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
_	listic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
_	en Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratifie	ed Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ 2 cm M	luck (A10)	Depleted Matrix (F3)	
	ed Below Dark Surface (A11)	Redox Dark Surface (F6)	
_	Dark Surface (A12)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
_ ,	Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
	lucky Peat or Peat (S3)		unless disturbed or problematic.
	Layer (if observed):		
Type:		<u> </u>	Hydric Soil Present? Yes NoX
Depth (ir	nches):		
DROLO			
	vdrology Indicators:	1 1 2 1 2 1 2 2 3 3 3 3 4 4 4 5 4 5 4 5 5 5 5 5 5 5 5 5	
	icators (minimum of one is require		Secondary Indicators (minimum of two require
_	e Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
_ •	ater Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
_	tion (A3)	True Aquatic Plants (B14)	Dry-Season Water Table (C2)
	Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
_		Oxidized Rhizospheres on Living Root	s (C3) Saturation Visible on Aerial Imagery (C9
_ Sedime	ent Deposits (B2)		
Sedime Drift De	eposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Sedime Drift De Algal M	eposits (B3) lat or Crust (B4)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (	<ul> <li>Stunted or Stressed Plants (D1)</li> <li>Geomorphic Position (D2)</li> </ul>
Sedime Drift De Algal M Iron De	eposits (B3)	<ul> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (</li> <li>Thin Muck Surface (C7)</li> </ul>	Stunted or Stressed Plants (D1)

Inundation visible on A	enai imagery	(67)	- Gauge of Well Data (D9)			
Sparsely Vegetated Co	ncave Surfac	ce (B8)	Other (Explain in Remark	s)		
Field Observations:						
Surface Water Present?	Yes	_ <sub>No</sub> _X	_ Depth (inches):			
Water Table Present?	Yes	_ No _X	_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	No _X	_ Depth (inches):	Wetland Hydrology Present?	Yes	<u>No</u>
Describe Recorded Data (s	tream gauge	monitoring	well, aerial photos, previou	s inspections), if available:		
Remarks:						

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind LLC	Sta	ate: OH	Sampling Point: W-A11
Investigator(s): JMM KMP	Section, Township, Range: T2N	NR16E S36	
Landform (hillslope, terrace, etc.): Slope	Local relief (concave,	, convex, none):	Concave
	Long: <u>-82.974342</u>		Datum: NAD 83
Soil Map Unit Name: Glynwood silt loam, end moraine, 2 to 6 p	percent slopes (Gwe1B1)	_ NWI classifica	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No (If	no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal C	ircumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, exp	plain any answer	s in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks: Cowardin: PEM				

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _4 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Euthamia graminifolia	30	Χ	FACW	
2. Solidago gigantea	15	Х	FACW	Prevalence Index = B/A =
3. Symphyotrichum racemosum	15	Х	FACW	Hydrophytic Vegetation Indicators:
4. Juncus effusus	15	Х	OBL	X 1 - Rapid Test for Hydrophytic Vegetation
5. Scirpus atrovirens	5		OBL	2 - Dominance Test is >50%
6. Carex vulpinoidea	5		FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Echinochloa crus-galli	5		FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8	·			data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10		= Total Co		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		= Total Co	ver	be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes X No
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	Matrix			lox Feature		12	<b>T</b> +	Demote
(inches)	Color (moist)		Color (moist)	%	Type	Loc <sup>2</sup>		e Remarks
0-3	10YR 4/2 10YR 4/2			5	- <u>-</u>		SIL	
3-10			7.5YR 5/6		_	<u>M</u>		
10-16		<u>85</u> 	7.5YR 4/6	<u>15</u>	C	M	CL	
Type: C=C	oncentration, D=Depl	etion, RM=F	Reduced Matrix, N	//S=Maske	ed Sand Gr	ains.		ation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils <sup>3</sup> :
Black Hi Hydroge Stratified 2 cm Mu Depleted Thick Da Sandy M	I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S3		Sandy Strippe Loamy Loamy X Deplet Redox Deplet	Gleyed M ed Matrix Dark Sur	5) S6) ineral (F1) latrix (F2) (F3) face (F6) urface (F7		Ca Da Irc Ve Of <sup>3</sup> Indica we	bast Prairie Redox (A16) ark Surface (S7) on-Manganese Masses (F12) ery Shallow Dark Surface (TF12) ther (Explain in Remarks) ators of hydrophytic vegetation and etland hydrology must be present, nless disturbed or problematic.
							-	
Restrictive Type: Depth (in	Layer (if observed):						Hydric	Soil Present? Yes X No
Restrictive Type: Depth (in							Hydric	Soil Present? Yes X No
Restrictive   Type: Depth (in Remarks:	ches):						Hydric	Soil Present? Yes X No
Restrictive Type: Depth (in Remarks: YDROLO	ches):						Hydric	Soil Present? Yes X No
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy	ches):	ne is require		apply)				
Restrictive Type: Depth (in Remarks: YDROLO Vetland Hy Primary India	ches): DGY drology Indicators:	ne is require		apply)	ves (B9)		<u>Sec</u>	Soil Present? Yes X No ondary Indicators (minimum of two required Surface Soil Cracks (B6)
Restrictive Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface	ches): PGY drology Indicators: cators (minimum of or	ne is require		ained Lea			<u>Sec</u>	ondary Indicators (minimum of two required
Restrictive Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface	ches): IGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2)	ne is require	Water-St Aquatic F	ained Lea	3)		<u>Sec</u>	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Restrictive Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturatio	ches): IGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2)	ne is require	Water-St Aquatic F True Aqu	ained Lea Fauna (B1	3) s (B14)		<u>Sec</u>	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
Restrictive I Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary India Surface High Wa Saturatia Saturatia Water M	Ches): DGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3)	ne is require	Water-St Aquatic F True Aqu Hydroger	ained Lea Fauna (B1 uatic Plants n Sulfide C	3) s (B14) Odor (C1)	ving Roots	Sec   	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Restrictive I Type: Depth (in Remarks: YDROLO YDROLO Wetland Hy Primary India Saturation Saturation Saturation Saturation Saturation Saturation Saturation Saturation Saturation Saturation Saturation	ches): PGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1)	ne is require	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea Fauna (B1 latic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv red Iron (C	4)	<u>Sec</u>	ondary 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)
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimei Drift Dej	ches): DGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	ne is require	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea Fauna (B1 latic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv red Iron (C		<u>Sec</u> <u>—</u> (C3) <u>—</u> (C3) <u>—</u> (C3) <u>X</u>	ondary 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)
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Saturatia Saturatia Water M Sedimen Drift Den Algal Ma	ches): DGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	ne is require	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea Fauna (B1 latic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv eed Iron (C tion in Tille	4)	<u>Sec</u> <u>—</u> (C3) <u>—</u> (C3) <u>—</u> (C3) <u>X</u>	ondary 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)
Restrictive Type: Depth (in Remarks: Primarks: Wetland Hy Primary India Water M Saturatia Water M Saturatia Urift Dep Algal Ma Iron Dep Inundati	ches): GGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	magery (B7)	Water-St Aquatic F Aquatic F Hydroger Oxidized Recent Ir Gauge of	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph of Reduc ron Reduc	3) s (B14) Odor (C1) eres on Liv eed Iron (C tion in Tille (C7)	4)	<u>Sec</u> <u>—</u> (C3) <u>—</u> (C3) <u>—</u> (C3) <u>X</u>	ondary 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)

Field Observations:			
Surface Water Present?	Yes No Depth (inches):		
Water Table Present?	Yes No X Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes No X Depth (inches):	Wetland Hydrology Present? Yes	XNo
Describe Recorded Data (str	eam gauge, monitoring well, aerial photos, previo	bus inspections), if available:	
Remarks:			

\_\_\_\_

Project/Site: Seneca Wind Project	City/County: Seneca	Sampling Date: <u>9/20/2018</u>
Applicant/Owner: Seneca Wind LLC	State: OH	
Investigator(s): JMM KMP	Section, Township, Range: T2N R16E S	
Landform (hillslope, terrace, etc.): Flat field	Local relief (concave, convex, r	
Slope (%): 0 Lat: 41.083858°	Long: <u>-82.974109°</u>	Datum: NAD 83
Soil Map Unit Name: Glynwood silt loam, end moraine, 2 to 6 p	percent slopes (Gwe1B1) NWI cl	assification: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u> </u>	in in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstan	ices" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any a	answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	N0 X N0 X N0 X	Is the Sampled Area within a Wetland?	Yes	No_X
Remarks: Upland sample plot					

### **VEGETATION** – Use scientific names of plants.

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
··		= Total Co		That Are OBL, FACW, or FAC: 0 (A/B)
Sapling/Shrub Stratum (Plot size:)		- 10tai 00	Vei	Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
				FACU species          x 4 =
5				
Herb Stratum (Plot size: <u>5</u> )		= Total Co	ver	UPL species x 5 = (D)
1. Zea mays	100	Х	UPL	Column Totals: (A) (B)
				Prevalence Index = B/A =
2				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
		= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No X
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

I

Depth	Matrix	%	<u>Redox Features</u> Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Tautum	Demedia
(inches) 0-12	_ <u>Color (moist)</u> 10YR 4/4	100	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	_ <u>Texture</u> SIL	Remarks
J-12		100			
		letion, RM=	Reduced Matrix, MS=Masked Sand Grains.		⊧Pore Lining, M=Matrix.
Histoso Histic E Black H Hydrog	il Indicators: ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) <i>I</i> uck (A10)		<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> </ul>	Coast Prairie Dark Surfac Iron-Mangar Very Shalloo	roblematic Hydric Soils <sup>3</sup> : e Redox (A16) e (S7) nese Masses (F12) w Dark Surface (TF12) ain in Remarks)
Deplete Thick I Sandy 5 cm N	ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) /lucky Peat or Peat (S3	3)	<ul> <li> Depleted Matrix (F3)</li> <li> Redox Dark Surface (F6)</li> <li> Depleted Dark Surface (F7)</li> <li> Redox Depressions (F8)</li> </ul>	wetland hydr	rdrophytic vegetation and rology must be present, rbed or problematic.
Type:	e Layer (if observed):			Hydric Soil Pres	ent? Yes <u>No X</u>
Remarks:					
YDROLO	OGY				
Vetland H	ydrology Indicators:				
Primary Ind	dicators (minimum of o	ne is require	ed; check all that apply)	Secondary Inc	dicators (minimum of two required
Surface	e Water (A1)		Water-Stained Leaves (B9)	Surface S	Soil Cracks (B6)
_ High W	Vater Table (A2)		Aquatic Fauna (B13)	Drainage	Patterns (B10)
_ Satura	tion (A3)		True Aquatic Plants (B14)	Dry-Seas	on Water Table (C2)
Water	Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish I	Burrows (C8)
_ Sedime	ent Deposits (B2)		Oxidized Rhizospheres on Living Roots	s (C3) Saturation	n Visible on Aerial Imagery (C9)
_ Drift De	eposits (B3)		Presence of Reduced Iron (C4)	Stunted o	r Stressed Plants (D1)
Algal N	Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (0)	C6) Geomorp	hic Position (D2)

Field Observations:

Surface Water Present?

Water Table Present?

Saturation Present? (includes capillary fringe)

Remarks:

Inundation Visible on Aerial Imagery (B7)
 Gauge or Well Data (D9)
 Sparsely Vegetated Concave Surface (B8)
 Other (Explain in Remarks)

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_

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

Wetland Hydrology Present? Yes \_\_\_\_ No X

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date:	9/20/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point:	W-A14
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S35		
Landform (hillslope, terrace, etc.): Depressional	Local relief (conc	ave, convex, none):	Concave	
Slope (%): 0 Lat: 41.090248	Long: -82.993673		Datum: NAD 8	3
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	oresent? Yes 🚬	<u>&lt; №</u>
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	, explain any answei	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PFO			

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. Acer rubrum	20	<u>X</u>	FAC	That Are OBL, FACW, or FAC: 9 (A)
2. Quercus palustris	15	<u>X</u>	FACW	Total Number of Dominant
3. Populus deltoides	10	Х	FAC	Species Across All Strata: 9 (B)
4				
5.				Percent of Dominant Species
5	45	= Total Cov		That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		= Total Cov	/er	Prevalence Index worksheet:
1. Cornus amomum	25	Х	FACW	Total % Cover of: Multiply by:
2. Rosa multiflora	5		FACU	OBL species
				FACW species x 2 =
3				
4				FAC species x 3 =
5				FACU species x 4 =
5'	30	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5')	20	V	FACW	Column Totals: (A) (B)
1. Carex intumescens	20	<u>X</u>		
2. Boehmeria cylindrica	25	<u>X</u>	OBL	Prevalence Index = B/A =
3. Apocynum cannabinum	5		FAC	Hydrophytic Vegetation Indicators:
4. Impatiens capensis	15	Х	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Toxicodendron radicans	15	Х	FAC	$\overline{X}$ 2 - Dominance Test is >50%
6. Lysimachia nummularia	5		FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Onoclea sensibilis	5		FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9	·			
10	90			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 15' )		= Total Cov	/er	be present, unless disturbed or problematic.
1. Toxicodendron radicans	5	Х	FAC	Hadron bartis
2.	· <u>· · · · · · · · · · · · · · · · · · </u>			Hydrophytic Vegetation
£		- Tatal Car		Present? Yes X No
Demortes (Include photo numbers have as an a consistent		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate s	sneet.)			

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
D-6	10YR 3/2	95	7.5YR 4/6	5	C	 M	SIL	
6-16	10YR 4/1	90	7.5 YR 5/6	10	C	M	SICL	
vpe: C=C	oncentration, D=Der		I=Reduced Matrix, M	  S=Maske	  d Sand Gr	ains.	2Location	PL=Pore Lining, M=Matrix.
	Indicators:	,						for Problematic Hydric Soils <sup>3</sup> :
Black Hi Hydroge Stratified	(A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10)		Sandy Strippe Loamy Loamy	Gleyed M Redox (S d Matrix ( Mucky Mi Gleyed M ed Matrix (	5) S6) neral (F1) latrix (F2)		Dark S Iron-M Very S	Prairie Redox (A16) surface (S7) anganese Masses (F12) hallow Dark Surface (TF12) (Explain in Remarks)
Thick Da Sandy M 5 cm Mu	d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S	3)			urface (F7	)	wetland	of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.
actrictive I								
cestrictive i	Layer (if observed)	:						
Type:	Layer (if observed)	:					Hydric Soil	Present? Ves X No
							Hydric Soil	Present? Yes X No
Type: Depth (ind							Hydric Soil	Present? Yes X No
Type: Depth (inc Remarks: YDROLO	ches):						Hydric Soil	Present? Yes <u>X</u> No
Type: Depth (inc Remarks: YDROLO Vetland Hyd	ches): GY drology Indicators							
Type: Depth (inc Remarks: YDROLO Vetland Hyd Primary Indic	GY drology Indicators cators (minimum of c		uired: check all that a		/es (B0)		Seconda	ary Indicators (minimum of two require
Type: Depth (ind Remarks: YDROLO Vetland Hyd Primary India Surface	GY drology Indicators cators (minimum of o Water (A1)		Water-Sta	ained Leav			<u>Seconda</u>	ary Indicators (minimum of two require ace Soil Cracks (B6)
Type: Depth (inc Remarks: YDROLO Yetland Hyo Primary Indic Surface High Wa	GY drology Indicators cators (minimum of o Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Leav auna (B13	3)		<u>Seconda</u> Surf XDrai	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10)
Type: Depth (inc Remarks: YDROLO Yetland Hyd Primary Indic Surface Surface High Wa Saturatio	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqua	ained Leav auna (B13 atic Plants	3) 5 (B14)		<u>Seconda</u> <u>Sura</u> <u>Drai</u> Dry-	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Type: Depth (ind Remarks: YDROLO Yetland Hyd Yrimary Indio Surface High Wa Saturatio Water M	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide C	3) 5 (B14) 9dor (C1)	ving Roots	Seconda Surf XDrai Dry- Cray	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8)
Type: Depth (inc Remarks: YDROLO Yetland Hyu Yrimary Indio Surface High Wa Saturatio Saturatio Water M Sedimer	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqua	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe	3) 5 (B14) 9dor (C1) eres on Liv		<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Sat</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8)
Type: Depth (inc Remarks: YDROLO Yetland Hyo Primary India Surface Saturatia Saturatia Saturatia Sedimer Drift Dep	GY drology Indicators cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduc	3) 6 (B14) 9dor (C1) eres on Liv ed Iron (C	4)	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) ıration Visible on Aerial Imagery (C9)
Type: Depth (inc Remarks: YDROLO Yetland Hyp Primary India Surface High Wa Saturatio Saturatio Sedimer Drift Dep Algal Ma	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct	3) 5 (B14) 9dor (C1) eres on Liv ed Iron (C ion in Tille	4)	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u> 6) <u>X</u> Geo	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
Type: Depth (inc Remarks: YDROLO YDROLO Vetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	: one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface	3) 5 (B14) odor (C1) eres on Liv ed Iron (C ion in Tille (C7)	4)	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u> 6) <u>X</u> Geo	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (inc Remarks: YDROLO YDROLO Vetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc 37) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	B) (B14) bdor (C1) eres on Live ed Iron (C ion in Tille (C7) a (D9)	4)	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u> 6) <u>X</u> Geo	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (inc Remarks: YDROLO YDROLO Vetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav	: one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc 37) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	B) (B14) bdor (C1) eres on Live ed Iron (C ion in Tille (C7) a (D9)	4)	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u> 6) <u>X</u> Geo	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (inc Remarks: YDROLO Yetland Hyo Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations:	: one is requ Imagery (E re Surface	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc 37) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	B) dor (C1) eres on Live ed Iron (C ion in Tille (C7) a (D9) emarks)	4) ed Soils (C	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u> 6) <u>X</u> Geo	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (inc Remarks: YDROLO Yetland Hyu Primary Indio Surface High Wa Saturatio Saturatio Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser	GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	: one is requ Imagery (E re Surface	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Recent In Thin Muc 37) Gauge or (B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	B) (B14) odor (C1) eres on Live ed Iron (C ion in Tille (C7) a (D9) emarks)	4) ed Soils (C	<u>Seconda</u> <u>Surf</u> <u>X</u> Drai <u>Cray</u> (C3) <u>Stur</u> 6) <u>X</u> Geo	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tted or Stressed Plants (D1) morphic Position (D2)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	_ No <u>X</u>
Remarks:					
Upland sample plot					

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> )		Species?		Number of Dominant Species
1. Acer saccharum		<u> </u>	FACU	That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				,
5				Percent of Dominant Species
		= Total Cov		That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- 10tai 00t		Prevalence Index worksheet:
1. Acer saccharum	15	Х	FACU	Total % Cover of:Multiply by:
2. Ulmus rubra	5	Х	FAC	OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Cov	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Potentilla simplex	5	Χ	FACU	
2. Polygonum virginianum	5	Х	FAC	Prevalence Index = B/A =
3. Ageratina altissima	5	Х	FACU	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	4.5			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 15')	15	= Total Cov	ver	be present, unless disturbed or problematic.
1. Parthenocissus quinquefolia	5	Х	FACU	Hydrophytic
2.				Vegetation
		= Total Cov	/er	Present? Yes No
Remarks: (Include photo numbers here or on a separate				1
	,			

Depth (inches)	Matrix Color (moist)	Redox Features           %         Color (moist)         %         Type <sup>1</sup> Loc <sup>2</sup>	Texture Remarks
0-12			SIL
		n, RM=Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
	Indicators:	n, Nin-Reduced Matrix, MS-Masked Sand Grans.	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosc		Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
_	Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
	listic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
_	en Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
_ , .	ed Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_	luck (A10)	Depleted Matrix (F3)	
_	ed Below Dark Surface (		
	ark Surface (A12)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm M	lucky Peat or Peat (S3)		unless disturbed or problematic.
estrictive	Layer (if observed):		
Туре:			
Depth (ir	nches):		Hydric Soil Present? Yes No _>
Remarks:			
YDROLO	DGY		
Vetland Hy	vdrology Indicators:		
		s required; check all that apply)	Secondary Indicators (minimum of two requ
	e Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
_	ater Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
_ •	tion (A3)	True Aquatic Plants (B14)	Dry-Season Water Table (C2)
_	Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
_	ent Deposits (B2)	Oxidized Rhizospheres on Living Roc	
	eposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
_		Recent Iron Reduction in Tilled Soils	
	lat or Crust (B4)	Recent iron Reduction in Lilled Solls	Geomorphic Position (112)

k Surface (C7) FAC-Neutral Test (D5)
r Well Data (D9)
xplain in Remarks)
nches):
nches):
nches): Wetland Hydrology Present? Yes No
I photos, previous inspections), if available:
i

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind LLC			Sampling Point: W-A15 PEM
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S35	
Landform (hillslope, terrace, etc.): Slope	Local relief (cond	cave, convex, none):	Concave
Slope (%): 0-5 Lat: 41.091054	Long: <u>-82.994955</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

	Absolute		t Indicator	Dominance Test worksheet	t:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FA	c: <u>3</u>	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	4	(B)
4				Demonst of Deminent Species		
5				Percent of Dominant Species That Are OBL, FACW, or FA		(A/B)
		= Total Co	ver			v/
Sapling/Shrub Stratum (Plot size:)				Prevalence Index workshee	et:	
1				Total % Cover of:	Multiply by:	-
2				OBL species	x 1 =	_
3				FACW species	x 2 =	_
4				FAC species	x 3 =	_
5				FACU species	x 4 =	
		= Total Co	ver	UPL species	x 5 =	
Herb Stratum (Plot size: 5' )				Column Totals:		
1. Echinochloa crus-galli	15	Х	FACW			_ (=/
2. Panicum dichotomiflorum	20	Х	FACW	Prevalence Index = B/	A =	_
3. Cyperus esculentus	5		FACW	Hydrophytic Vegetation Inc	licators:	
4 Ambrosia artemisiifolia	15	Х	FACU	1 - Rapid Test for Hydro	phytic Vegetation	
5. Toxicodendron radicans	15	Х	FAC	X 2 - Dominance Test is >	50%	
6. Polygonum pensylvanicum	5		FACW	3 - Prevalence Index is ≤	3.0 <sup>1</sup>	
7				4 - Morphological Adapta	ations <sup>1</sup> (Provide sup	porting
				data in Remarks or or	n a separate sheet)	
8				Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	n)
9			·			
10			·	<sup>1</sup> Indicators of hydric soil and	wetland hydrology r	nust
Woody Vine Stratum (Plot size:)	75	= Total Co	ver	be present, unless disturbed	or problematic.	
1				Hydrophytic Vegetation		
2				Present? Yes X	No	
Remarks: (Include photo numbers here or on a separate		= Total Co	ver			
nemarks. (include proto numbers here of off a separate	sneet.)					

Profile Des	cription: (Describe	to the dep	oth needed to docu	ment the	e indicator	or confir	m the absence of	indicators.)		
Depth	Matrix			ox Featur						
(inches)	Color (moist)	%	Color (moist)	%_	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks		
0-8	10YR 4/2	90	7.5YR 4/6	10	<u>C</u>					
8-16	10YR 4/2	85	7.5 YR 4/6	15	С	М	С			
					_					
					_					
Type: C=C	oncentration, D=De	pletion, RM	Reduced Matrix, N	IS=Maske	ed Sand G	rains.	<sup>2</sup> Location: F	PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :		
Histoso	I (A1)		Sandy	Gleyed N	Aatrix (S4)		Coast Pra	airie Redox (A16)		
Histic E	pipedon (A2)		Sandy	Redox (S	65)		Dark Surf			
	listic (A3)			ed Matrix	. ,			ganese Masses (F12)		
	en Sulfide (A4)				lineral (F1)			llow Dark Surface (TF12)		
	d Layers (A5)		X Deplet		Matrix (F2)		Other (Ex	plain in Remarks)		
	uck (A10) d Below Dark Surfac	ce (A11)		Dark Sur						
	ark Surface (A12)				Surface (F7	0	<sup>3</sup> Indicators of	hydrophytic vegetation and		
	Mucky Mineral (S1)			Depressi		/		wetland hydrology must be present,		
5 cm M	ucky Peat or Peat (S	\$3)					unless dis	sturbed or problematic.		
Restrictive	Layer (if observed)	):								
Туре:										
Depth (inches):				Hydric Soil Pr	esent? Yes X No					
Remarks:										
YDROLC	GY									
	drology Indicators									
	cators (minimum of		ired: check all that a	(vlaa			Secondary	Indicators (minimum of two required)		
	Water (A1)		Water-St		Wee (BO)			e Soil Cracks (B6)		
	ater Table (A2)		Aquatic F		• •			ge Patterns (B10)		
								eason Water Table (C2)		
Saturation (A3) True Aquatic Plants (B14) Water Marks (B1) Hydrogen Sulfide Odor (C1)							h Burrows (C8)			
_	ent Deposits (B2)				eres on Li	ving Roots		tion Visible on Aerial Imagery (C9)		
	posits (B3)				ced Iron (C			d or Stressed Plants (D1)		
	at or Crust (B4)				tion in Tille			prphic Position (D2)		
	posits (B5)		Thin Muc					eutral Test (D5)		
	ion Visible on Aerial	Imagery (F					<u>X</u> 1101			
	y Vegetated Concav		·		. ,					
Field Obser			( 0 (10) (2)							
		Yes	No X Depth (ii	nches).						
Nater Table			No X Depth (ii							
			No X Depth (ii				tland Hydrology D	Present? Yes X No		
Saturation F (includes ca	pillary fringe)			iches).			uanu nyurology P	resentr res NO		
	ecorded Data (stream	n gauge, m	onitoring well, aerial	photos, p	previous in	spections)	), if available:			

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-A15-PFO
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S35	
Landform (hillslope, terrace, etc.): Slope		ave, convex, none):	Concave
Slope (%): 0-5 Lat: 41.090893	Long: -82.995067		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly		nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks:				
Cowardin: PFO				

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> )		Species?		Number of Dominant Species
1. Quercus palustris	15	<u>X</u>	FACW	That Are OBL, FACW, or FAC: _8 (A)
2. Ulmus americana	10	Χ	FACW	Total Number of Dominant
3. Quercus rubrus	5		FACU	Species Across All Strata: 8 (B)
4				,
5.				Percent of Dominant Species
o	30	= Total Cov		That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- 10(a) 000		Prevalence Index worksheet:
1. Ulmus americana	10	Х	FACW	Total % Cover of:Multiply by:
2. Cornus amomum	10	X	FACW	OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5.				FACU species x 4 =
	20	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)
1. Ambrosia artemisiifolia	5		FACU	
2. Apocynum cannabinum	5		FAC	Prevalence Index = B/A =
3. Echinochloa crus-galli	20	X	FACW	Hydrophytic Vegetation Indicators:
4. Panicum dichotomiflorum	25	X	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Toxicodendron radicans	15	X	FAC	∑ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
	70	= Total Cov		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 15 )		- 10(a) 000		be present, unless disturbed or problematic.
1. Toxicodendron radicans	X	5	FAC	Hydrophytic
2.				Vegetation
	5	= Total Cov	/er	Present? Yes X No
Remarks: (Include photo numbers here or on a separate s	heet.)			1

nches) -8	Color (moist) 10YR 4/2	_ <u>%</u> 95	Color (moist) 7.5YR 4/6	_ <u>%</u> 5	<u>Type<sup>1</sup></u> C	Loc <sup>2</sup>	 SICL	Remarks
16	10YR 4/2	- 85	7.5YR 4/6	15	- <del>C</del>	M	CL	
		_	· · ·					
			I=Reduced Matrix, M	S=Maske	d Sand Gr	ains	<sup>2</sup> l ocation: Pl	_=Pore Lining, M=Matrix.
	Indicators:		I-Reduced Matrix, M	0-Maske		ams.		Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy	Gleyed M	atrix (S4)			rie Redox (A16)
Histic Ep	pipedon (A2)		Sandy	Redox (S	5)		Dark Surfa	
Black Hi				d Matrix (	,			anese Masses (F12)
	n Sulfide (A4)				ineral (F1)			ow Dark Surface (TF12)
2 cm Mu	l Layers (A5) ick (A10)		1	ed Matrix	latrix (F2)			olain in Remarks)
	Below Dark Surfa	ce (A11)		Dark Surf				
Thick Da	ark Surface (A12)		Deplete	ed Dark S	urface (F7	)	<sup>3</sup> Indicators of h	hydrophytic vegetation and
	lucky Mineral (S1)		Redox	Depressio	ons (F8)			drology must be present,
5 cm Mu	icky Peat or Peat (S	\$3)					unless dist	urbed or problematic.
triative I	aver (if charmed	۱.						
	_ayer (if observed	):						
Type: Depth (inc		):					Hydric Soil Pre	sent? Yes X No
Type: Depth (inc		):					Hydric Soil Pre	sent? Yes X No
Type: Depth (ind marks:	ches):	):					Hydric Soil Pre	sent? Yes <u>X</u> No
Type: Depth (ind marks:	ches):						Hydric Soil Pre	sent? Yes <u>X</u> No
Type: Depth (ind marks: DROLO stland Hyd	ches): GY drology Indicators		uired; check all that a	pply)			Secondary I	ndicators (minimum of two requi
Type: Depth (ind marks: DROLO tiland Hyd mary Indic Surface	GY drology Indicators cators (minimum of Water (A1)		Water-Sta	ained Lea			Secondary I	ndicators (minimum of two requi Soil Cracks (B6)
Type: Depth (ind marks: DROLO etland Hyd mary Indic Surface . Surface . High Wa	GY drology Indicators cators (minimum of Water (A1) iter Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1	3)		Secondary II	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10)
Type: Depth (ind marks: DROLO tiland Hyd mary Indic Surface High Wa Saturatic	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3)		Water-Sta Aquatic F True Aqua	ained Lea auna (B1 atic Plants	3) s (B14)		Secondary II Surface X Drainag Dry-Sea	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ison Water Table (C2)
Type: Depth (ind marks: DROLO tiland Hyd mary Indic Surface High Wa Saturatic Water M	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B13 atic Plants Sulfide C	3) s (B14) Odor (C1)		Secondary II Surface X Drainag Dry-Sea Crayfish	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8)
Type: Depth (inc marks: DROLO tland Hyo mary Indic Surface High Wa Saturatic Water M Sedimer	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Lea auna (B13 atic Plants Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv		Secondary II Surface X Drainag Dry-Sea Crayfish (C3) Saturati	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9
Type: Depth (inc marks: DROLO tland Hyc mary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) arks (B1) arks (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lean auna (B1 atic Plants Sulfide C Rhizosphi of Reduc	3) s (B14) odor (C1) eres on Liv ed Iron (C	4)	Secondary II       Surface       X       Drainag       Dry-Sea       Crayfish       (C3)       Stunted	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) Ison Water Table (C2) I Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1)
Type: Depth (inc marks: DROLO tland Hyc Mary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B13 atic Plants Sulfide C Rhizosphi of Reduction Reduction	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille	4)	Secondary II          Surface         X       Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       X	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) phic Position (D2)
Type: Depth (inc marks: DROLO tland Hyc mary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep	GY drology Indicators cators (minimum of Water (A1) ther Table (A2) on (A3) arks (B1) arks (B1) arks (B2) posits (B3) at or Crust (B4)	: one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc	ained Lea auna (B13 atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7)	4)	Secondary II          Surface         X       Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       X	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) Ison Water Table (C2) I Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1)
Type: Depth (ind marks: DROLO tland Hyd Mary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Mucl 37) Gauge or	ained Lea auna (B13 atic Plants Sulfide C Rhizosphi of Reduc on Reduc k Surface Well Data	3) b (B14) Dodor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4)	Secondary II          Surface         X       Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       X	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) phic Position (D2)
Type: Depth (ind marks: DROLO etland Hyd mary Indic Surface High Wa Saturatic Water M Sedimer Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial v Vegetated Concav vations:	: one is requ Imagery (I ve Surface	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Muc 37) Gauge or (B8) Other (Ex	ained Lean auna (B1) atic Plants Sulfide C Rhizospho of Reduct on Reduct on Reduct k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary II          Surface         X       Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       X	ndicators (minimum of two requi Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) phic Position (D2)
Type: Depth (inc marks: DROLO etland Hyo mary Indic Surface High Wa Saturatic Saturatic Vater M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial vegetated Concar vations: er Present?	: one is requ Imagery (I /e Surface Yes	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     Oxidized     Presence     Recent In     Thin Muc 37) Gauge or     (B8) Other (Ex     No X Depth (ir	ained Lean auna (B1) atic Plants Sulfide C Rhizospho of Reduct on Reduct on Reduct well Data plain in R	3) s (B14) odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary II          Surface         X       Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       X	ndicators (minimum of two requin Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) phic Position (D2)
Type: Depth (inc marks: DROLO tiland Hyo mary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) arks (B1) arks (B1) arks (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial vegetated Concav vations: er Present? Present?	Imagery (I ve Surface Yes Yes	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Muc 37) Gauge or (B8) Other (Ex	ained Lean auna (B1) atic Plants Sulfide C Rhizosphi of Reduct on Reduct k Surface Well Data plain in R	3) s (B14) odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary II          Surface         X         Drainag         Dry-Sea         Crayfish         (C3)         Saturati         Stunted         6)       X         FAC-Ne	ndicators (minimum of two requin Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) phic Position (D2)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind LLC			Sampling Point: W-A15-UP
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S35	
Landform (hillslope, terrace, etc.): Flat field		ave, convex, none):	Convex
Slope (%): 0 Lat: 41.090969	Long: -82.995333		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Norm	nal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	ls the Sampled Area within a Wetland?	Yes	No_X
Remarks: Upland sample plot					

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: _0 (A)
2			Total Number of Dominant
3			Species Across All Strata: 1 (B)
4			
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
		= Total Cover	
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1			Total % Cover of:Multiply by:
2			OBL species x 1 =
3			FACW species x 2 =
4			FAC species x 3 =
5			FACU species x 4 =
		= Total Cover	UPL species x 5 =
Herb Stratum (Plot size: 5' )			Column Totals: (A) (B)
1. Glycine max	100	X UPL	(1)
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6.			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7			data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9			-
10	100		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:	100	= Total Cover	be present, unless disturbed or problematic.
1			- Hydrophytic Vegetation
2			Present? Yes No X
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sneet.)		

Depth (inches)	Matrix Color (moist)	%	Redox Features           Color (moist)         %         Type <sup>1</sup> Loc <sup>2</sup>	Textu	Ire Remarks
0-12	10YR 4/4	100		SICL	
		oletion, RM=	Reduced Matrix, MS=Masked Sand Grains.		cation: PL=Pore Lining, M=Matrix.
Histoso Histic E Black H Hydrog Stratifie	I Indicators: ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10)		<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> </ul>	C D Ir V	ators for Problematic Hydric Soils <sup>3</sup> : Coast Prairie Redox (A16) Dark Surface (S7) ron-Manganese Masses (F12) /ery Shallow Dark Surface (TF12) Dther (Explain in Remarks)
Deplete Thick I Sandy 5 cm N	ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Iucky Peat or Peat (S	3)	Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	w	cators of hydrophytic vegetation and retland hydrology must be present, inless disturbed or problematic.
Туре:	e Layer (if observed) nches):	:		Hydric	soil Present? Yes No
Remarks:					
YDROLO					
	ydrology Indicators:		ad; aback all that apply)	0	conden (Indiactore (minimum of two -convices
Surface High W Saturat Water I Sedime	licators (minimum of c e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	one is requir	ed: check all that apply)           Water-Stained Leaves (B9)           Aquatic Fauna (B13)           True Aquatic Plants (B14)           Hydrogen Sulfide Odor (C1)           Oxidized Rhizospheres on Living Root           Presence of Reduced Iron (C4)		<u>condary Indicators (minimum of two required</u> 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)
Algal N	Aat or Crust (B4)		Recent Iron Reduction in Tilled Soils	(C6)	Geomorphic Position (D2) FAC-Neutral Test (D5)

					//
Inundation Visible on A	erial Imagery (B7)	G	Gauge or Well Data (D9)		
Sparsely Vegetated Con	ncave Surface (B8)	C	Other (Explain in Remarks)		
Field Observations:					
Surface Water Present?	Yes No	<u> </u>	Depth (inches):		
Water Table Present?	Yes No	<u> </u>	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes No	X	Depth (inches):	Wetland Hydrology Present? Yes	s No_X
Describe Recorded Data (st	ream gauge, monite	oring we	ell, aerial photos, previous inspect	ions), if available:	
Remarks:					

Project/Site: Sene	ca Wind Project	City/County: Seneca		Sampling Date 9/20/2018
Applicant/Owner: S	Seneca Wind LLC		State: OH	Sampling Point: W-A16-PEM
Investigator(s): JM	МКМР	Section, Township, Rang	e: T2N R16E S34	
Landform (hillslope,	terrace, etc.): Slope	Local relief (co	oncave, convex, none)	Concave
Slope (%): 0-5	Lat: 41.088672	Long: -83.006344		Datum: NAD 83
Soil Map Unit Name	Blount silt loam, end moraine	, 0 to 2 percent slopes	NWI classifi	cation: N/A
Are climatic / hydrol	ogic conditions on the sile typical for	this lime of year? Yes X No	(If no, explain in F	Remarks.)
Are Vegetation	, Soil, or Hydrology	significantly disturbed? Are 'No	ormal Circumstances"	present? Yes X No
Are Vegetation	, Soil, or Hydrology	naturally problematic? (If need	led, explain any answe	ers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	_ No
Remarks: Cowardin: PEM				

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1		-		That Are OBL, FACW, or FAC: _3 (A)
2		_		Total Number of Dominant
3				Species Across All Strata: (B)
4				Benefit of Deminent Service
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
	1	= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1		-		Total % Cover of: Multiply by:
2		_		OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	3000	= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)
1. Leerzia oryzoides	30	X	OBL	
2. Impatiens capensis	25	Х	FACW	Prevalence Index = B/A =
3. Boehmeria cylindrica	10		OBL	Hydrophytic Vegetation Indicators:
4. Polygonum sagittatum	25	Х	OBL	X 1 - Rapid Test for Hydrophytic Vegetation
5. Solidago gigantea	5		FACW	X 2 - Dominance Test is >50%
6. Bidens frondosa	5		FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8		-	(	data in Remarks or on a separate sheet)
9,		-		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10		-		
	100	= Total Co	wor	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- 10tal 00	Vei	be present, unless disturbed or problematic.
1		1	1. C	Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes X No
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth (inches)	Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 5/2	80	7.5 YR 5/6	20	С	MPL	CL	
and the second sec	Concentration, D=Dep	etion, RN	1=Reduced Matrix, N	IS=Maske	d Sand Gr	ains.		=Pore Lining, M=Matrix.
Histoso Black I Black I Hydrog Stratifie 2 cm M Deplete Thick D Sandy 5 cm M	Epipedon (A2) Histic (A3) Jen Sulfide (A4) ed Layers (A5) Juck (A10) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Jucky Peat or Peat (S	3)	Sandy Strippe Loamy X Deplet Redox Deplet	Redox (S d Matrix ( Mucky M Cleyed M ed Matrix Dark Sur	S6) Ineral (F1) Iatrix (F2) (F3) Iace (F6) urface (F7		Goast Prain Dark Surface Iron-Manga Very Shallo Other (Expl <sup>3</sup> Indicators of h wetland hyd	Problematic Hydric Soils <sup>3</sup> : ie Redox (A16) ce (S7) inese Masses (F12) iw Dark Surface (TF12) lain in Remarks) ydrophytic vegetation and trology must be present, urbed or problematic.
Type:	Layer (if observed)						Hydric Soil Pres	sent? Yes X No
Remarks:								
	ydrology Indicators:							
Wetland Hy Primary Ind	ydrology Indicators: licators (minimum of e							dicators (minimum of two required)
Wetland Hy Primary Ind	ydrology Indicators: licators (minimum of e e Water (A1)		Water-Sta	ained Lea			Surface	Soil Cracks (B6)
Wetland Hy Primary Ind Surface High W	ydrology Indicators: licators (minimum of d e Water (A1) /ater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1	3)		Surface	Soil Cracks (B6) Patterns (B10)
Wetland Hy Primary Ind Surface High W Saturat	ydrology Indicators: Ilcators (minimum of e e Water (A1) /ater Table (A2) tion (A3)		Water-Sta Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) 5 (B14)	_	Surface   Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
Wetland Hy Primary Ind Surface High W Saturat Water I	ydrology Indicators: licators (minimum of e e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14) Odor (C1)	ring Roots	Surface = Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ydrology Indicators: Ilcators (minimum of e e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres an Liv		Surface : Drainage Dry-Sea: Crayfish (C3) Saturatio	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	ydrology Indicators: licators (minimum of e e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1)	4)	Surface : Drainage Dry-Sea: Crayfish (C3) Saturatic Stunted :	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)

Water Table Present? Ye		Concerning and the second second			
				V	
Saturation Present? Ye (includes capillary fringe)	es No _X	_ Depth (inches):	Wetland Hydrology Present?	Yes X	_ No_
Remarks:	an est an more				

Project/Site: Seneca Wind Project	City/County: Seneca	Sampling Date: <u>9/20/2018</u>
Applicant/Owner: Seneca Wind LLC	State:	
Investigator(s): JMM KMP	Section, Township, Range: T2N R	16E S34
Landform (hillslope, terrace, etc.): Slope	Local relief (concave, co	nvex, none): <u>Concave</u>
Slope (%): 0-5 Lat: 41.088406	Long: -83.006678	Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classification: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No (If no,	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circu	ımstances" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks:				
Cowardin: PFO				

20'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. Quercus palustris	15	<u> </u>	FACW	That Are OBL, FACW, or FAC: _7 (A)
2. Ulmus americana	15	Х	FACW	Total Number of Deminent
3. Carya ovata	5		FACU	Total Number of Dominant Species Across All Strata: 9 (B)
4.				、
5				Percent of Dominant Species
···	35	= Total Cov		That Are OBL, FACW, or FAC: 78% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		- 101ai 000		Prevalence Index worksheet:
1. Ulmus americana	10	Х	FACW	Total % Cover of: Multiply by:
2. Carya ovata	5	X	FACU	OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	15	= Total Cov		UPL species          x 5 =
Herb Stratum (Plot size: <u>5'</u> )		- 10(a) CO	/er	Column Totals:         (A)         (B)
1. Microstegium vimineum	20	Х	FAC	
2. Persicaria virginiana	5	X	FAC	Prevalence Index = B/A =
3. Toxicodendron radicans	10	X	FAC	Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
4				Z - Dominance Test is >50%
5				$3$ - Prevalence Index is $\leq 3.0^1$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 15' )	35	= Total Cov	ver	be present, unless disturbed or problematic.
1. Parthenocissus quinquefolia	5	Х	FACU	Hydrophytic
2 Toxicodendron radicans	5	X	FAC	Vegetation
· · · ·	10	= Total Cov	/er	Present? Yes X No
Remarks: (Include photo numbers here or on a separate s				

Profile Desc	ription: (Describe	to the de	pth needed to docu	nent the	indicator	or confir	m the absence of i	indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>		Remarks
0-4	10YR 3/2	97	7.5YR 5/6	3		MPL	SIL	
4-8	10YR 4/2	95	7.5YR 5/6	5	<u> </u>	MPL	SIL	
8-16	10YR 5/1	90	7.5YR 4/6	10	С	MPL	SIL	
1							2	
'Type: C=Co Hydric Soil		pletion, RM	I=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	Cloved M	atrix (S4)			irie Redox (A16)
	oipedon (A2)			Redox (S			Dark Surfa	
	stic (A3)			d Matrix (	,			janese Masses (F12)
	en Sulfide (A4)				ineral (F1)			low Dark Surface (TF12)
Stratified	d Layers (A5)				latrix (F2)		Other (Ex	plain in Remarks)
	ıck (A10)		X Deplete					
	d Below Dark Surfac	ce (A11)		Dark Surf			3	
	ark Surface (A12) lucky Mineral (S1)			Depressio	urface (F7)	)		hydrophytic vegetation and /drology must be present,
	icky Peat or Peat (S	(3)		Depressio	DIIS (FO)			turbed or problematic.
	Layer (if observed)							
Type:								×
Depth (in	ches):						Hydric Soil Pre	esent? Yes X No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
Primary India	cators (minimum of	one is requ	lired; check all that ap	oply)			Secondary I	Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surface	e Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B13	3)		📉 Drainag	ge Patterns (B10)
Saturatio	on (A3)		True Aqua	atic Plants	s (B14)		Dry-Sea	ason Water Table (C2)
Water M	larks (B1)		Hydrogen					h Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized I	Rhizosph	eres on Liv	ing Roots	(C3) Saturat	ion Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)		Presence	of Reduc	ed Iron (C4	4)	Stunted	or Stressed Plants (D1)
	at or Crust (B4)				tion in Tille	d Soils (C	·	rphic Position (D2)
·	posits (B5)		Thin Muck				X FAC-Ne	eutral Test (D5)
	on Visible on Aerial							
	Vegetated Concav	e Surface	(B8) Other (Ex	plain in R	emarks)			
Field Obser			N X D II C					
Surface Wat			No X Depth (in					
Water Table			No X Depth (in					
Saturation P (includes cap		res	No X Depth (in	ches):		_   Wet	land Hydrology P	resent? Yes X No
		n gauge, m	nonitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Domorko:								
Remarks:								

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind LLC			Sampling Point: W-A16-UP
Investigator(s): JMM KMP	Section, Township, Range: <u>T</u>	2N R16E S34	
Landform (hillslope, terrace, etc.): Flat field	Local relief (conca	ve, convex, none):	Convex
Slope (%): 0 Lat: _41.088700°	Long: <u>-83.006260°</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classifica	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly		I Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, o	explain any answer	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	_ No X _ No X _ No X	ls the Sampled Area within a Wetland?	Yes	No_X
Remarks: Upland sample plot					

# **VEGETATION** – Use scientific names of plants.

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		i olui oo		Column Totals: (A) (B)
1. Glycine max	100	Х	UPL	
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10			·	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:		= Total Co	ver	be present, unless disturbed or problematic.
1				
				Hydrophytic Vegetation
2				Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
Remarks. (include proto numbers here of on a separate	sneet.)			

I

Depth (inchor)	<u>Matrix</u> Color (moist)	%	<u>Redox Features</u> <u>Color (moist)</u> <u>%</u> <u>Type<sup>1</sup></u> Loc <sup>2</sup>	Texture	Remarks
<u>(inches)</u> 0-12	10YR 4/3	100		SIL	Remarks
			Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> l ocation: Pl =P	Pore Lining, M=Matrix.
	I Indicators:		Reduced Matrix, MS-Masked Sand Grans.		oblematic Hydric Soils <sup>3</sup> :
Histoso Histic I Black I Hydrog Stratifi 2 cm M Deplet	ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10) ed Below Dark Surfac	e (A11)	<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> </ul>	Coast Prairie Dark Surface Iron-Mangane Very Shallow Other (Explair	Redox (A16) (S7) ese Masses (F12) Dark Surface (TF12) n in Remarks)
Sandy	Dark Surface (A12) Mucky Mineral (S1) ∕lucky Peat or Peat (S3	3)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydro	rophytic vegetation and logy must be present, jed or problematic.
Restrictive	E Layer (if observed):				
Type: _				Undria Sail Dragor	nt? Yes No $\times$
Depth (i	nches):			Hydric Soil Preser	nt? Yes No
YDROLO	DGY				
Vetland H	ydrology Indicators:				
rimary Inc	dicators (minimum of o	ne is requir	ed; check all that apply)	Secondary Indic	cators (minimum of two require
_ Surfac	e Water (A1)		Water-Stained Leaves (B9)	Surface So	il Cracks (B6)
_ •	Vater Table (A2)		Aquatic Fauna (B13)		atterns (B10)
_	tion (A3)		True Aquatic Plants (B14)		n Water Table (C2)
_	Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Bu	• •
	ent Deposits (B2)		Oxidized Rhizospheres on Living Roots	· / <u> </u>	Visible on Aerial Imagery (C9)
_	eposits (B3)		Presence of Reduced Iron (C4)		Stressed Plants (D1)
	/lat or Crust (B4) eposits (B5)		Recent Iron Reduction in Tilled Soils (C Thin Muck Surface (C7)	· — ·	c Position (D2) al Test (D5)
Iron D.					

Field Observations:

Surface Water Present?

Water Table Present?

Saturation Present? (includes capillary fringe)

Remarks:

Inundation Visible on Aerial Imagery (B7)
 Sparsely Vegetated Concave Surface (B8)
 Other (Explain in Remarks)

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_

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

Wetland Hydrology Present? Yes \_\_\_\_ No X

Project/Site: Seneca Wind Project		City/Co	unty: <u>Seneca</u>		Sampling Date: 9/20/20	018	
				State: OH			
Investigator(s): JMM KMP		Section	, Township, Rai	nge: T2N R16E S34			
Landform (hillslope, terrace, etc.): Slope			Local relief	(concave, convex, none):	Concave		
			Long: -83.011530 Datum: NAD 83				
Soil Map Unit Name: Pandora silt Ioam				NWI classifica			
Are climatic / hydrologic conditions on the site typical for this	time of ve	ar? Yes	× /				
Are Vegetation, Soil, or Hydrology sig				Normal Circumstances" p		0	
Are Vegetation, Soil, or Hydrology na				eded, explain any answer			
SUMMARY OF FINDINGS – Attach site map s	howing	samp	oling point lo	ocations, transects,	important features	s, etc.	
Hydric Soil Present?     Yes X     No       Wetland Hydrology Present?     Yes X     No			s the Sampled within a Wetlan		No		
Remarks: Cowardin: PEM							
VEGETATION – Use scientific names of plants.							
Tree Stratum (Plot size:)	Absolute % Cover		nant Indicator	Dominance Test works			
1				Number of Dominant Sp That Are OBL, FACW, o		(A)	
2.							
3				Total Number of Domina Species Across All Strat	<u>^</u>	(B)	
4				Descent of Deminent Co			
5				Percent of Dominant Sp That Are OBL, FACW, o		(A/B)	
15'		= Total	Cover			. ,	
Sapling/Shrub Stratum (Plot size: 15')	F	х	FACW	Prevalence Index work			
1. Cornus amomum					Multiply by:	_	
2. Lindera benzoin			FACW		x 1 =		
3					x 2 =		
4				FAC species	x 3 =	-	

Sapling/Shrub Stratum (Plot size: 15 )				Prevalence Index works	sheet:	
1. Cornus amomum	5	X	FACW	Total % Cover of:	Multiply by:	_
2. Lindera benzoin	5	<u>X</u>	FACW	OBL species	x 1 =	_
3				FACW species	x 2 =	_
4				FAC species	x 3 =	
5				FACU species	× 4 =	_
5'	10	= Total Co	ver	UPL species	x 5 =	_
Herb Stratum (Plot size: 5' )				Column Totals:	(A)	_ (B)
1. Impatiens capensis	_ 50	X	FACW			
2. Carex frankii	10		OBL	Prevalence Index =	= B/A =	_
3. Microstegium vimineum	15		FAC	Hydrophytic Vegetation	Indicators:	
4. Symphyotrichum racemosum	5		FACW	X 1 - Rapid Test for Hy	drophytic Vegetation	
5. Agrimonia parviflora	15		FACW	2 - Dominance Test	is >50%	
6	_			3 - Prevalence Index	c is ≤3.0 <sup>1</sup>	
7					laptations <sup>1</sup> (Provide sup or on a separate sheet)	
8				Problematic Hydroph	nytic Vegetation <sup>1</sup> (Explain	in)
9						
10				<sup>1</sup> Indicators of hydric soil a	and wetland bydrology r	muet
Woody Vine Stratum (Plot size:)	95	= Total Co	over	be present, unless distur		nust
1				Hydrophytic		
2				Vegetation	$\checkmark$	
		= Total Co	ver	Present? Yes	<u> </u>	
Remarks: (Include photo numbers here or on a separate	sheet.)					

	cription: (Describe							
Depth (inchor)	Matrix Color (moist)	%	Color (moist)	lox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches) 0-16	10YR 5/2	95	7.5YR 4/6	 5	C	M	SIL	Remarks
Type: C=C	oncentration, D=De	pletion, RM	/=Reduced Matrix, M	 //S=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
lydric Soil	Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	I (A1)		Sandy	Gleyed Ma	atrix (S4)		Coast Pra	irie Redox (A16)
Histic E	pipedon (A2)		Sandy	Redox (St	5)		Dark Surfa	ace (S7)
	istic (A3)			ed Matrix (	,			anese Masses (F12)
	en Sulfide (A4)			Mucky Mi				low Dark Surface (TF12)
	d Layers (A5)			Gleyed M			Other (Exp	plain in Remarks)
_	uck (A10) d Below Dark Surfac	00 (A11)		ed Matrix ( Dark Surfa				
	ark Surface (A12)	ce (ATT)		ed Dark Sun		)	<sup>3</sup> Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio	,	,		drology must be present,
	ucky Peat or Peat (S	33)						turbed or problematic.
							unicos dis	tarbed of problematic.
estrictive	Layer (if observed)							
Type:	Layer (if observed)							
Туре:		):						esent? Yes X No
Туре:	Layer (if observed)	):						
Type: Depth (in		):						
Type: Depth (in Remarks:	oches):	):						
Type: Depth (in remarks: CDROLO	OGY drology Indicators	:					Hydric Soil Pre	esent? Yes <u>X</u> No
Type: Depth (in remarks: CDROLO	oches):	:	uired; check all that a	apply)			Hydric Soil Pre	esent? Yes X No
Type: Depth (in Remarks: YDROLO Vetland Hy Irimary Indi	OGY drology Indicators	:	Water-St	ained Leav	, ,		Hydric Soil Pre	esent? Yes X No
Type: Depth (in remarks: //DROLO /etland Hy rimary Indii Surface High Wa	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2)	:	Water-St Aquatic F	ained Leav Fauna (B13	3)		Hydric Soil Pre	esent? Yes X No Indicators (minimum of two required Soil Cracks (B6) ge Patterns (B10)
Type: Depth (in remarks: //DROLO //etland Hy rrimary Indio Surface High Wa Saturati	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	:	Water-St Aquatic F True Aqu	ained Leav Fauna (B13 uatic Plants	6) (B14)		Hydric Soil Pre	esent? Yes X No Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
Type: Depth (in remarks: //DROLO /etland Hy rimary India Surface High Wa Saturati Water M	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)	:	Water-St Aquatic f True Aqu Hydroge	ained Leav Fauna (B13 uatic Plants n Sulfide O	6) (B14) dor (C1)		Hydric Soil Pre	esent? Yes X No Indicators (minimum of two required Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) in Burrows (C8)
Type: Depth (in emarks: //DROLO /etland Hy rimary India Surface High Wa Saturati Saturati Water M Sedime	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	:	Water-St Aquatic f True Aqu Hydroge Oxidized	ained Leav Fauna (B13 uatic Plants n Sulfide O Rhizosphe	3) (B14) dor (C1) eres on Liv		Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9)
Type: Depth (in emarks: //DROLO /etland Hy rimary India Surface High Wa Saturati Water M Sedimei Drift De	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	:	Water-St Aquatic f True Aqu Hydroge Oxidized Presence	ained Leav Fauna (B13 latic Plants n Sulfide O Rhizosphe e of Reduce	3) (B14) dor (C1) eres on Liv ed Iron (C	4)	Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (in Remarks: YDROLO Vetland Hy rimary India Surface High Wa Saturati Saturati Water M Sedimei Drift De Algal Ma	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	:	Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent In	ained Leav Fauna (B13 natic Plants n Sulfide O Rhizosphe e of Reduce ron Reduct	3) (B14) dor (C1) eres on Liv ed Iron (C ion in Tille	4)	Hydric Soil Pre	ndicators (minimum of two required Soil Cracks (B6) Patterns (B10) ason Water Table (C2) In Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Type: Depth (in temarks: //DROLO //etland Hy rimary Indii Surface High Wa Saturati Saturati Sedime: Sedime: Drift De Algal Ma Iron Dep	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	): one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     Oxidized     Presence     Recent In     Thin Mue	ained Leav Fauna (B13 Jatic Plants In Sulfide O Rhizosphe e of Reduce fon Reduct ck Surface	(B14) dor (C1) eres on Liv ed Iron (C ion in Tille (C7)	4)	Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (in temarks: YDROLO Vetland Hy 'rimary India Surface High Wa Saturati Saturati Saturati Saturati Sedimei Drift Dej Algal Ma Iron Dej Inundati	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	: one is requ Imagery (E	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     Oxidized     Presence     Recent In     Thin Muc 37) Gauge o	ained Leav Fauna (B13 aatic Plants n Sulfide O Rhizosphe e of Reduce fon Reduct ck Surface r Well Data	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	4)	Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Type: Depth (in remarks: // // // // // // // // // // // // //	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav	: one is requ Imagery (E	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     Oxidized     Presence     Recent In     Thin Muc 37) Gauge o	ained Leav Fauna (B13 aatic Plants n Sulfide O Rhizosphe e of Reduce fon Reduct ck Surface r Well Data	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	4)	Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Type: Depth (in remarks: //DROLO /etland Hy rimary India Surface High Wa Saturati Saturati Vater M Sedime Drift De Algal Ma Iron De Inundati Sparsel ield Obser	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav rvations:	): intervention of the second	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     Oxidized     Presence     Recent In     Thin Muc 37) Gauge o     (B8) Other (E	ained Leav Fauna (B13 uatic Plants In Sulfide O Rhizosphe of Reduct on Reduct con Reduct con Reduct ron Reduct ron Reduct ron Reduct ron Reduct ron Reduct ron Reduct	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Type: Depth (in Remarks: YDROLO Vetland Hy Primary India Surface High Wa Saturati Saturati Saturati Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Surface Wat	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations: ter Present?	Imagery (E // ve Surface Yes	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     Oxidized     Presence     Recent In     Thin Muc 37) Gauge o     (B8) Other (E	ained Leav Fauna (B13 uatic Plants n Sulfide O Rhizosphe e of Reduct ron Reduct ck Surface r Well Data xplain in Re	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two require Soil Cracks (B6) Patterns (B10) ason Water Table (C2) n Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Type: Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturati Vater M Sedime Drift De Algal Ma Iron De Inundati Sparse!	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav vations: ter Present?	Imagery (E ve Surface Yes Yes	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     Oxidized     Presence     Recent In     Thin Muc 37) Gauge o     (B8) Other (E	ained Leav Fauna (B13 latic Plants in Sulfide O Rhizosphe e of Reduct fon Reduct ch Surface r Well Data xplain in Re nches):	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two required Soil Cracks (B6) Patterns (B10) ason Water Table (C2) In Burrows (C8) ion Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)

Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-A17-UP
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S34	
Landform (hillslope, terrace, etc.): Flat field	Local relief (cond	cave, convex, none):	Convex
Slope (%): 0 Lat: 41.088700°	Long: <u>-83.006260°</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norn	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	N0 X N0 X N0 X	Is the Sampled Area within a Wetland?	Yes	_ No_X
Remarks: Upland sample plot					

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# **VEGETATION** – Use scientific names of plants.

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		i otai oo		Column Totals: (A) (B)
1. Glycine max	100	Х	UPL	(-)
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:		= Total Co	ver	be present, unless disturbed or problematic.
1				
				Hydrophytic Vegetation
2				Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
Remarks. (include proto numbers here of on a separate	sileet.)			
1				

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Depth	Matrix	Redox Features	
(inches)	Color (moist)	<u>%</u> Color (moist) <u>%</u> Type <sup>1</sup>	
0-12	10YR 4/3	100	SIL
	Concentration, D=Deple	ion, RM=Reduced Matrix, MS=Masked Sand G	
•		Sandy Clayed Matrix (S4)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histose Histic F	or (A1) Epipedon (A2)	Sandy Gleyed Matrix (S4) Sandy Redox (S5)	) Coast Prairie Redox (A16) Dark Surface (S7)
	Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
	gen Sulfide (A4)	Loamy Mucky Mineral (F1	
	ed Layers (A5)	Loamy Gleyed Matrix (F2)	
_	/luck (A10)	Depleted Matrix (F3)	
	ed Below Dark Surface	A11) Redox Dark Surface (F6)	
	Dark Surface (A12)	Depleted Dark Surface (Fi	<sup>3</sup> Indicators of hydrophytic vegetation and
_ Sandy	Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm M	lucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive	e Layer (if observed):		
Type:			
Depth (i	inches):		Hydric Soil Present? Yes No
Remarks:			
YDROL			
	ydrology Indicators:		
		is required; check all that apply)	Secondary Indicators (minimum of two require
Surfac	e Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
_	Vater Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
High W		True Aquatic Plants (B14)	Dry-Season Water Table (C2)
High W Satura	tion (A3)		영상 이 가지 않는 것 같은 것 같은 것 같이 있었다. 그 것은 것 같은 것 같은 것 같은 것 같은 것 같은 것 같이 있다. 것 같은 것 같
High W Satura Water	Marks (B1)	Hydrogen Sulfide Odor (C1)	
High W Satura Water Sedime	Marks (B1) ent Deposits (B2)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Li	iving Roots (C3) Saturation Visible on Aerial Imagery (C9)
High W Satura Water Sedime	Marks (B1)	Hydrogen Sulfide Odor (C1)	iving Roots (C3) Saturation Visible on Aerial Imagery (C9)
High W Satura Water Sedimo	Marks (B1) ent Deposits (B2)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Li	Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         C4)       Stunted or Stressed Plants (D1)

Iron Deposits (B5)		Thin Muck Surface (C7)	FAC-Neutral Test (D5)	
Inundation Visible on A	erial Imagery (B7)	Gauge or Well Data (D9)		
Sparsely Vegetated Col	ncave Surface (B8	) Other (Explain in Remarks)		
Field Observations:				
Surface Water Present?	Yes No	o _X Depth (inches):	_	
Water Table Present?	Yes No	Depth (inches):	_	
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	_ Wetland Hydrology Present? Yes	No_X
Describe Recorded Data (st	ream gauge, moni	toring well, aerial photos, previous insp	ections), if available:	
Remarks:				

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: <u>W-A10</u>
Investigator(s): JMM KMP	Section, Township, Range:	T2N R16E S28	
Landform (hillslope, terrace, etc.): Terrace	Local relief (conca	ave, convex, none):	Concave
Slope (%): 0 Lat: 41.109086	Long: <u>-83.028432</u>		Datum: NAD 83
Soil Map Unit Name: Glynwood clay loam, end moraine, 2 to 6	percent slopes, eroded	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norma	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed,	explain any answer	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks: Cowardin: PEM				

	Absolute		t Indicator	Dominance Test workshee	t:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FA	c: 2	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	2	(B)
4						
5		_		Percent of Dominant Species That Are OBL, FACW, or FA		(A/B)
		= Total Co	ver			()
Sapling/Shrub Stratum (Plot size:)				Prevalence Index workshee	et:	
1				Total % Cover of:	Multiply by:	_
2				OBL species	x 1 =	_
3				FACW species	x 2 =	_
4				FAC species	x 3 =	_
5				FACU species	x 4 =	
		= Total Co	ver	UPL species		
Herb Stratum (Plot size: <u>5</u> ) )		rotar oo		Column Totals:		_
1. Phalaris arundinacea	50	Х	FACW			_ (0)
2. Apocynum cannabinum	5		FAC	Prevalence Index = B/	A =	_
3. Leersia oryzoides	20	Х	OBL	Hydrophytic Vegetation Inc	dicators:	
4 Solidago gigantea	5		FACW	X 1 - Rapid Test for Hydro	phytic Vegetation	
5. Ambrosia trifida	10		FAC	X 2 - Dominance Test is >	50%	
6. Echinochloa crus-galli	5		FACW	3 - Prevalence Index is s		
				4 - Morphological Adapta		porting
7				data in Remarks or o	n a separate sheet)	, sorting
8				Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	n)
9						
10				<sup>1</sup> Indicators of hydric soil and	wetland hydrology n	nust
Woody Vine Stratum (Plot size:)	95	= Total Co	ver	be present, unless disturbed		
1				Hydrophytic Vegetation		
2				Present? Yes	<u>No</u>	
		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sneet.)					

Depth (inches) 0-6	<u>Matrix</u> Color (moist) 10YR 5/2	<u>%</u>	Color (moist)	ox Feature %		_Loc <sup>2</sup>		Remarks
6-16	10YR 4/2	97	7.5YR 4/6	3	С	M	SIL	
	oncentration, D=De Indicators:	pletion, RM	I=Reduced Matrix, M	S=Masked	d Sand Gr	ains.		L=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histoso Histic E Black H Hydrogu Stratifie 2 cm M Deplete Thick D		ce (A11)	Sandy Strippe Loamy Loamy X Deplete Redox Deplete	Gleyed Ma Redox (S5 d Matrix (S Mucky Min Gleyed Ma ed Matrix ( Dark Surfa ed Dark Su Depressio	5) 56) neral (F1) atrix (F2) F3) ace (F6) urface (F7)	)	Coast Pra Dark Surfa Iron-Mang Very Shall Other (Exp <sup>3</sup> Indicators of	irie Redox (A16)
	ucky Peat or Peat (S							turbed or problematic.
Туре:	iches):						Hydric Soil Pre	esent? Yes X No
Type: Depth (in Remarks:							Hydric Soil Pre	esent? Yes <u>X</u> No
Type: Depth (in Remarks: YDROLC							Hydric Soil Pre	esent? Yes <u>X</u> No
Type: Depth (in Remarks: YDROLC Yetland Hy Primary Indi Garage Surface High Wa Saturati Water M Saturati Water M Saturati Algal M Iron Dej Inundat	OGY Indrology Indicators	: one is requ	Aquatic F Aquatic F True Aqu Hydrogen Oxidized Presence Recent In Thin Muc 37) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti k Surface ( Well Data	i) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tille (C7) (D9)	4)	<u>Secondary I</u> <u>Surface</u> <u>Drainag</u> <u>Dry-Sea</u> (C3) <u>Saturati</u> Stunted 6) <u>X</u> Geomo	esent? Yes X No
Type: Depth (in Remarks: YDROLC Vetland Hy Primary Indi Surface High Wi Saturati Saturati Saturati Sedime Drift De Algal M Iron De Inundat Sparsel iield Obser	DGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	: one is requ Imagery (I /e Surface Yes	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     Oxidized     Presence     Recent In     Thin Muc 37) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti k Surface ( Well Data plain in Re	i) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tille (C7) (D9) emarks)	4) d Soils (C	<u>Secondary I</u> <u>Surface</u> <u>Drainag</u> <u>Dry-Sea</u> (C3) <u>Saturati</u> Stunted 6) <u>X</u> Geomo	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) rphic Position (D2)

Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/19/2018
Applicant/Owner: Seneca Wind LLC			Sampling Point: W-A10-UP
Investigator(s): _JMM KMP	Section, Township, Range:	T2N R16E S28	
Landform (hillslope, terrace, etc.): Flat field		ave, convex, none):	Convex
Slope (%): 0 Lat: 41.109140°	Long: <u>-83.028380°</u>		Datum: NAD 83
Soil Map Unit Name: Glynwood clay loam, 6 to 12 percent slop	es, eroded	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NO X NO X NO X	Is the Sampled Area within a Wetland?	Yes	. №_ <u>×</u> _
Remarks: Upland sample plot					

# **VEGETATION** – Use scientific names of plants.

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		i otai oo		Column Totals: (A) (B)
1. Glycine max	100	Х	UPL	(-)
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:		= Total Co	ver	be present, unless disturbed or problematic.
1				
				Hydrophytic Vegetation
2				Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
Remarks. (include proto numbers here of on a separate	sileet.)			
1				

I

Depth (inches)	Matrix Color (moist)	<u>Redox Features</u> <u>Color (moist)</u> <u>%</u> _Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks	
0-12		OO		
		n, RM=Reduced Matrix, MS=Masked Sand Gra		
•	I Indicators:		Indicators for Problematic Hydric So	ils":
_ Histoso		Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)	
	Epipedon (A2) Histic (A3)	Sandy Redox (S5) Stripped Matrix (S6)	Dark Surface (S7) Iron-Manganese Masses (F12)	
_	jen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)	
	ed Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)	
_ 2 cm M	luck (A10)	Depleted Matrix (F3)		
_ Deplet	ed Below Dark Surface (A	11) Redox Dark Surface (F6)		
	Dark Surface (A12)	Depleted Dark Surface (F7)		
	Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present	,
	lucky Peat or Peat (S3) Layer (if observed):		unless disturbed or problematic.	
Type:	Luyer (ii observeu).			
	nches):		Hydric Soil Present? Yes	No_X
Remarks:				
YDROLO	DGY			
Vetland H	ydrology Indicators:			
rimary Ind	licators (minimum of one	s required: check all that apply)	Secondary Indicators (minimum of tw	vo require
Surface	e Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)	
	/ater Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)	
_	tion (A3)	True Aquatic Plants (B14)	Dry-Season Water Table (C2)	
_	Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
	ent Deposits (B2)	Oxidized Rhizospheres on Livir		
D '4 D		Presence of Peduced Iron (CA	Stunted or Stressed Plants (D1)	
_ Drift De		Presence of Reduced Iron (C4)		
_ Algal M	at or Crust (B4)	Presence of Reduced from (C4) Recent Iron Reduction in Tilled		

FAC-Neutral Test (D5)

Iron Deposits (B5)		Thin Muck Surface (C7)	FAC-Neutral Test (D5)	
Inundation Visible on A	erial Imagery (B7)	Gauge or Well Data (D9)		
Sparsely Vegetated Col	ncave Surface (B8	<ol> <li>Other (Explain in Remarks)</li> </ol>		
Field Observations:				
Surface Water Present?	Yes No	o 🗙 Depth (inches):		
Water Table Present?	Yes No	o 🗙 Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland Hydrology Present? Yes	<u>NoX</u>
Describe Recorded Data (st	ream gauge, moni	itoring well, aerial photos, previous	inspections), if available:	
Remarks:				

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/21/2018
Applicant/Owner: Seneca Wind	Stat		Sampling Point: W-A20
Investigator(s): JMM KMP	_ Section, Township, Range: T002	N R016E S0	32
Landform (hillslope, terrace, etc.): Linear	Local relief (concave, c	convex, none):	Concave
Slope (%): 0 Lat: 41.081290	Long: -83.034451		Datum: NAD 83
Soil Map Unit Name: Glynwood clay loam, end moraine, 2 to	6 percent slopes, eroded	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the sile typical for this lime of	year? Yes 🗶 No (If n	o, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significan	ly disturbed? Are 'Normal Cir	cumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturally ;	problematic? (If needed, expl	ain any answer	s in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	_ No
Remarks: Cowardin: PEM				

diant with Automation 10	Absolute	and the second s	t Indicator	Dominance Test worksheet		
Tree Stratum (Plot size:)	% Cover	Species?	? Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC	: <u>3</u>	(A)
2			-	Total Number of Dominant		
3				Species Across All Strata:	3	(B)
4			_			
5		-		Percent of Dominant Species That Are OBL, FACW, or FAC		(A/B)
		= Total Co	over			- (/20)
Sapling/Shrub Stratum (Plot size:)	_			Prevalence Index workshee	t:	
1		-		Total % Cover of:	Multiply by:	-
2				OBL species	x 1 =	1
3.				FACW species		
4				FAC species		
		-		FACU species		
5		= Total Co		UPL species		
Herb Stratum (Plot size: 5')		= Total Co	over	and the second sec		
1 Typha angustifolia	40	Х	OBL	Column Totals:	(A)	(0)
2. Leerzia oryzoides	30	X	OBL	Prevalence Index = B/A	×=	
3 Polygonum sagittatum	25	X	OBL	Hydrophytic Vegetation Ind	2	-
4 Ambrosia trifida	5	-	FACW	X 1 - Rapid Test for Hydrop		
0		-		$\frac{1}{2}$ 2 - Dominance Test is >5		
5				3 - Prevalence Index is ≤		
6				the second se		
7		-		4 - Morphological Adapta data in Remarks or or		
8				Problematic Hydrophytic	the statement of the residence of	•
9					vegetation (Lxpia	any
10	<u></u>			1		
	100	= Total Co	over	<sup>1</sup> Indicators of hydric soil and be present, unless disturbed		must
Woody Vine Stratum (Plot size:)				incos distances	or problematic.	_
1				Hydrophytic		
2				Vegetation	No	
	-	= Total Co	over	Present? Yes	No	
Remarks: (Include photo numbers here or on a separate	sheet.)					

(inches)	Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	e Remarks		
0-8	10YR 4/2	90	7.5HR 4/6	10	С	MPI	SCL			
8-16	10YR 4/2	7.5YR 4/6	20	С	MPL	SCL				
							·			
the second se	oncentration, D=Depl	letion, RM=F	Reduced Matrix, N	15=Maske	d Sand G	ains.		ation: PL=Pore Lining, M=Matrix.		
lydric Soil	Indicators:						Indicat	tors for Problematic Hydric Soils <sup>3</sup> :		
Histosal					lairix (S4)			past Prairie Redox (A16)		
	pipedon (A2)			Redox (S				ark Surface (S7)		
	istic (A3) en Sulfide (A4)			d Matrix	(S6) ineral (F1)			n-Manganese Masses (F12) ery Shallow Dark Surface (TF12)		
	d Layers (A5)				Matrix (F2)			her (Explain in Remarks)		
	uck (A10)			ed Matrix				Car Technol III Car Party		
	d Below Dark Surface	e (A11)		Dark Sur	1					
	ark Surface (A12)		Depleted Dark Surface (F7)					<sup>3</sup> Indicators of hydrophytic vegetation and		
Sandy Mucky Mineral (S1)			Redox	Depressi	ons (F8)		wetland hydrology must be present,			
5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed):							un	less disturbed or problematic.		
Dontrinting										
	Layer (il observeu).									
Type:	a a serie a serie a serie						Hydric :	Soil Present? Yes X No		
	a a serie a serie a serie		2				Hydric \$	Soil Present? Yes X No		
Type: Depth (in Remarks:	ches):						Hydric \$	Soil Present? Yes X No		
Type: Depth (in Remarks: YDROLO Wetland Hy	ches): DGY drology Indicators:									
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India	Ches): DGY drology Indicators: cators (minimum of or				ves (89)		Seco	ondary Indicators (minimum of two required		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface	Ches): DGY drology Indicators: cators (minimum of or Water (A1)		Water-St	ained Lea	1		Seco	ondary Indicators (minimum of two required Surface Soil Cracks (B6)		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface	Ches): OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2)		Water-St	ained Lea auna (B1	3)		Seco	ondary Indicators (minimum of two required		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indl Surface X High Wa X Saturati	OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		Secc	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indlu Surface X High Wa Saturati Water M	Ches): OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2)		Water-St Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14)	ring Roots	Secc  	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indla Surface X High Wa Saturati Water M Sedimen	OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-St: Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1)		<u>Secc</u> 	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimei Drift De	DGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres an Liv	4)	Seco 	ondary 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)		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X High Wa Saturati Water M Sedimei Drift Dej Algal Ma	Ches): OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence Recent In	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres an Liv ced Iron (C tion in Tille	4)	Secc 	ondary 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)		
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X High Wa Saturati Water M Sedimen Drift Dej Algal Ma Iron Deg Inundati	Ches): OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	ne is require	Water-Sta Aquatic F True Aqua Hydroger X Oxidized Presence Recent Ir Gauge or	ained Lea auna (B1 atic Plant n Sulfide C Rhizosph of Reduction Reduction	3) s (B14) Odor (C1) eres an Liv eed Iron (C tion in Tille (C7)	4)	Secc 	ondary 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)		

 Surface Water Present?
 Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_\_

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

 Saturation Present?
 Yes X
 No \_\_\_\_\_ Depth (inches): \_\_\_\_\_\_

 Saturation Present?
 Yes X
 No \_\_\_\_\_\_ Depth (inches): \_\_\_\_\_\_\_

 Cincludes capillary fringe)
 Depth (inches): \_\_\_\_\_\_\_
 Wetland Hydrology Present? Yes X
 No \_\_\_\_\_\_\_

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

Project/Site: Seneca Wind Project/Site:	roject	City/County: Seneca		Sampling Date 9/20/2018
Applicant/Owner: Seneca Wir	nd		State: OH	Sampling Point: W-A20-UP
Investigator(s): C. Vileno, K. I	Pulver	Section, Township, Range:	T002N R016E	S004
Landform (hillslope, terrace, etc.	): Flat field	Local relief (cor	cave, convex, non	e): Convex
	1.081545	Long: <u>-83.034469</u>		Datum: NAD 83
Soil Map Unit Name: Glynwoo	d clay loam, end me	oraine, 2 to 6 percent slopes, eroded	NWI class	ification: N/A
Are climatic / hydrologic conditio	ins on the sile typical fo	or this lime of year? Yes X No	(If no, explain in	Remarks.)
Are Vegetation, Soil	_, or Hydrology	significantly disturbed? Are Nor	mal Circumstances	s" present? Yes X No
Are Vegetation, Soil	, or Hydrology	naturally problematic? (If neede	d, explain any ans	wers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No _X	
Remarks: Upland sample plot						

A DATE AND A DATE OF	Absolute		nt Indicator	Dominance Test worksh	leet:	
Tree Stratum (Plot size:)	% Cover	Species	? Status	Number of Dominant Spe		
1				That Are OBL, FACW, or	FAC: 0	(A)
2				Total Number of Dominar	t	
3				Species Across All Strata	1	(B)
4				Percent of Dominant Spe	niae	
5				That Are OBL, FACW, or		(A/B)
and an an an an an an an an an	1	= Total C	over			
Sapling/Shrub Stratum (Plot size:)				Prevalence Index works		
1		-		Total % Cover of:		
2				OBL species	x 1 =	
3.		1		FACW species	x 2 =	_
4				FAC species	x 3 =	
5			_	FACU species	x 4 =	_
		= Total C	over	UPL species	x 5 =	
Herb Stratum (Plot size: 5')				Column Totals:	(A)	(B)
1. Glycine max	100	X	UPL			
2	_	_		Prevalence Index =	22-19-2-1-2-	
3		-	_	Hydrophytic Vegetation	Indicators:	- condition
4				1 - Rapid Test for Hy	drophytic Vegetation	1
5				2 - Dominance Test is	s >50%	
6				3 - Prevalence Index	is ≤3.0 <sup>1</sup>	
7				4 - Morphological Ada	aptations <sup>1</sup> (Provide s	supporting
8			(		r on a separate she	
9,				Problematic Hydroph	ytic Vegetation <sup>1</sup> (Ex	plain)
10		-				
10		- Total C		<sup>1</sup> Indicators of hydric soil a		gy must
Woody Vine Stratum (Plot size: )	-	- Total C	over	be present, unless disturb	ed or problematic.	
1				Hydrophytic		
2		-	-	Vegetation		
		= Total C	over	Present? Yes	No _X	-
Remarks: (Include photo numbers here or on a separate	-		222			_

Depth Matrix								Permedia	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-12	10YR 4/4	100				=	SIL		
									0407
and the second sec	oncentration, D=Depl	letion, HM-	-Reduced Matrix, M	S=Masked	Sand Gr	ains.	Indicators for Pri	Pore Lining, M=M	
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 Strippe Loamy Deplete Redox Deplete	Gleyed Ma Redox (S5) d Matrix (S Mucky Min Cleyed Ma ed Matrix (F Dark Surfa ed Dark Surfa Depression	6) eral (F1) trix (F2) '3) ce (F6) face (F7)		Coast Prairie Dark Surface Iron-Mangane Very Shallow Other (Explain <sup>3</sup> Indicators of hyd wetland hydro	Redox (A16) (S7) ese Masses (F12) Dark Surface (TF n in Remarks)	) F12) on and sent,
	Layer (if observed):	T							
Type: Depth (in	ches):		<u> </u>				Hydric Soil Prese	nt? Yes	No X

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is require	d check all that apply)	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is require 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)	d Check all that apply)     Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Living R     Presence of Reduced Iron (C4)     Recent Iron Reduction in Tilled Soil     Thin Muck Surface (C7)	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)
Cleves de la servición de la servi		
	N	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspecti	ons), if available:
Remarks:		

Project/Site: Sene	eca Wind Project	City/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner:	Seneca Wind		State: OH	Sampling Point: W-A21
Investigator(s): JN	/M KMP	Section, Township, Range	: T002N R016E	S004
Landform (hillslope	e, terrace, etc.): Linear	Local relief (co	ncave, convex, noi	ne): Concave
Slope (%): 0 Lat: 41.076216		Long: -83.025858		Datum: NAD 83
Soil Map Unit Nam	Blount silt loam, end morain	e, 2 to 4 percent slopes	NWI clas	sification: N/A
Are climatic / hydro	ologic conditions on the sile typical fo	or this lime of year? Yes 🗶 No 🔄	(If no, explain i	n Remarks.)
Are Vegetation	, Soil, or Hydrology	significantly disturbed? Are No	rmal Circumstance	s" present? Yes X_ No
Are Vegetation	, Soil, or Hydrology	naturally problematic? (If need	ed, explain any ans	swers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	_ No
Remarks: Cowardin: PEM				

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1		-	_	That Are OBL, FACW, or FAC: (A)
2		-	-	Total Number of Dominant
3		-		Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1		-		Total % Cover of:Multiply by:
2		-		OBL species x 1 =
3.		_		FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
<b>F</b> <sup>2</sup>	1	= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')	-			Column Totals: (A) (B)
1. Echinochloa crus-galli	20	Х	FACW	
2. Ambrosia trifida	5	_	FAC	Prevalence Index = B/A =
3. Symphyotrichum pilosum	5	-	FACU	Hydrophytic Vegetation Indicators:
4. Panicum dichotomiflorum	20	Х	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Impatiens capensis	20	Х	FACW	X 2 - Dominance Test is >50%
6. Leerzia oryzoides	10		OBL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Polygonum sagittatum	10		OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8 Scirpus atrovirens	5		OBL	data in Remarks or on a separate sheet)
g Euthamia graminifolia	5	-	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.		-		
	100	= Total Co	Wer	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- Total Oc		be present, unless disturbed or problematic.
1		(	10 C 1	Hydrophytic
2				Vegetation
200-		= Total Co	ver	Present? Yes X No
Remarks: (Include photo numbers here or on a separate			A.C.	

Depth	Matrix	07		ox Featur		1 2	Tanking	Describe		
(inches)	Color (moist)	%	Color (moist)	%	Type1		Texture	Remarks		
0-6	10YR 5/2	90	7.5YR 5/6	10	C	M/PL	SIL	-		
6-16	10YR 5/2	85		15	C	M/PL	SIL			
		pletion, RI	M=Reduced Matrix, N	1S=Maske	ad Sand G	ains.		; PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils <sup>3</sup> :		
Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy I	I (A1) pipedon (A2) listic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S		Sandy Stripps Loamy X Deplet Redox Deplet	Redox (S ed Matrix Mucky M Cleyed M ed Matrix Dark Sur	(S6) lineral (F1) Matrix (F2) (F3) face (F6) Surface (F7		Dark S Iron-Mi Very S Other ( <sup>3</sup> Indicators wetland	Prairie Redox (A16) Surface (S7) anganese Masses (F12) hallow Dark Surface (TF12) (Explain in Remarks) c of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.		
	Layer (if observed)						1000000	and the second		
Type:	o and opposite the						1.6753.0216	×		
Depth (in	iches):						Hydric Soil	Present? Yes X No		
Remarks:										
YDROLC	DGY									
Wetland Hy	drology Indicators	:								
Primary Ind	cators (minimum of	one is req	uired check all that a	(vlqqi			Seconda	ary Indicators (minimum of two required		
Surface	Water (A1)		Water-St	ained Lea	ves (89)		× Surf	ace Soil Cracks (B6)		
	ater Table (A2)			auna (B1	-14 C		Drainage Patterns (B10)			
	ion (A3)		True Aqu					Season Water Table (C2)		
Water M	Aarks (B1)				Odor (C1)			yfish Burrows (C8)		
	nt Deposits (B2)		X Oxidized				and the second s	ration Visible on Aerial Imagery (C9)		
	posits (B3)				ced Iron (C	Aug. 10. 10. 10. 10.		nted or Stressed Plants (D1)		
	at or Crust (B4) posits (B5)			on Reduc	tion in Tille	ed Soils (C		morphic Position (D2) -Neutral Test (D5)		
					1.5.1					

Inundation Visible on Aerial Imagery (B7) \_\_\_\_ Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) \_\_\_ Other (Explain in Remarks) Field Observations: No X Depth (inches): Surface Water Present? Yes No X Depth (inches); Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Seneca Wind Project	_ City/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner: Seneca Wind	544 m 24 5	State: OH	Sampling Point: W-A21-UP
Investigator(s): JMM KMP	Section, Township, Range:	T002N R016E S	004
Landform (hillslope, terrace, etc.): Flat field	Local relief (con	cave, convex, none):	Convex
Slope (%): 0 Lat: 41.076283	Long: -83.025567		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 pe	rcent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes X No	_ (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Norn	mal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If neede	d, explain any answe	ers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No	
Remarks: Upland sample plot						

	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species	? Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2		-		Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5		- T-1-10		That Are OBL, FACW, or FAC: 0 (A/B)
Sapling/Shrub Stratum (Plot size:)		= Total C	over	Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4		-		FAC species x 3 =
5				FACU species x 4 =
		= Total C		UPL species x 5 =
Herb Stratum (Plot size: 5' )	-	- Total Ci	over	Column Totals: (A) (B)
1. Glycine max	100	Х	UPL	
2,		ha		Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10		-		
10.		= Total C	over	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	-	- Total O	over	be present, unless disturbed or problematic.
1		_	-	Hydrophytic
2				Vegetation
		= Total C	over	Present? Yes No
Remarks: (Include photo numbers here or on a separate				

	Matrix			x Features	1 2	and and and a		
(inches)	Color (moist)	%	Color (moist)	%Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks	
)-12	10YR 4/4	100		<del></del>		SIL		
				·				
				·				
-	-				-			
	-						-	
	ncentration D=De	pletion RM=	Reduced Matrix, MS		ains	21 ocation	PL=Pore Lining, M=Mat	riv
lydric Soil I		pienen, run	neurosa matrix, me	Musice sund of	unio.		or Problematic Hydric	
Histosol	(A1)		Sandy G	Sleyed Matrix (S4)		Coast P	rairie Redox (A16)	
Histic Ep	ipedon (A2)			Redox (S5)			rface (S7)	
Black His	stic (A3)		Stripped	Matrix (S6)		Iron-Ma	nganese Masses (F12)	
Hydroger	n Sulfide (A4)		Loamy M	Mucky Mineral (F1)		Very Sh	allow Dark Surface (TF1	2)
	Layers (A5)			Gleyed Matrix (F2)		Other (E	xplain in Remarks)	
_ 2 cm Mu				d Matrix (F3)				
	Below Dark Surfa	ce (A11)		ark Surface (F6)				
	rk Surface (A12)			d Dark Surface (F7	)		of hydrophytic vegetation	
	ucky Mineral (S1)		Redox D	Depressions (F8)			hydrology must be prese	ent,
	cky Peat or Peat (S ayer (if observed				_	unless o	listurbed or problematic.	
Type:	ayer (il observed	).				10.149		
	ibool:					Hydric Soil F	Present? Yes	No_X
Denth (inc								
Depth (inc Remarks:								
Remarks:								
Remarks: YDROLO(								
Remarks: YDROLOG Wetland Hyd	GY Irology Indicators		ed: check all that ap	ply)		Secondar	y Indicators (minimum of	two require
Remarks: YDROLO( Netland Hyd Primary Indic	GY Irology Indicators			ρlγ) ned Leaves (B9)			y Indicators (minimum of ce Soil Cracks (B6)	two require
Remarks: YDROLOO Netland Hyd Primary Indic Surface N	GY Irology Indicators ators (minimum of			ned Leaves (B9)		Surfa	and the bar of a strate of	two require
Remarks: YDROLO( Wetland Hyd Primary Indic Surface N High Wat	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2)		Water-Stai Aquatic Fa	ned Leaves (B9)		Surfa Drain	ce Soil Cracks (B6) age Patterns (B10)	
Remarks: YDROLOG Wetland Hyd Primary Indic Surface N High Wat Saturatio	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) m (A3)		Water-Stai Aquatic Fa True Aquat	ned Leaves (B9) una (B13) tic Plants (B14)		Surfa Drain Dry-S	ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2)	
Remarks: YDROLOO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1)		Water-Stai Aquatic Fa True Aquat Hydrogen S	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1)	ing Roots	Surfa Drain Dry-S Crayf	ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8)	
Remarks: YDROLOO Wetland Hyd Primary Indic Surface N United Saturation Water Ma Sedimen	<b>GY</b> Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) thizospheres on Liv		Surfa Drain Dry-S Crayf (C3) Satur	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In	nagery (C9)
Remarks: YDROLOO Wetland Hyd Primary Indic Surface N Surface N Saturatio Water Ma Sedimen Drift Dep	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) thizospheres on Liv of Reduced Iron (C-	4)	Surfa Drain Dry-S Crayf (C3) Satur Stunt	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Im ed or Stressed Plants (D	nagery (C9)
Remarks: YDROLOG Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iron	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Rhizospheres on Liv of Reduced Iron (C- n Reduction in Tille	4)	(C3) Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In ed or Stressed Plants (D norphic Position (D2)	nagery (C9)
Remarks: YDROLOO Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	one is require	Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iron Thin Muck	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Chizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7)	4)	(C3) Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Im ed or Stressed Plants (D	nagery (C9)
Remarks: YDROLOO Primary Indic Primary Indic Surface N High War Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial	one is require Imagery (B7	Water-Stai	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) thizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9)	4)	(C3) Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In ed or Stressed Plants (D norphic Position (D2)	nagery (C9)
Remarks: YDROLOG Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav	one is require Imagery (B7	Water-Stai	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Chizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7)	4)	(C3) Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In ed or Stressed Plants (D norphic Position (D2)	nagery (C9)
Remarks: YDROLOO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Observ	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav rations:	one is require Imagery (B7 ve Surface (B	Water-Stai	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) thizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9) ilain in Remarks)	4)	(C3) Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In ed or Stressed Plants (D norphic Position (D2)	nagery (C9)
Remarks: YDROLOO Primary Indic Surface N High Water Ma Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Surface Water	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present?	one is require Imagery (B7 /e Surface (B Yes N	Water-Stai	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Rhizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9) blain in Remarks)	4)	(C3) Surfa Drain Dry-S Crayf (C3) Satur Stunt 5) Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In ed or Stressed Plants (D norphic Position (D2)	nagery (C9)
Remarks: YDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Observ Surface Water Nater Table I	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present?	Imagery (B7 ve Surface (B Yes N Yes N	Water-Stail Aquatic Fa Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iron Thin Muck Gauge or V B Other (Exp No X Depth (inc	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Chizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9) Idain in Remarks)	4) d Soils (C6	(C3) Surfa Crayf (C3) Saturt Stunt S) Geom FAC-	ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Im ed or Stressed Plants (D norphic Position (D2) Neutral Test (D5)	nagery (C9)
Remarks: YDROLOO Primary Indic Primary Indic Surface N High Water Saturatio Water Mai Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Observ Surface Water Nater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B7 ve Surface (B Yes N Yes N Yes N	Water-Stail     Aquatic Fa     True Aquati     Hydrogen S     Oxidized R     Presence c     Recent Iron     Thin Muck ) Gauge or V 8) Other (Exp No X Depth (inc	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Chizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9) Itain in Remarks)	4) d Soils (Ce	Surfa     Drain     Dry-S     Crayf (C3) Satur ) Stunt ) Geom     FAC- and Hydrology	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial In ed or Stressed Plants (D norphic Position (D2)	nagery (C9) 1)
Remarks: YDROLOG Metland Hyd Primary Indic Surface N High War Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri includes cap Describe Reco	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B7 ve Surface (B Yes N Yes N Yes N	Water-Stail     Aquatic Fa     True Aquati     Hydrogen S     Oxidized R     Presence c     Recent Iron     Thin Muck     Other (Exp     Other (Exp     Other (inc     X Depth (inc     X Depth (inc	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Chizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9) Itain in Remarks)	4) d Soils (Ce	Surfa     Drain     Dry-S     Crayf (C3) Satur ) Stunt ) Geom     FAC- and Hydrology	ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Im ed or Stressed Plants (D norphic Position (D2) Neutral Test (D5)	nagery (C9) 1)
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Remarks: YDROLOO Primary Indic Primary Indic Surface N High Water Saturatio Water Mai Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Observ Surface Water Nater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B7 ve Surface (B Yes N Yes N Yes N	Water-Stail     Aquatic Fa     True Aquati     Hydrogen S     Oxidized R     Presence c     Recent Iron     Thin Muck     Other (Exp     Other (Exp     Other (inc     X Depth (inc     X Depth (inc	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) Chizospheres on Liv of Reduced Iron (C- n Reduction in Tille Surface (C7) Well Data (D9) Itain in Remarks)	4) d Soils (Ce	Surfa     Drain     Dry-S     Crayf (C3) Satur ) Stunt ) Geom     FAC- and Hydrology	ce Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Im ed or Stressed Plants (D norphic Position (D2) Neutral Test (D5)	nagery (C9) 1)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point: W-A22
Investigator(s): JMM KMP	Section, Township, Ra	nge: T002N R016E	S005
Landform (hillslope, terrace, etc.): Slope	Local relief	(concave, convex, nor	ne): Concave
Slope (%): 3-5 Lat: 41.075462	Long: -83.035367		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, e	nd moraine, 0 to 2 percent slopes	NWI class	sification: <u>N/A</u>
Are climatic / hydrologic conditions on the s	ite typical for this time of year? Yes $\_$ No $\_$	(If no, explain i	n Remarks.)
Are Vegetation, Soil, or Hyd	Irology significantly disturbed? Are "	Normal Circumstance	s" present? Yes X No
Are Vegetation, Soil, or Hyd	Irology naturally problematic? (If ne	eded, explain any ans	swers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	_ No
Remarks: Cowardin: PEM				

		a sector sector	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _3 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4		_		Depart of Department Department
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)		= Total Cov	ver	Prevalence Index worksheet:
				Total % Cover of: Multiply by:
1				OBL species          x 1 =
2			-	FACW species x 2 =
3				
4			<u> </u>	FAC species x 3 =
5				FACU species x 4 =
11-th Oto the (Distributed 5'		= Total Cov	ver	UPL species x 5 =
Herb Stratum (Plot size: 5') 1 Leerzia oryzoides	45	х	OBL	Column Totals: (A) (B)
2. Panicum dichotomiflorum	20	X	FACW	Developer Index - D/A
3 Bidens frondosa	5		FACW	Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
4. Polygonum pensylvanicum	25	<u>X</u>	FACW	X 1 - Rapid Test for Hydrophytic Vegetation
5. Carex Iurida	5		OBL	X 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7	_			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10		-		
	100	= Total Cov		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: )		- 10101 001	VC1	be present, unless disturbed or problematic.
1				Hydrophytic
2		-	-	Vegetation
		= Total Cov	ver	Present? Yes <u>No</u>
	heet.)			4

Depth	Matrix	0/		dox Featur		1.2.2	Tautos	Demoder
(inches) Color 0-8 10YR	r (moist) 4/2	<u>%</u> 90	Color (moist) 7.5YR 4/6	<u>%</u> 10	<u>Type</u> 1 C	<u>Loc<sup>2</sup></u> M/PL	<u>Texture</u> SICL	Remarks
			-		-			
3-16 10YR	4/2	80	7.5YR 4/6	20	C	M/PL	CL	9
			÷					
			-					
			-					
Type: C=Concentrat ydric Soil Indicator		oletion, RM	=Reduced Matrix,	MS=Maske	ed Sand G	irains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	5.		Sand	y Gleyed N	latrix (SA)			Prairie Redox (A16)
Histic Epipedon (	A2)			y Redox (S				urface (S7)
Black Histic (A3)				bed Matrix (				anganese Masses (F12)
Hydrogen Sulfide	(A4)		the second secon	y Mucky M	12-12 A	)		hallow Dark Surface (TF12)
Stratified Layers	and the second se		Loam	y Gleyed N	Aatrix (F2)		access to a second second	Explain in Remarks)
_ 2 cm Muck (A10)				eted Matrix				
Depleted Below D		e (A11)		x Dark Sur				
_ Thick Dark Surface				eted Dark S		7)		of hydrophytic vegetation and
_ Sandy Mucky Min	and the second	2)	Redo	x Depressi	ons (F8)			d hydrology must be present.
5 cm Mucky Peat Restrictive Layer (if							unless	disturbed or problematic.
	observed):						1.00	
Туре:							Hydric Soil	Present? Yes X No
Depth (inches):							Construction Service	Carponia Mars- A Cole
	Indicators							
Vetland Hydrology I			ired: check all that	apply)			Seconda	rv Indicators (minimum of two required
Vetland Hydrology I Primary Indicators (mi	inimum of c			25.5 Trans	ves (89)			
Vetland Hydrology I Primary Indicators (mi Surface Water (A	inimum of c 1)		Water-S	Stained Lea			Surf	ace Soil Cracks (B6)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table	inimum of c 1)		Water-S Aquatic	Stained Lea Fauna (B1	3)		X Surf	ace Soil Cracks (B6) nage Patterns (B10)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3)	inimum of o 1) e (A2)		Water-S Aquatic True Aq	Stained Lea Fauna (B1 juatic Plant	3) s (B14)		X Surfi Drai	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table	inimum of c 1) e (A2) )		Water-S Aquatic True Aq	Stained Lea Fauna (B1 Juatic Plant en Sulfide (	3) s (B14) Odor (C1)	iving Roots	Surf X Drai Dry- Cray	ace Soil Cracks (B6) nage Patterns (B10)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1)	inimum of o 1) e (A2) ) ts (B2)		Water-S Aquatic True Aq Hydroge X Oxidized	Stained Lea Fauna (B1 Juatic Plant en Sulfide (	3) s (B14) Odor (C1) eres on L		C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) /fish Burrows (C8) ıration Visible on Aerial Imagery (C9)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposi	inimum of c 1) e (A2) ) ts (B2) 3)		Water-S Aquatic True Aq Hydrogo X Oxidize Presend	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc	3) s (B14) Odor (C1) eres on L ced Iron (C		(C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) /fish Burrows (C8)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposi Drift Deposits (B3	inimum of c 1) (A2) ) ts (B2) 3) tt (B4)		Water-S Aquatic True Aq Hydroge X Oxidize Presenc Recent	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till	(4)	(C3) Surf Surf Drai Dry- Cray (C3) Satu Stur 6) X Geo	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) uration Visible on Aerial Imagery (C9) ated or Stressed Plants (D1)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposi Drift Deposits (B3 Algal Mat or Crus	inimum of c 1) (A2) (s (B2) (s) (t (B4) (s)	one is requi	Water-S Aquatic True Aq Hydroge X Oxidize Presend Recent Thin Mu	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7)	(4)	(C3) Surf Surf Drai Dry- Cray (C3) Satu Stur 6) X Geo	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
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Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetat	inimum of c 1) (A2) ) ts (B2) 3) tt (B4) ;) a on Aerial I	one is requi	Water-S Aquatic True Aq Hydroge X Oxidize Present Recent Thin Mu 7) Gauge o	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc uck Surface or Well Dat	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9)	(4)	(C3) Surf Surf Drai Dry- Cray (C3) Satu Stur 6) X Geo	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetat Field Observations:	inimum of c 1) (A2) ) ts (B2) 3) tt (B4) () e on Aerial I ed Concave	one is requi Imagery (B e Surface (	Water-S Aquatic True Aq Hydroge X Oxidized Presend Recent Thin Mu 7) Gauge ( B8) Other (B	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc uck Surface or Well Dat	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9)	(4)	(C3) Surf Surf Drai Dry- Cray (C3) Satu Stur 6) X Geo	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetat Vegetat Surface Water Preser	inimum of a 1) (A2) ) ts (B2) )) it (B4) i) e on Aerial I ed Concave nt? Y	Imagery (B e Surface ( 'es	Water-S Aquatic True Aq Hydroge X Oxidize Presend Recent Thin Mu 7) Gauge 0 B8) Other (B	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc Jron Reduc Jron Reduc Jron Reduc Jron Reduc Jron Reduc Jron Reduc	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9)	(4)	(C3) Surf Surf Drai Dry- Cray (C3) Satu Stur 6) X Geo	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetat Field Observations: Surface Water Present?	inimum of a 1) (A2) ) its (B2) 3) it (B4) ii) ed Concave nt? Y Y Y	Imagery (B e Surface ( 'es	Water-S Aquatic Aquatic True Aq Hydroge X Oxidize Presend Recent Thin Mu (7) Gauge B8) Other (E No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc ick Surface or Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9)	C4) ed Soils (Ci	C3) Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetate Vegetate Vegetate Present? Saturation Present? Includes capillary frin	inimum of a 1) (A2) (s (B2) 3) at (B4) b) ed Concave mt? Y Y Y Y Y Y Y Y Y Y	Imagery (B e Surface ( 'es 'es	Water-S Aquatic True Aq X Oxidized Presend Recent Thin Mu 7) Gauge 0 B8) Other (B No X Depth No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc cro Reduc cro Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9) emarks)	(4) ed Soils (Cl	Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology I         Primary Indicators (minimary Indicators (minimary Indicators)         Surface Water (A         High Water Table         Saturation (A3)         Water Marks (B1)         Sediment Deposit         Drift Deposits (B3)         Algal Mat or Crus         Iron Deposits (B5)         Inundation Visible         Sparsely Vegetate         Field Observations:         Surface Water Present?         Saturation Present?	inimum of a 1) (A2) (s (B2) 3) at (B4) b) ed Concave mt? Y Y Y Y Y Y Y Y Y Y	Imagery (B e Surface ( 'es 'es	Water-S Aquatic True Aq X Oxidized Presend Recent Thin Mu 7) Gauge 0 B8) Other (B No X Depth No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc cro Reduc cro Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9) emarks)	(4) ed Soils (Cl	Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
High Water Table Saturation (A3) Water Marks (B1) Sediment Deposi Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible	inimum of a 1) (A2) (s (B2) 3) at (B4) b) ed Concave mt? Y Y Y Y Y Y Y Y Y Y	Imagery (B e Surface ( 'es 'es	Water-S Aquatic True Aq X Oxidized Presend Recent Thin Mu 7) Gauge 0 B8) Other (B No X Depth No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc cro Reduc cro Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9) emarks)	(4) ed Soils (Cl	Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	nage Patterns (B10) Season Water Table (C2) /fish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Netland Hydrology I         Primary Indicators (minimary Indicators (minimary Indicators)         Surface Water (A         High Water Table         Saturation (A3)         Water Marks (B1)         Sediment Deposit         Drift Deposits (B3)         Algal Mat or Crus         Iron Deposits (B5)         Inundation Visible         Sparsely Vegetat         Field Observations:         Surface Water Present?         Saturation Present?         Saturation Present?         Saturation Present?         Saturation Present?	inimum of a 1) (A2) (s (B2) 3) at (B4) b) ed Concave mt? Y Y Y Y Y Y Y Y Y Y	Imagery (B e Surface ( 'es 'es	Water-S Aquatic True Aq X Oxidized Presend Recent Thin Mu 7) Gauge 0 B8) Other (B No X Depth No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc cro Reduc cro Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9) emarks)	(4) ed Soils (Cl	Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetat Field Observations: Surface Water Present? Saturation Present? Saturation Present? Saturation Present? Saturation Present?	inimum of a 1) (A2) (s (B2) 3) at (B4) b) ed Concave mt? Y Y Y Y Y Y Y Y Y Y	Imagery (B e Surface ( 'es 'es	Water-S Aquatic True Aq X Oxidized Presend Recent Thin Mu 7) Gauge 0 B8) Other (B No X Depth No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc cro Reduc cro Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9) emarks)	(4) ed Soils (Cl	Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Vetland Hydrology I Primary Indicators (mi Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Inundation Visible Sparsely Vegetat Field Observations: Surface Water Present? Saturation Present? Saturation Present? Saturation Present? Saturation Present?	inimum of a 1) (A2) (s (B2) 3) at (B4) b) ed Concave mt? Y Y Y Y Y Y Y Y Y Y	Imagery (B e Surface ( 'es 'es	Water-S Aquatic True Aq X Oxidized Presend Recent Thin Mu 7) Gauge 0 B8) Other (B No X Depth No X Depth No X Depth	Stained Lea Fauna (B1 juatic Plant en Sulfide C d Rhizosph ce of Reduc lron Reduc cro Reduc cro Well Dat Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on L ced Iron (C tion in Till (C7) a (D9) emarks)	(4) ed Soils (Cl	Surf X Drai Dry- Cray (C3) Satu Stur 6) X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point: W-A23-PEM
Investigator(s): JMM KMP	_ Section, Township, Range:	T002N R016E S0	005
Landform (hillslope, terrace, etc.): Slope	Local relief (con	cave, convex, none):	Concave
Slope (%): 3-5 Lat: 41.075370	Long: -83.036555		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 per	cent slopes	NWI classific	cation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes X No	_ (If no, explain in R	(emarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Norr	nal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If neede	d, explain any answe	ers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks: Cowardin: PEM				

	Absolute	Dominan	t Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	3	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	3	(B)
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:	100%	(A/B)
Construction of the second	-	= Total Co	ver			3. 3
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:		
1			·	Total % Cover of:	Multiply by:	
2		-		OBL species x		
3				FACW species x	2 =	-
4				FAC species x	3 =	-
5		-		FACU species x	4 =	_
5'		= Total Co	ver	UPL species x	5 =	
Herb Stratum (Plot size: 5')			0.51	Column Totals: (A	A)	_ (B)
1. Eupatorium perfoliatum	25	X	OBL	A A Statistical second second		
2. Polygonum sagittatum	30	X	OBL	Prevalence Index = B/A =		_
3. Juncus tenuis	20	X	FAC	Hydrophytic Vegetation Indica		1000
4. Scirpus atrovirens	5		OBL	X 1 - Rapid Test for Hydrophy		
5. Bidens fondosa	5		FACW	2 - Dominance Test is >50%	6	
6. Echinochloa crus-galli	5		FACW	3 - Prevalence Index is ≤3.0	D <sup>1</sup>	
7. Panicum dichotomiflorum	10	-	FACW	4 - Morphological Adaptatio		
8				data in Remarks or on a		
9				Problematic Hydrophytic Ve	egetation' (Expla	in)
10		-				
	100	= Total Co	ver	<sup>1</sup> Indicators of hydric soil and we		must
Woody Vine Stratum (Plot size:)	-	. Total Oc		be present, unless disturbed or	problematic.	
1		_	-	Hydrophytic		
2				Vegetation		
		= Total Co	ver	Present? Yes	No	
Remarks: (Include photo numbers here or on a separate	sheet.)					

Profile Des Depth	Matrix	a de la cara		ument the lox Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		Texture	Remarks
0-8	10YR 4/2	85	7.5YR 4/6	15	С	MPL	SICL	
8-16	10YR 4/2	75	7.5YR 4/6	25	<u>C</u>	MPL	SICL	
	/		÷	-				
			-					
					_			
	ioncentration, D=De Indicators:	pletion, RN	1=Reduced Matrix, N	NS=Maske	ed Sand G	irains.		PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :
Histoso	ACCUMUNCTION.		Sand	Gleyed N	latrix (SA)			Prairie Redox (A16)
	pipedon (A2)			Redox (S				urface (S7)
	listic (A3)			ed Matrix				anganese Masses (F12)
1 10 M 100 J 10 J	en Sulfide (A4)			Mucky M		)		hallow Dark Surface (TF12)
	d Layers (A5)			Gleyed N			and the second s	Explain in Remarks)
	uck (A10)			ted Matrix				
	d Below Dark Surfa	ce (A11)		Dark Sur				
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F	7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Redox	Depressi	ons (F8)		wetland	I hydrology must be present.
5 cm M	ucky Peat or Peat (S	S3)					unless	disturbed or problematic.
Restrictive	Layer (if observed	):						
Type:							to conside	×
Depth (in	ches):						Hydric Soil	Present? Yes X No
IYDROLC Wetland Hy	OGY drology Indicators			_	_		-	
Primary Ind	cators (minimum of	one is requ	lired: check all that a	apply)			Seconda	ry Indicators (minimum of two required
Surface	Water (A1)		Water-St	tained Lea	ves (B9)		Surfa	ace Soil Cracks (B6)
High W	ater Table (A2)		Aquatic I	Fauna (B1	3)		Drair	nage Patterns (B10)
Saturat	ion (A3)		True Aqu	atic Plant	s (B14)		Dry-	Season Water Table (C2)
Water M	Aarks (B1)		Hydroge	n Sulfide (	Odor (C1)		Cray	fish Burrows (C8)
Sedime	nt Deposits (B2)		X Oxidized	Rhizosph	eres on Li	iving Roots	(C3) Satu	ration Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Presence	e of Reduc	ed Iron (C	(4)	Stun	ted or Stressed Plants (D1)
Algal M	at or Crust (B4)		Recent I	ron Reduc	tion in Till	ed Soils (Ce	6) <u>X</u> Geor	morphic Position (D2)
Iron De	posits (B5)		Thin Mud	k Surface	(C7)		X FAC	-Neutral Test (D5)
Inundat	ion Visible on Aerial	Imagery (E	37) Gauge o	r Well Dat	a (D9)			
	y Vegetated Concav			xplain in R				
Field Obse		1.		10 10 10 10 10 10 10 10 10 10 10 10 10 1		T		
	200	Yes	No X Depth (	inches):				
Water Table		Yes		inches):				
Saturation F		Yes	No X Depth (i			Wat	and Hydrology	Present? Yes X No
(includes ca	pillary fringe)		nonitoring well, aeria		vrevious ir			
Describe Re	Solucu Data (Sireal	n gauge, fi	iormoning well, aeria	priotos, p	Sevious II	apecuons),	avanable?	
Remarks:								
-								

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-A23-PFO
Investigator(s): JMM KMP	Section, Township, Range:	T002N R016E S0	005
Landform (hillslope, terrace, etc.): Slope	Local relief (conc	ave, convex, none):	Concave
Slope (%): 3-5 Lat: 41.075483	Long: <u>-83.037243</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly		nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	. No
Remarks:				

30'	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> ) 1. Quercus palustris	<u>% Cover</u> 15	Species? X	FACW	Number of Dominant Species
				That Are OBL, FACW, or FAC: 5 (A)
2. Quercus macrocarpa	$-\frac{10}{5}$	<u> </u>	FAC	Total Number of Dominant
3. Ulmus americana			FACW	Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
15	30	= Total Cov	ver	
Sapling/Shrub Stratum (Plot size: 15' )				Prevalence Index worksheet:
1. Ulmus americana	15	<u>X</u>	FACW	Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	15	= Total Cov		UPL species x 5 =
Herb Stratum (Plot size: 5' )		10101 00		Column Totals: (A) (B)
1. Symphyotrichum racemosum	10		FACW	
2. Juncus effusus	15	X	OBL	Prevalence Index = B/A =
3 Scirpus atrovirens	5		OBL	Hydrophytic Vegetation Indicators:
Microstegium vimineum	25	X	FAC	1 - Rapid Test for Hydrophytic Vegetation
				$\overline{X}$ 2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 <sup>1</sup>
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	55	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2	85	7.5YR 4/6	15	C	MPL	SICL	
8-16	10YR 4/2	75	7.5YR 4/6	25	С	MPL	SICL	
		oletion, RM	M=Reduced Matrix, M	S=Maske	ed Sand Gr	ains.		n: PL=Pore Lining, M=Matrix.
lydric Soil	Indicators:							s for Problematic Hydric Soils <sup>3</sup> :
Histoso				-	latrix (S4)			t Prairie Redox (A16)
	pipedon (A2)			Redox (S				Surface (S7)
	listic (A3) en Sulfide (A4)			d Matrix	lineral (F1)			Manganese Masses (F12) Shallow Dark Surface (TF12)
	d Layers (A5)				Aatrix (F2)			(Explain in Remarks)
	uck (A10)		X Deplete	ed Matrix	(F3)			
Deplete	ed Below Dark Surfac	ce (A11)	Redox	Dark Sur	face (F6)			
	ark Surface (A12)				Surface (F7	)		s of hydrophytic vegetation and
Sandy M	Mucky Mineral (S1)		Redox	Depressi	ons (F8)			nd hydrology must be present,
E and MA								
	ucky Peat or Peat (S	-					unies	s disturbed or problematic.
Restrictive	Layer (if observed)	-					unies	s disturbed or problematic.
Restrictive Type:	Layer (if observed)	-						il Present? Yes X No
Restrictive	Layer (if observed)	-						X
Restrictive Type: Depth (in Remarks:	Layer (if observed)	-						X
Restrictive Type: Depth (in Remarks: YDROLO	Layer (if observed)							X
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy	Layer (if observed) nches): DGY rdrology Indicators	:	uired: check all that a	pply)			Hydric Soi	X
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi	Layer (if observed) nches): DGY rdrology Indicators	:	uired: check all that a Water-Sta		ves (B9)		Hydric Soi	il Present? Yes <u> </u>
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi Surface	Layer (if observed) Inches): DGY /drology Indicators icators (minimum of d	:		ained Lea			Hydric Soi	il Present? Yes X No
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi Surface High Wa	Layer (if observed) Inches): OGY /drology Indicators: icators (minimum of deserved)	:	Water-Sta	ained Lea auna (B1	3)		Hydric Soi	Il Present? Yes X No lary Indicators (minimum of two require rface Soil Cracks (B6)
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi Surface High Wa Saturati	Layer (if observed) Inches): OGY /drology Indicators icators (minimum of d e Water (A1) later Table (A2)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B1 atic Plant sulfide (	3) s (B14) Odor (C1)		Hydric Soi Hydric Soi Second Su Dra Cra	Il Present? Yes X No No Hary Indicators (minimum of two required rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8)
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Saturati Saturati Saturati Sedime	Layer (if observed) Inches): DGY rdrology Indicators: icators (minimum of d water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on Liv		Hydric Soi Hydric Soi Second Su Dra Dra (C3) Sa	Il Present? Yes X No Ilary Indicators (minimum of two require rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9)
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De	Layer (if observed) Inches): DGY rdrology Indicators icators (minimum of d water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C	4)	Hydric Soi Hydric Soi Second Su Dra Dra (C3) Stu	Il Present? Yes X No Ilary Indicators (minimum of two require rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Netland Hy Primary Indi Saturati Gaturati Saturati Saturati Saturati Drift De Algal M:	Layer (if observed) aches): DGY /drology Indicators: icators (minimum of of water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	:	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille	4)	Hydric Soi Hydric Soi Second	Il Present? Yes X No Iary Indicators (minimum of two require rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) inted or Stressed Plants (D1) iomorphic Position (D2)
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Netland Hy Primary Indi Surface High Wa Saturati Saturati Saturati Sedime Drift De Algal Ma Iron De	Layer (if observed) Inches): DGY /drology Indicators: icators (minimum of of water (A1) later Table (A2) ion (A3) Marks (B1) with Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5)	: one is req	Water-Sta Aquatic F True Aqua Hydrogen X Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7)	4)	Hydric Soi Hydric Soi Second	Il Present? Yes X No No lary Indicators (minimum of two required rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Restrictive Type: Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati Ingal Ma	Layer (if observed) aches): DGY /drology Indicators: icators (minimum of of water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	: one is req Imagery (	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent In     Thin Mucl B7) Gauge or	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9)	4)	Hydric Soi Hydric Soi Second	Il Present? Yes X No lary Indicators (minimum of two require rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) iomorphic Position (D2)

 Yes
 No
 X
 Depth (inches):

 Yes
 No
 X
 Depth (inches):

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

Water Table Present?

Saturation Present? (includes capillary fringe)

Remarks:

Wetland Hydrology Present? Yes  $\times$  No \_\_\_\_

Project/Site: Seneca Wind Project	City	/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner: Seneca Wind			State: OH	Sampling Point: W-A22,W-A23-L
Investigator(s): JMM KMP	Se	ction, Township, Rang	e: T002N R016E S	6005
Landform (hillslope, terrace, etc.): Flat field		Local relief (co	oncave, convex, none	Convex
Slope (%): 0 Lat: 41.075605	Lor	ng: -83.035336		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end mora	aine, 0 to 2 percent	slopes	NWI classifi	cation: N/A
Are climatic / hydrologic conditions on the site typica	al for this time of year?	Yes X No	(If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology _			ormal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology _			ded, explain any answ	
SUMMARY OF FINDINGS – Attach site				
Hydrophytic Vegetation Present? Yes	No X	Contraction of the Contract	2.22	
Hydric Soil Present? Yes	No	Is the Sampled A		
Wetland Hydrology Present? Yes Remarks:	No _X	within a Wetland	? Yes	No
Upland sample plot for W-A22 & W-A23				
VEGETATION – Use scientific names of	plants.			
<u>Tree Stratum</u> (Plot size:) 1)	Absolute D <u>% Cover</u> S	pecies? Status	Dominance Test wor Number of Dominant S That Are OBL, FACW,	Species
2			Total Number of Domi Species Across All Str	and the second se
4 5			Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:	)	otal Cover	Prevalence Index wo	
2				x 1 =
3				x 2 =
4.			FAC species	x 3 =
5			FACU species	x 4 =
5'	= 1	otal Cover	UPL species	x 5 =
Herb Stratum (Plot size: 5') 1. Glycine max	100 >			(A) (B)
2,		-	Hydrophytic Vegetat	x = B/A =
3				Hydrophytic Vegetation
4			2 - Dominance Te	
5			3 - Prevalence Inc	
6				Adaptations <sup>1</sup> (Provide supporting
8			data in Remark	ks or on a separate sheet)
9,			Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
10			Indicators of hudda	sil and walland huderbarr such
Woody Vine Stratum (Plot size:	_)	otal Cover	be present, unless dis	bil and wetland hydrology must turbed or problematic.
1			Hydrophytic	
0			Vegetation	esNo_X
2		otal Cover	Present? Y	es no i

Depth Mat		Redox	Features			
(inches) Color (mois		Color (moist)	% Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12 10YR 4/4	100				SIL	
5/5						
		-				
		·				
					_	
Type: C=Concentration, D	Depletion RN	A=Reduced Matrix MS	Masked Sand Gr	ains	2 ocation: Pl	_=Pore Lining, M=Matrix.
lydric Soil Indicators:						Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy G	eyed Matrix (S4)		Coast Prai	rie Redox (A16)
Histic Epipedon (A2)			edox (S5)		Dark Surfa	
Black Histic (A3)		Stripped	Matrix (S6)		Iron-Mang	anese Masses (F12)
Hydrogen Sulfide (A4)			ucky Mineral (F1)		and the second se	ow Dark Surface (TF12)
Stratified Layers (A5)			leyed Matrix (F2)		Other (Exp	lain in Remarks)
2 cm Muck (A10)			Matrix (F3)			
_ Depleted Below Dark S			ark Surface (F6) Dark Surface (F7		31	
Thick Dark Surface (A1 Sandy Mucky Mineral (\$			epressions (F8)	)		hydrophytic vegetation and drology must be present,
5 cm Mucky Peat or Pe	Care Allow and a local	Nedox Di				urbed or problematic
Restrictive Layer (if obser				-	0	and de la proprior a de
그 같은 것을 알 수 있는 것이 같이 같이 같이 같이 했다.						
and the second sec					Hydric Soil Pre	sent? Yes <u>No X</u>
Depth (inches):						
Depth (inches):						
Remarks:				,		
Remarks: YDROLOGY						
Remarks: YDROLOGY Vetland Hydrology Indica						
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimun			- 000		Secondary I	ndicators (minimum of two require
Remarks: YDROLOGY Netland Hydrology Indica Primary Indicators (minimum Surface Water (A1)		Water-Stair	ed Leaves (B9)		Surface	Soil Cracks (B6)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water-Stain Aquatic Fau	ed Leaves (B9) ina (B13)		Surface Drainag	Soil Cracks (B6) e Patterns (B10)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stair Aquatic Fau True Aquati	ed Leaves (B9) ina (B13) c Plants (B14)		Surface Drainag Dry-Sea	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	n of one is requ	Water-Stair Aquatic Fau True Aquati Hydrogen S	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1)		Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	n of one is requ	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rł	red Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv		Surface Drainag Dry-Sea Crayfish 3) Saturati	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	n of one is requ	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence o	red Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) hizospheres on Liv f Reduced Iron (C4	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Permarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	n of one is requ	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum 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)	n of one is requ	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7)	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Permarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum 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 Addition Visible on	n of one is requ erial Imagery (I	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rł Presence o Recent Iron Thin Muck S B7) Gauge or W	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C4 Reduction in Tille Surface (C7) /ell Data (D9)	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Av Sparsely Vegetated Co	n of one is requ erial Imagery (I	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rł Presence o Recent Iron Thin Muck S B7) Gauge or W	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7)	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks: YDROLOGY Netland Hydrology Indica Primary Indicators (minimum 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 Ar Sparsely Vegetated Co Field Observations:	n of one is requ erial Imagery (I ncave Surface	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S B7) Gauge or W (B8) Other (Expl	ed Leaves (B9) ina (B13) c Plants (B14) iulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks)	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks: YDROLOGY Netland Hydrology Indica Primary Indicators (minimum 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 Addition Visible on A	n of one is requ erial Imagery (I ncave Surface Yes	Water-Stain Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron Rfin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks)	4)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Ad Sparsely Vegetated Co Field Observations: Surface Water Present? Nater Table Present?	erial Imagery ( ncave Surface Yes Yes	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rł Presence o Recent Iron Thin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C4 Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks) nes):	4) d Soils (C6)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Remarks: YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum 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 Ad Sparsely Vegetated Co Field Observations: Surface Water Present? Nater Table Present? Saturation Present?	n of one is requ erial Imagery (I ncave Surface Yes	Water-Stain Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron Rfin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C4 Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks) nes):	4) d Soils (C6)	Surface Drainag Dry-Sea Crayfish 3) Saturati Stunted Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks: YDROLOGY Netland Hydrology Indica Primary Indicators (minimum 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 Av Sparsely Vegetated Co Field Observations: Surface Water Present? Nater Table Present? Saturation Present? Saturation Present? Saturation Present?	erial Imagery (I ncave Surface Yes Yes Yes	Water-Stain Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron Thin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl No X Depth (incl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks) nes): nes):	4) d Soils (C6)	<ul> <li>Surface</li> <li>Drainag</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturati</li> <li>Stunted</li> <li>Geomor</li> <li>FAC-Ne</li> </ul>	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Remarks: YDROLOGY Netland Hydrology Indica Primary Indicators (minimum 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 Av Sparsely Vegetated Co Field Observations: Surface Water Present? Nater Table Present? Saturation Present? Saturation Present?	erial Imagery (I ncave Surface Yes Yes Yes	Water-Stain Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron Thin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl No X Depth (incl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks) nes): nes):	4) d Soils (C6)	<ul> <li>Surface</li> <li>Drainag</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturati</li> <li>Stunted</li> <li>Geomor</li> <li>FAC-Ne</li> </ul>	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Addition	erial Imagery (I ncave Surface Yes Yes Yes	Water-Stain Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron Thin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl No X Depth (incl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks) nes): nes):	4) d Soils (C6)	<ul> <li>Surface</li> <li>Drainag</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturati</li> <li>Stunted</li> <li>Geomor</li> <li>FAC-Ne</li> </ul>	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Remarks:         YDROLOGY         Vetland Hydrology Indica         Primary Indicators (minimum         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         Inundation Visible on Ai         Sparsely Vegetated Co         Sturface Water Present?         Vater Table Present?         Vater Table Present?         Saturation Present?         Describe Recorded Data (sterming)	erial Imagery (I ncave Surface Yes Yes Yes	Water-Stain Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized Rf Presence o Recent Iron Thin Muck S B7) Gauge or W (B8) Other (Expl No X Depth (incl No X Depth (incl No X Depth (incl	ed Leaves (B9) ina (B13) c Plants (B14) sulfide Odor (C1) nizospheres on Liv f Reduced Iron (C- Reduction in Tille Surface (C7) /ell Data (D9) ain in Remarks) nes): nes):	4) d Soils (C6)	<ul> <li>Surface</li> <li>Drainag</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturati</li> <li>Stunted</li> <li>Geomor</li> <li>FAC-Ne</li> </ul>	Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/24/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point: W-A24
Investigator(s): JMM KMP	Section, Township, Range:	T002N R016E S0	005
Landform (hillslope, terrace, etc.): Slope	Local relief (cond	ave, convex, none):	Concave
Slope (%): 3-5 Lat: 41.075198	Long: <u>-83.044168</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	resent? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes <u>X</u> No
Remarks:			
Cowardin: PEM			

	Absolute		Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> )		Species?		Number of Dominant Species
1. Tilia americana		<u> </u>	FACU	That Are OBL, FACW, or FAC: _3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				
				Percent of Dominant Species That Are OBL_EACW or EAC: 60% (A/B)
5	10			That Are OBL, FACW, or FAC: 00% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		= Total Co	ver	Prevalence Index worksheet:
1. Rubus occidentalis	5	X	FACU	
			1700	
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5.				FACU species x 4 =
	5	= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')		Total OU	VCI	Column Totals: (A) (B)
1 Phalaris arundinacea	50	Х	FACW	
2. Polygonum sagittatum	25	X	OBL	Prevalence Index = B/A =
3 Impatiens capensis	20	$\frac{x}{x}$	FACW	Hydrophytic Vegetation Indicators:
<ul> <li>A. Phytolacca americana</li> </ul>	5		FACU	
				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	400			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	100	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	Matrix			ox Feature					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>		Remarks	
)-8	10YR 4/2	95	7.5YR 5/6	5		M	SIL		
-16	10YR 4/2	85	7.5YR 4/6	15	<u>C</u>	М	SICL		
	oncentration, D=De	pletion, RM	Reduced Matrix, M	S=Maske	d Sand Gr	ains.		tion: PL=Pore Lining, M=Matrix.	
•			Condu	Cloued M	atrix (CA)				
Histosol Histic Fr	pipedon (A2)			Redox (S	atrix (S4) 5)			ast Prairie Redox (A16) rk Surface (S7)	
	istic (A3)			d Matrix (	,			n-Manganese Masses (F12)	
_	en Sulfide (A4)				ineral (F1)			ry Shallow Dark Surface (TF12)	
- • •	d Layers (A5)		_ /		latrix (F2)			ner (Explain in Remarks)	
_	uck (A10)		× /	ed Matrix					
Depleter	d Below Dark Surfa	ce (A11)	Redox	Dark Sur	ace (F6)				
_ Thick Da	ark Surface (A12)		Deplete	ed Dark S	urface (F7)	)	<sup>3</sup> Indicat	tors of hydrophytic vegetation and	
_ Sandy M	lucky Mineral (S1)		Redox	Depressi	ons (F8)		wetland hydrology must be present,		
	ucky Peat or Peat (S	53)					unle	ess disturbed or problematic.	
_ 5 cm Mu	acky rear of rear (c	,							
	Layer (if observed								
estrictive I	Layer (if observed						Hydric S	Soil Present? Yes <u>×</u> No	
Type: Depth (inc	Layer (if observed						Hydric S	Goil Present? Yes <u> </u>	
estrictive I Type: Depth (ind emarks:	Layer (if observed						Hydric S	Soil Present? Yes <u>X</u> No <u></u>	
estrictive I Type: Depth (ind emarks: /DROLO	Layer (if observed	):					Hydric S	Soil Present? Yes <u>X</u> No <u></u>	
estrictive I Type: Depth (ind emarks: //DROLO	Layer (if observed ches): GY drology Indicators	):	red: check all that a	pply)				Soil Present? Yes X No	
Type: Depth (ind emarks: DROLO etland Hyd rimary Indic	Layer (if observed ches): GY drology Indicators	):	red: check all that a Water-Sta		ves (B9)		<u>Seco</u>		
Type: Depth (ind emarks: TOROLO retland Hyd rimary Indic Surface	Layer (if observed ches): GY drology Indicators cators (minimum of	):		ained Lea			<u>Seco</u>	ndary Indicators (minimum of two require	
Type: Depth (ind emarks: DROLO etland Hyd imary Indic Surface	Layer (if observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2)	):	Water-Sta	ained Lea auna (B1	3)		<u>Seco</u>	Indary Indicators (minimum of two require Surface Soil Cracks (B6)	
Estrictive I Type: Depth (ind emarks: //DROLO //D	Layer (if observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2)	):	Water-Sta Aquatic F	ained Lea auna (B1 atic Plants	3) s (B14)		<u>Seco</u>	Indary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10)	
Type: Depth (ind emarks: TOROLO etland Hyd imary Indid Surface High Wa Saturatio Water M	Layer (if observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	):	Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B1 atic Planta Sulfide C	3) s (B14)	ing Roots	<u>Seco</u>	ndary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)	
Type: Depth (ind emarks:	Layer (if observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)	):	Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Lea auna (B1 atic Plants Sulfide C Rhizosph	3) s (B14) Odor (C1)		<u>Seco</u> <u>X</u> (C3) <u>S</u>	ndary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)	
estrictive I Type: Depth (ind emarks: //DROLO //etland Hyd rimary India Surface High Wa Saturatia Saturatia Water M Sedimer Drift Dep	Layer (if observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	):	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1) atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv	4)	<u>Seco</u> <u>X</u> (C3) <u>S</u>	Indary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)	
Eestrictive I Type: Depth (ind Remarks: YDROLO Yetland Hyd rimary India Surface High Wa Saturatid Water M Sedimer Drift Dep Algal Ma	Layer (if observed ches):	):	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	<u>Seco</u> <u>X</u> (C3) (C3) S (C3) S (C3) S S S S S S S S S S S S S S S S S S S	Indary Indicators (minimum of two require 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)	

Field Observations:			
Surface Water Present?		No <u>×</u> Depth (inches):	
Water Table Present?	Yes	No X Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	No X Depth (inches):	Wetland Hydrology Present? Yes X No
Describe Recorded Data (s	tream gauge	e, monitoring well, aerial photos, previo	ous inspections), if available:
Remarks:			

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/24/2018	
Applicant/Owner: Seneca Wind	- 202 0.72	State: OH	Sampling Point: W-A24-UP	
Investigator(s): JMM KMP	Section, Township, Rang	T002N R016E S	\$005	
Landform (hillslope, terrace, etc.): Flat field	Local relief (co	oncave, convex, nor	ne): Convex	
Slope (%): 0 Lat: 41.075082	Long: -83.044309		Datum: NAD 83	
Soil Map Unit Name: Blount silt loam, end moraine, 2 to	4 percent slopes	NWI class	sification: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes X No	(If no, explain i	n Remarks.)	
Are Vegetation, Soil, or Hydrology signi	ficantly disturbed? Are "No	ormal Circumstance	s" present? Yes X No	
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If need	led, explain any ans	swers in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No X	
Remarks: Upland sample plot						

	Absolute	Dominar	nt Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:)	% Cover	Species'	? Status	Number of Dominant Species		
				That Are OBL, FACW, or FAC: 0 (	(A)	
2				Total Number of Dominant		
3				Species Across All Strata:(	(B)	
4				Percent of Dominant Species		
5					(A/B)	
Sapling/Shrub Stratum (Plot size:)		= Total Co	over	Prevalence Index worksheet:		
1				Total % Cover of: Multiply by:		
2				OBL species x 1 =		
3				FACW species x 2 =		
4				FAC species x 3 =		
5.				FACU species x 4 =		
		= Total Co	over	UPL species x 5 =		
Herb Stratum (Plot size: 5' )		, Total of		Column Totals: (A)		
1. Zea mays	100	X	UPL		1-7	
2		1-		Prevalence Index = B/A =		
3		1	<u> </u>	Hydrophytic Vegetation Indicators:		
4				1 - Rapid Test for Hydrophytic Vegetation		
5				2 - Dominance Test is >50%		
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>		
7				4 - Morphological Adaptations <sup>1</sup> (Provide suppo	orting	
8		40. 		data in Remarks or on a separate sheet)		
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	)	
10						
	100	= Total Co	over	<sup>1</sup> Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.	Jst	
Woody Vine Stratum (Plot size:)		1 100 Mar 12		be present, unless disturbed of problematic.	_	
1				Hydrophytic		
2				Vegetation Present? Yes No X		
		= Total Co	over	Present? TesNo		
Remarks: (Include photo numbers here or on a separate	sheet.)					

Profile Description: (Desc Depth Mat			Features			in station and the	
(inches) Color (mois		Color (moist)	%Type1	Loc <sup>2</sup>	exture	Remarks	
0-12 10YR 4/4	100			SIL	-		
		-					
		÷					
<sup>1</sup> Type: C=Concentration, D=	Depletion, RM	Reduced Matrix, MS	=Masked Sand Grain	ns.	<sup>2</sup> Location: PL=	Pore Lining, M=Matr	ix.
Hydric Soil Indicators:				In	dicators for P	roblematic Hydric S	oils <sup>3</sup> :
Histosol (A1)		Sandy G	leyed Matrix (S4)	-	_ Coast Prairie	e Redox (A16)	
Histic Epipedon (A2)		Sandy R	edox (S5)	-	Dark Surface	e (S7)	
Black Histic (A3)			Matrix (S6)	-	the second se	nese Masses (F12)	
Hydrogen Sulfide (A4)			lucky Mineral (F1)	-		v Dark Surface (TF12	2)
Stratified Layers (A5)			leyed Matrix (F2)	-	_ Other (Expla	in in Remarks)	
2 cm Muck (A10)			Matrix (F3)				
Depleted Below Dark St			ark Surface (F6)		S	An Querrander	
Thick Dark Surface (A12	A		Dark Surface (F7)			drophytic vegetation	
Sandy Mucky Mineral (S		Redox D	epressions (F8)			ology must be preser	nt,
5 cm Mucky Peat or Pea				1	unless distui	rbed or problematic.	_
Restrictive Layer (if observ	ea):						
Type:				Hy	dric Soil Prese	ent? Yes	No X
Contraction of the second s				1.0			
Depth (inches): Remarks:							
Depth (inches):							
Depth (inches): Remarks:							
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat							
Depth (inches): Remarks:			LOUIS CONTRACTOR			licators (minimum of	two required
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1)		Water-Stair	ned Leaves (B9)		Surface S	oil Cracks (B6)	two required
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2)			ned Leaves (B9)		Surface S	and the second second	two required
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1)		Water-Stair Aquatic Fai	ned Leaves (B9)		Surface S Drainage	oil Cracks (B6)	two required
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water-Stair Aquatic Fat True Aquat	ned Leaves (B9) una (B13)		Surface S Drainage Dry-Sease	oil Cracks (B6) Patterns (B10)	two required
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stair Aquatic Fau True Aquat Hydrogen S	ned Leaves (B9) una (B13) ic Plants (B14)	g Roots (C3)	Surface S Drainage Dry-Sease Crayfish E	oil Cracks (B6) Patterns (B10) on Water Table (C2)	
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R	ned Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1)	-	Surface S Drainage Dry-Sease Crayfish E Saturation	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)	agery (C9)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o	ned Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin		Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima	agery (C9)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o Recent Iron	ned Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4)		Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D	agery (C9)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	of one is requi	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck	ned Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4) Reduction in Tilled		Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	agery (C9)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 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)	of one is requi	<ul> <li>Water-Stair</li> <li>Aquatic Fau</li> <li>True Aquatic</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Thin Muck</li> <li>Gauge or V</li> </ul>	ned Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4) n Reduction in Tilled Surface (C7)		Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	agery (C9)
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Depth (inches): Remarks: <b>IYDROLOGY</b> Wetland Hydrology Indicat Primary Indicators (minimum 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 Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? (includes capillary fringe)	rial Imagery (B cave Surface ( Yes Yes Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck 7) Gauge or V B8) Other (Expl No X Depth (inc No X Depth (inc	hed Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) ain in Remarks) hes):	Soils (C6)	Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	agery (C9)
Depth (inches): Remarks: Primary Indicators (minimum 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 Ac Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Water Table Present?	rial Imagery (B cave Surface ( Yes Yes Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck 7) Gauge or V B8) Other (Expl No X Depth (inc No X Depth (inc	hed Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) ain in Remarks) hes):	Soils (C6)	Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	agery (C9)
Depth (inches): Remarks: Remarks: PYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 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 Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? Saturation Present? Saturation Present? Mater Table Present? Saturation Present? Saturation Present? Mater Table Present? Saturation	rial Imagery (B cave Surface ( Yes Yes Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck 7) Gauge or V B8) Other (Expl No X Depth (inc No X Depth (inc	hed Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) ain in Remarks) hes):	Soils (C6)	Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	agery (C9)
Depth (inches): Remarks: <b>IYDROLOGY</b> Wetland Hydrology Indicat Primary Indicators (minimum 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 Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? (includes capillary fringe)	rial Imagery (B cave Surface ( Yes Yes Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck 7) Gauge or V B8) Other (Expl No X Depth (inc No X Depth (inc	hed Leaves (B9) una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livin f Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) ain in Remarks) hes):	Soils (C6)	Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	agery (C9) )
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Project/Site: Seneca Wind Project	City/County: Seneca Sampling Date: 9/20/2018
Applicant/Owner: Seneca Wind LLC	State: OH Sampling Point: W-A19-PEM
Investigator(s): JMM KMP	_ Section, Township, Range: <u>T1N R16E S4</u>
Landform (hillslope, terrace, etc.): Linear	Local relief (concave, convex, none): Concave
Slope (%): 0 Lat: 41.080254	Long: <u>-83.018523</u> Datum: <u>NAD 83</u>
Soil Map Unit Name: Pandora silt Ioam	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of	í year? Yes 🔀 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally	
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?     Yes X     No       Hydric Soil Present?     Yes X     No	
Hydric Soil Present? Yes X No	Is the Sampled Area
Wetland Hydrology Present? Yes X No	within a Wetland? Yes X No
Remarks: Cowardin: PEM	
VEGETATION – Use scientific names of plants.	

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Cov	/er	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)				
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
	·			FACU species x 4 =
5				
Herb Stratum (Plot size: <u>5'</u> )		= Total Cov	/er	UPL species x 5 =
1. Leerzia oryzoides	30	х	OBL	Column Totals: (A) (B)
2. Echinochloa crus-galli		<u> </u>	FACW	Dravalance Index - D/A -
2. Archine eine triffele	5			Prevalence Index = B/A =
3. Ambrosia trifida	5		FAC	Hydrophytic Vegetation Indicators:
4. Solidago gigantea	15		FACW	X 1 - Rapid Test for Hydrophytic Vegetation
5. Phalaris arundinacea	25	Х	FACW	X 2 - Dominance Test is >50%
6. Bidens frondosa	5		FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Typha angustifolia	10		OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8. Epilobium coloratum	5		OBL	data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				Indiantan of hudrin without wetland hudratany must
	100	= Total Cov	/er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
		= Total Cov	/er	Present? Yes X No
Remarks: (Include photo numbers here or on a separate				1
	,			

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Control       Restor Fraues       Texture       Remarks         0.8       10YR 5/2       97       7.5YR 5/6       3       C       M       CL         8-16       10YR 5/2       97       7.5YR 5/6       3       C       M       CL         8-16       10YR 5/2       97       7.5YR 5/6       3       C       M       CL         8-16       10YR 4/2       90       7.5YR 5/6       3       C       M       CL	Profile Desc	cription: (Describe	to the dep	oth needed to docur	nent the	indicator	or confir	m the absence of	indicators.)
0-8         10YR 5/2         97         7.5YR 5/6         3         C         M         CL           8-16         10YR 4/2         90         7.5YR 4/6         10         C         M         CL           B-16         10YR 4/2         90         7.5YR 4/6         10         C         M         CL           Image: Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains         *Location: PL=Pore Lining, M=Matrix, MHore Solis':         Indicators:         Indicators:         Indicators:         Indicators:         Indicators:         Coast Prairs Reduced (A1)         Sandy Redux; (S6)         Dark Strates (S7)         Dark Strates (S1)         Depleted Dark Strates (S7)         Dark Strates (S1)         Dark	Depth	Matrix		Redo	x Feature	es			
8-16       10YR 4/2       90       7.5YR 4/6       10       C       M       CL		Color (moist)	%	Color (moist)	%				Remarks
Image: C = Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>1</sup> Location: PL=Pore Lining, M=Matrix.          Image: C = Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>1</sup> Location: PL=Pore Lining, M=Matrix.          Image: C = Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>1</sup> Location: PL=Pore Lining, M=Matrix.          Image: C = Concentration, D=Depletion, RM=Reduced Matrix, (S4)          – Coast Prairs Reduced (Af)           – Coast Prairs Reduced (Af)          Image: C = Concentration, D = Depletion, RM=Reduced Matrix, (S4)          – Coast Prairs Reduced (Af)           – Coast Prairs Reduced (Af)          Image: C = Concentration, D = Depletion, RM=Reduced Matrix, (S5)          – Coast Surface (TF)           – Toro-Managenee Matrix, (S4)           – Coast Surface (TF)          Standbox (Af)          – Loamy Gleved Matrix (S2)           – Other (Explain in Remarks)           – Depletion (R3)           – Other (Explain in Remarks)          2 cm Mucky Missing (S1)           – Depletion (R3)           – Depletion (R3)           – Other Resord Parket Matrix (R4)          3 strate Values (Pati or Peat (S3)           – Redox Depressions (F8)           – Interestication of thytophytic vegetation and         velame (S1)          Type:	0-8	10YR 5/2	97	7.5YR 5/6	3	С	М	CL	
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)	8-16	10YR 4/2	90	7.5YR 4/6	10	С	М	CL	
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)									
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)									
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)									
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)		<u> </u>							
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)									
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histosol (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histosol (A2)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F6)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     melos disturbed or problematic       Type:     Depleted Plank Surface (A11)     Redox Depressions (F8)       Primary Indicators:     Hydric Soil Present? Yes X No       Primary Indicators:     Melocitators:       Primary Indicators:     Melocitators:       Primary Indicators:     May and the second statistic Plant (B13)       Surface Water (A11)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yafae Water Marks (B1)     Hydrogen Sulface Odor (C1)     CraryRein Burrow (C2)       Saturation (A3)     True Aquatic Flanta (Plant)     Saturation Visible on Aerial Imagery (C9)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)									
Hydric Soil Indicators:     Indicators:     Indicators:     Indicators:       Histocal (A1)     Sandy Gleyed Matrix (S4)     Coast Prairie Redox (A16)       Histocal (A1)     Sandy Redox (S5)     Dark Surface (S7)       Black Histic (A3)     Stripped Matrix (S6)     Iorn-Manganese Masses (F12)       Hydrogen Suffde (A4)     Loamy Mucky Mineral (F1)     Very Shallow Dark Surface (F7)       2 cm Muck (A10)     Redox Dark Surface (F7)     Other (Explain in Remarks)       2 cm Mucky Mineral (S1)     Redox Dark Surface (F7)     *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):     Type:     unless disturbed or problematic.       Type:     Depleted Plank Surface (A11)     Water-Stained Leaves (B9)     Scondary Indicators (minimum of two required)       Type:     Depletic Soil Present?     Yes X     No       Permary Indicators (minimum of one is required: check all that apply)     Scondary Indicators (minimum of two required)       Surface Water (A1)     Water-Stained Leaves (B9)     Surface Soil Cracks (B6)       Yindiace Water (A1)     Hydrogen Sulfide Odor (C1)     Crarkin Burrow (C2)       Saturation (A3)     Three Aquatic Planta (B13)     Dry-Season Water Table (C2)       Saturation (A3)     Presence of Reduced fron (C4)     Saturation Visible on Aerial Imagery (C9)       Sunted or Stressed Pl	1							2	
			pletion, RM	=Reduced Matrix, Ma	S=Maske	d Sand Gr	ains.		
Image: Epipedin (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iork Surface (S7)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (F12)         2 cm Muck (A10)       Depleted Below Dark Surface (A11)       Redox Dark Surface (F7)         3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       ************************************				Candu		-			
□       Bick Histic (A3)					-				
						,			
2 cm Muck (A10)       X       Depleted Balow Dark Surface (A11)       Redox Dark Surface (F6)         Thick Dark Surface (A12)       Redox Dark Surface (F7)       *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (If observed):       Type:									
□ Depleted Below Dark Surface (A11)       □ Depleted Dark Surface (F7) <sup>3</sup> Indicators of hydrophytic vegetation and set of the present, unless disturbed or problematic.         □ Sandy Mucky Mineral (S1)       □ Redox Dark Surface (F7) <sup>3</sup> Indicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):       Type:									,
Sandy Mucky Mineral (S1)	Deplete	d Below Dark Surfac	ce (A11)						
	Thick Da	ark Surface (A12)		Deplete	d Dark S	urface (F7	)	<sup>3</sup> Indicators of	hydrophytic vegetation and
Restrictive Layer (if observed):       Type:		• • • •		Redox [	Depressio	ons (F8)			
Type:								unless dis	sturbed or problematic.
Depth (inches):       Hydric Soil Present?       Yes X       No         Remarks:         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         Yetar Table (A2)       Aquatic Flants (B13)       Drainage Patterns (B10)         Yetar Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Yetar Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Yetar Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Yetar Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Yetar Marks (B1)       Hydrogen Sulfide Odor (C1)       Staturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Adgal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       K Geomorphic Position (D2)         Inon Deposits (B5)       Thin Muck Surface (C7)       K FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)	Restrictive	Layer (if observed)	:						
Depth (inches):	Туре:							Hydric Soil Pr	asant2 Vas X No
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         X High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drit Deposits (B3)       Presence of Reduced Iron (C4)       Stunde or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         I non Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         I nundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       Surface Water Present?       Yes X No         Sutface Water Present?       Yes X No       Depth (inches): <u>0</u> Water Table Present?       Yes X No       Depth (inches): <u>0</u> <td>Depth (in</td> <td>ches):</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Hyunc Son Ph</td> <td></td>	Depth (in	ches):						Hyunc Son Ph	
Wetland Hydrology Indicators:       Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Aqaal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Inon dotion Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Saturation Present?       Yes X No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Deptrible Recorded Data (stream gauge, monitoring well, aerial photos, previous	Remarks:								
Wetland Hydrology Indicators:       Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Aqaal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Inon dotion Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Saturation Present?       Yes X No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Deptrible Recorded Data (stream gauge, monitoring well, aerial photos, previous									
Wetland Hydrology Indicators:       Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Aqaal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Inon dotion Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Saturation Present?       Yes X No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Deptrible Recorded Data (stream gauge, monitoring well, aerial photos, previous									
Wetland Hydrology Indicators:       Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Inon dotion Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Saturation Present?       Yes X No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Depth Recorded Data (stream gauge, monitoring well, aerial photos, previous ins									
Wetland Hydrology Indicators:       Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Inon dotion Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Saturation Present?       Yes X No       Depth (inches): <u>0</u> Wetland Hydrology Present? Yes X No       No         Depth Recorded Data (stream gauge, monitoring well, aerial photos, previous ins									
Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Surface Water Present?       Yes       No       Depth (inches):         Water Table Present?       Yes       No       Depth (inches): O         Saturation Present?       Yes       No       Depth (inches): O       Wetland Hydrology Present? Yes       No         Depth (inches): O       Depth (inches): O       Wetland Hydrology Present? Yes       No       No         Deptrib Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)	HYDROLO	GY							
Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       Mo       Depth (inches): 0         Sutration Present?       Yes       No       Depth (inches): 0         Saturation Present?       Yes       No       Depth (inches): 0         Water Table Present?       Yes       No       Depth (inches): 1         Depth (inches): 0       Wetland Hydrology Present?       Yes       No         Describe Recorded Data (stream gauge, monitori	Wetland Hy	drology Indicators	:						
X       High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X       Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       Mo       Depth (inches):         Surface Water Present?       Yes       No         Yes       No       Depth (inches): 0         Saturation Present?       Yes       No         Depth (inches):       0       Wetland Hydrology Present? Yes       No         Cincludes capillary fringe)       Depth (inches): 0       Wetland Hydrology Present? Yes       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Primary Indi	cators (minimum of	one is requ	ired; check all that ap	ply)			Secondary	Indicators (minimum of two required)
X       High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X       Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       Mo       Depth (inches):         Surface Water Present?       Yes       No         Yes       No       Depth (inches): 0       Wetland Hydrology Present? Yes       No         Gauge, ormitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surface	e Soil Cracks (B6)
X       Saturation (A3)	1 1 1	, ,							
Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:       Ves       No         Surface Water Present?       Yes       No         Mater Table Present?       Yes       No         Depth (inches):       0       Wetland Hydrology Present?       Yes         Yes       No       Depth (inches): 0       Wetland Hydrology Present?       Yes       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Present?       Yes       No	<u> </u>					·		Dry-Se	ason Water Table (C2)
Sediment Deposits (B2)Oxidized Rhizospheres on Living Roots (C3)Saturation Visible on Aerial Imagery (C9)Stunted or Stressed Plants (D1)Stunted or Stressed Plants (D2)Stunted or Stressed Plants (D3)Stunted or Stressed Plants (D2)Stunted or Stressed Plants (D5)Stunted or Stressed Plants (D5)Stunted Stunted Stunted Plants (D5)Stunted Plants (D5)St	Water M	larks (B1)				. ,			• •
Drift Deposits (B3)      Presence of Reduced Iron (C4)      Stunted or Stressed Plants (D1)        Algal Mat or Crust (B4)      Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)        Iron Deposits (B5)      Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)        Inundation Visible on Aerial Imagery (B7)      Gauge or Well Data (D9)       X       FAC-Neutral Test (D5)        Sparsely Vegetated Concave Surface (B8)      Other (Explain in Remarks)        Feld Observations:         Surface Water Present?       Yes      No      Depth (inches):							ing Roots		
Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)       Feld Observations:         Surface Water Present?       Yes       No       Depth (inches):         Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         (includes capillary fringe)       Depth (aerial photos, previous inspections), if available:       No				Presence	of Reduc	ed Iron (C	4)		
	Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Tille	d Soils (C		
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes _X No Depth (inches): Saturation Present? Yes _X No Depth (inches): Motion Depth (inches): Wetland Hydrology Present? Yes _X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Field Observations:         Surface Water Present?       Yes       No       Depth (inches):	Inundati	ion Visible on Aerial	Imagery (B	(7) Gauge or V	Well Data	a (D9)			
Surface Water Present?       Yes       No       X       Depth (inches):	Sparsel	y Vegetated Concav	e Surface (	(B8) Other (Exp	lain in R	emarks)			
Water Table Present?       Yes       X       No       Depth (inches):       0       Wetland Hydrology Present?       Yes       X       No       No         Saturation Present?       Yes       X       No       Depth (inches):       0       Wetland Hydrology Present?       Yes       X       No       No									
Water Table Present?       Yes       X       No       Depth (inches):       0       Wetland Hydrology Present?       Yes       X       No       No         Saturation Present?       Yes       X       No       Depth (inches):       0       Wetland Hydrology Present?       Yes       X       No       No	Surface Wat	ter Present?	/es	No X Depth (inc	ches):				
Saturation Present?       Yes       X       No       Depth (inches):       0       Wetland Hydrology Present?       Yes       X       No         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       No							_		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							- Wet	land Hydrology P	resent? Ves X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			63		ches). <u>-</u>		_   ••••	and Hydrology P	
Remarks:			n gauge, m	onitoring well, aerial	photos, p	revious in	spections)	, if available:	
Remarks:									
	Remarks:								

Project/Site: Seneca Wind Project		City/County	: Seneca		Sampling Date:	9/20/2018
				State: OH		
Investigator(s): JMM KMP		Section, To	wnship, Ra	nge: T1N R16E S4		
				(concave, convex, none):	Concave	
						3
Soil Map Unit Name: Pandora silt Ioam				NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the site typical for thi	s time of ye	ar?Yes >		(If no, explain in R		
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		No
Are Vegetation, Soil, or Hydrology I				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						atures, etc.
Hydrophytic Vegetation Present? Yes N	lo					
Hydric Soil Present? Yes X	lo		e Sampleo			
	lo	with	in a Wetla	nd? Yes <u>^</u>	No	-
Remarks: Cowardin: PSS						
VEGETATION – Use scientific names of plants				1	<u></u>	
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test work		
1/				Number of Dominant Sp That Are OBL, FACW, o	<u>^</u>	(A)
2				Total Number of Domin	ant	
3				Species Across All Stra	2	(B)
45				Percent of Dominant Sp That Are OBL, FACW, o		(A/B)
Semling/Chryth Stratum (Distaire) 15'		= Total Cov	ver	Prevalence Index worl	kehoot:	
Sapling/Shrub Stratum (Plot size: 15') 1. Salix nigra	30	х	OBL	Total % Cover of:		v bv:
2			<u></u>	OBL species		
3				FACW species		
4				FAC species		
5.				FACU species	x 4 =	
51	30	= Total Cov	ver	UPL species	x 5 =	
Herb Stratum (Plot size: 5')	05	X		Column Totals:	(A)	(B)
1. Leerzia oryzoides	35	<u> </u>	OBL		-	
2. Echinochloa crus-galli 3 Ambrosia trifida	- <u>15</u> 5		FACW	Prevalence Index		
Calidara sizantaa			FAC	Hydrophytic Vegetation		
4. Solidago gigantea 5. Phalaris arundinacea	- 10		FACW FACW	$\frac{1}{X}$ 2 - Dominance Tes		ation
	- 30	<u>^</u>	FACW	3 - Prevalence Inde		
6. Bidens frondosa			FACW	4 - Morphological A		ido cunnorting
7				data in Remarks	s or on a separate	sheet)
8				Problematic Hydrop		
9						
10	100	= Total Cov		<sup>1</sup> Indicators of hydric soil		
Woody Vine Stratum (Plot size:)		- 10(a) 001		be present, unless distu	irbed or problema	tic.
1			<u></u>	Hydrophytic		
2				Vegetation	×	
		= Total Cov	/er	Present? Yes	s <u>X</u> No_	
Remarks: (Include photo numbers here or on a separate	sheet.)					

Profile Desc	ription: (Describe	e to the de	oth needed to docu	ment the	indicator	or confirm	m the absence of in	dicators.)
Depth	Matrix			ox Feature				
(inches)	Color (moist)	%	Color (moist)	%_	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 5/2	97	10YR 5/6	3	<u> </u>	M		
8-16	10YR 4/2	90	10YR 4/6	5	<u> </u>	M	<u>CL</u>	
							· ·	
<sup>1</sup> Type: C=Ce	oncentration, D=De	pletion, RM	=Reduced Matrix, M	S=Maske	d Sand G	ains.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix.
Hydric Soil	Indicators:							roblematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy	Gleyed M	atrix (S4)		Coast Prairi	e Redox (A16)
Histic Ep	pipedon (A2)			Redox (S			Dark Surfac	e (S7)
	stic (A3)			d Matrix (				nese Masses (F12)
	en Sulfide (A4)				ineral (F1)			w Dark Surface (TF12)
	d Layers (A5)				latrix (F2)		Other (Explanation)	ain in Remarks)
_	ick (A10)	(111)	X Deplete					
·	d Below Dark Surfa ark Surface (A12)	ce (ATT)		Dark Sur	urface (F6)	<b>`</b>	<sup>3</sup> Indicators of h	drophytic vegetation and
	fucky Mineral (S1)			Depressi		)		rology must be present,
	icky Peat or Peat (S	53)		Depressi	0113 (1 0)			rbed or problematic.
	Layer (if observed							
Type:								
Depth (in							Hydric Soil Pres	ent? Yes X No
Remarks:								
i tomanto.								
	<u></u>							
HYDROLO								
-	drology Indicators		. Se o receber					
		one is requ	ired; check all that a					dicators (minimum of two required)
1 1 1	Water (A1)		Water-Sta					Soil Cracks (B6)
<u> </u>	ater Table (A2)		Aquatic Fa		,			Patterns (B10)
X Saturation	. ,		True Aqua				_ /	on Water Table (C2)
	larks (B1)		Hydrogen				Crayfish I	
	nt Deposits (B2)		Oxidized			•	· · <u> </u>	n Visible on Aerial Imagery (C9)
	posits (B3)		Presence					or Stressed Plants (D1)
	at or Crust (B4)				tion in Tille	d Soils (C		hic Position (D2)
	oosits (B5)		Thin Mucl				X FAC-Neu	tral Test (D5)
_	on Visible on Aerial	• • •	, <u> </u>					
	/ Vegetated Conca	ve Surface	(B8) Other (Ex	plain in R	emarks)			
Field Obser			$\sim$					
Surface Wat			No X Depth (in			-		
Water Table			No Depth (in			_		$\sim$
Saturation P		Yes X	No Depth (in	iches): <u>0</u>		_ Wet	land Hydrology Pre	sent? Yes X No
(includes cap Describe Re		n daude m	onitoring well, aerial	photos r	revious in	spections)	if available:	
200011001100		gaage, m	ering wen, dend	priotoo, p			,	
Remarks:								
Norman No.								

roject/Site: Seneca Wind Project Cit			_ City/County: Seneca Sampling Date: 9/20/			
Applicant/Owner: Seneca Wind LLC				State: OH Sampling Point: W-A19-UP		
Investigator(s): <u>C. Vileno, K. Pulver</u>			Section, Township, R	ange: <u>T1N R16E S4</u>		
Landform (hillslope, terrace, etc.): FI	at field		Local relie	ef (concave, convex, none): <u>Convex</u>		
Slope (%): 0 Lat: 41.08	80235	I	ong: -83.018446	Datum: NAD 83		
Soil Map Unit Name: Pandora silt I	loam			NWI classification: N/A		
Are climatic / hydrologic conditions or	n the site typical for t	his time of yea	nr? Yes X No	(If no, explain in Remarks.)		
Are Vegetation, Soil,	or Hydrology	_ significantly of	listurbed? Are	e "Normal Circumstances" present? Yes 🔀 No		
Are Vegetation, Soil,	or Hydrology	_ naturally prot	olematic? (If	needed, explain any answers in Remarks.)		
SUMMARY OF FINDINGS -	Attach site ma	p showing	sampling point	locations, transects, important features, etc.		
Hydrophytic Vegetation Present?	Yes	No X				
Hydric Soil Present?	Yes	$N_0 X$	Is the Sample			
Wetland Hydrology Present?	Yes	No <u>X</u>	within a Weth	and? Yes <u>No X</u>		
Remarks: Upland sample plot						
VEGETATION - Use scientifi	c names of plant	ts.				
<u>Tree Stratum</u> (Plot size:			Dominant Indicator Species? Status			
2				Total Number of Dominant Species Across All Strata: 1 (B)		
4						
5				<ul> <li>Percent of Dominant Species</li> <li>That Are OBL, FACW, or FAC: 0%</li> <li>(A/B)</li> </ul>		
	-		= Total Cover			
Sapling/Shrub Stratum (Plot size:				Prevalence Index worksheet: Total % Cover of:Multiply by:		
1 2				OBL species         x1 =		
3.				FACW species x 2 =		
4				FAC species x 3 =		
5.				FACU species x 4 =		
			= Total Cover	UPL species x 5 =		
Herb Stratum (Plot size: 5'	)	400	X UDI	Column Totals: (A) (B)		
1. Glycine max		100	X UPL	- Dravalance Index - D(A -		
2				Prevalence Index = B/A =		
3				Hydrophytic Vegetation Indicators:          1 - Rapid Test for Hydrophytic Vegetation		
4				- 2 - Dominance Test is >50%		
5				$\begin{bmatrix} 2 & 2 & 2 & 2 & 2 & 2 & 2 & 2 & 2 & 2 $		
6				- 4 - Morphological Adaptations <sup>1</sup> (Provide supporting		
7				data in Remarks or on a separate sheet)		
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
9 10				-		
10			= Total Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrology must		
Woody Vine Stratum (Plot size:	)			be present, unless disturbed or problematic.		
1			<u> </u>	_ Hydrophytic		
2				Vegetation Present? Yes No _X_		
			= Total Cover	Present? Yes No		
Remarks: (Include photo numbers	here or on a separat	e sheet.)				

Depth	Matrix	%	<u>Redox Features</u> Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Tautum	Demedia
(inches) 0-12	_ <u>Color (moist)</u> 10YR 4/4	100	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	_ <u>Texture</u> SIL	Remarks
J-12		100			
		letion, RM=	Reduced Matrix, MS=Masked Sand Grains.		⊧Pore Lining, M=Matrix.
Histoso Histic E Black H Hydrog	il Indicators: ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) <i>I</i> uck (A10)		<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> </ul>	Coast Prairie Dark Surfac Iron-Mangar Very Shalloo	roblematic Hydric Soils <sup>3</sup> : e Redox (A16) e (S7) nese Masses (F12) w Dark Surface (TF12) ain in Remarks)
Deplete Thick I Sandy 5 cm N	ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) /lucky Peat or Peat (S3	3)	<ul> <li> Depleted Matrix (F3)</li> <li> Redox Dark Surface (F6)</li> <li> Depleted Dark Surface (F7)</li> <li> Redox Depressions (F8)</li> </ul>	wetland hydr	rdrophytic vegetation and rology must be present, rbed or problematic.
Type:	e Layer (if observed):			Hydric Soil Pres	ent? Yes <u>No X</u>
Remarks:					
YDROLO	OGY				
Vetland H	ydrology Indicators:				
Primary Ind	dicators (minimum of o	ne is require	ed; check all that apply)	Secondary Inc	dicators (minimum of two required
Surface	e Water (A1)		Water-Stained Leaves (B9)	Surface S	Soil Cracks (B6)
_ High W	Vater Table (A2)		Aquatic Fauna (B13)	Drainage	Patterns (B10)
_ Satura	tion (A3)		True Aquatic Plants (B14)	Dry-Seas	on Water Table (C2)
Water	Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish I	Burrows (C8)
_ Sedime	ent Deposits (B2)		Oxidized Rhizospheres on Living Roots	s (C3) Saturation	n Visible on Aerial Imagery (C9)
_ Drift De	eposits (B3)		Presence of Reduced Iron (C4)	Stunted o	r Stressed Plants (D1)
Algal N	Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (0)	C6) Geomorp	hic Position (D2)

Inundation Visible on A	erial Imagery (B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Co	oncave Surface (B8)	Other (Explain in Remarks	5)		
Field Observations:					
Surface Water Present?	Yes No	X Depth (inches):			
Water Table Present?	Yes No	X Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No	X Depth (inches):	Wetland Hydrology Present?	Yes	No <u>×</u>
Describe Recorded Data (s	tream gauge, monitor	ing well, aerial photos, previous	s inspections), if available:		
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/21/2018	_
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A18	
Investigator(s): JMM KMP	Section, Township, Range:	T1N R16E S4		_
Landform (hillslope, terrace, etc.): Depression	Local relief (cond	ave, convex, none):	Concave	
Slope (%): 0 Lat: 41.076525	Long: <u>-83.019877</u>		Datum: NAD 83	
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No	_
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	l, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks:				
Cowardin: PEM				

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> )	<u>% Cover</u> 10	Species? X	FACW	Number of Dominant Species
1. Quercus palustris				That Are OBL, FACW, or FAC: _4 (A)
2				Total Number of Dominant
3				Species Across All Strata: _5(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)
	4.0	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15' )		rotal oct		Prevalence Index worksheet:
1. Rosa multiflora	10	<u>X</u>	FACU	Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	10	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5')		rotal oct		Column Totals: (A) (B)
1. Boehmeria cylindrica	35	Х	OBL	
2. Impatiens capensis	20	Х	FACW	Prevalence Index = B/A =
3. Microstegium vimineum	20	X	FAC	Hydrophytic Vegetation Indicators:
A Phalaris arundinacea	10		FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Lysimachia nummularia	5		FACW	X 2 - Dominance Test is >50%
6 Toxicodendron radicans	5		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. Scirpus atrovirens	5		OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	400			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	100	= Total Cov	/er	be present, unless disturbed or problematic.
1				Hydrophytic Vegetation
2				Present? Yes X No
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sneet.)			

Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location:       PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)	Depth	Matrix		Red	ox Featur	es			
B-16       10YR 4/2       B5       7.5YR 4/6       15       C       M       CL         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *       *       Cocation: PL=Pore Lining, M=Matrix.         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *       Indicators for Problematic Hydric Solis*:         Histos (IA1)	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	e Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Histosol (A1)       Sandy Gleyed Matrix (S4)       Indicators for Problematic Hydric Solis <sup>1</sup> :         Histosol (A1)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Ioro-Manganese Masses (F12)         Hydrogen Sulfide (A4)       Loamy Mudxy Mineral (F1)       Very Shallow Dark Surface (S7)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         2 cm Muck (A10)       Depleted Matrix (F2)       Other (Explain in Remarks)         2 cm Muck Mineral (S1)       Redox Dark Surface (F7) <sup>1</sup> Indicators of hydrophytic vegetation and westarch (F6) westarce (F6)         3 cm Muck Mineral (S1)       Redox Dark Surface (F7) <sup>1</sup> Indicators of hydrophytic vegetation and westarch (F1) westarce (F6)         Type:	0–8	10YR 4/2	95	7.5YR 4/6	5	С	M	CL	
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (A1)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron-Manganese Masses (F12)         Hydrogen Suffied (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         2 cm Muck (A10)       Z bepleted Matrix (F3)       Other (Explain in Remarks)         2 cm Muck (A10)       Redox Dark Surface (F6)       Other (Explain in Remarks)         5 cm Mucky Mineral (S1)       Redox Dark Surface (F7) <sup>a</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Strictice Layer (if observed):       Type:	8-16	10YR 4/2	85	7.5YR 4/6	15	С	М	CL	
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (A1)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron-Manganese Masses (F12)         Hydrogen Suffied (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         2 cm Muck (A10)       Z bepleted Matrix (F3)       Other (Explain in Remarks)         2 cm Muck (A10)       Redox Dark Surface (F6)       Other (Explain in Remarks)         5 cm Mucky Mineral (S1)       Redox Dark Surface (F7) <sup>a</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Strictice Layer (if observed):       Type:				Reduced Matrix N					ation: PI =Pore Lining M=Matrix
Histosol (A1)				Ceduced Matrix, IV	IO-Maske	u Sanu Gi	an 15.		
Type:	Histic E Black Hi Hydroge Stratifier 2 cm Mu Deplete Thick Da Sandy M	pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surfa ark Surface (A12) Mucky Mineral (S1)		Sandy Strippe Loamy Loamy X Deplet Redox Deplet	Redox (S ed Matrix ( Mucky M Gleyed M ed Matrix Dark Sur ed Dark S	5) S6) ineral (F1) latrix (F2) (F3) face (F6) surface (F7	)	— Da — Irc — Ve — Ot <sup>3</sup> Indica we	ark Surface (S7) on-Manganese Masses (F12) ery Shallow Dark Surface (TF12) ther (Explain in Remarks) ators of hydrophytic vegetation and etland hydrology must be present,
Depth (inches):       Hydric Soil Present?       Yes       No         Remarks:       Primary Indicators:       No       No       No         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       K FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)	Restrictive	Layer (if observed	):						
Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)	_							Hydric	Soil Present? Yes × No
YDROLOGY         Netland Hydrology Indicators:         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       K FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)								Inyunc	
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Stature (D9)	Depth (in	ches):						Tiyunc	
Primary Indicators (minimum of one is required: check all that apply)       Surface Water (A1)       Water-Stained Leaves (B9)       Surface Vater (A1)       Surface Water (A1)       Surface Vater (A1)       Dreseason Vater Table (A2)       Surface Vater (A1)       Dry-Season Vater Table (C2)       Surface (C2) </td <td>Depth (in Remarks:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Tryunc</td> <td></td>	Depth (in Remarks:							Tryunc	
Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)	Depth (in Remarks: YDROLO	DGY							
High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)	Depth (in Remarks: YDROLO Wetland Hy	DGY drology Indicators	:						
Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)	Depth (in Remarks: YDROLO Netland Hy Primary India	DGY drology Indicators cators (minimum of	:			(50)			condary Indicators (minimum of two required
Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)	Depth (in Remarks: YDROLO Vetland Hy Primary India Surface	DGY drology Indicators cators (minimum of Water (A1)	:	Water-St	ained Lea			<u>Sec</u>	ondary Indicators (minimum of two required Surface Soil Cracks (B6)
Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       FAC-Neutral Test (D5)	Depth (in Remarks: YDROLO Vetland Hy Primary India Surface High Wa	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2)	:	Water-St Aquatic F	ained Lea auna (B1	3)		<u>Sec</u> X	condary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)	Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturati	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	:	Water-St Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		<u>Sec</u> 	condary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       A Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       A FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)	Depth (in Remarks: YDROLO Vetland Hy Primary India Surface High Wa Saturati Water M	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)	:	Water-St Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide C	3) s (B14) Odor (C1)		<u>Sec</u>	condary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)	Depth (in Remarks: YDROLO YDROLO Vetland Hy Primary India Saturati Saturati Saturati Saturati Saturati Saturati Saturati Saturati	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	:	Water-St Aquatic F True Aqu Hydroger Oxidized	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on Liv		<u>Sec</u>	condary 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)
_ Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)	Depth (in Remarks: YDROLO Yetland Hy Primary India Surface High Wa Saturati Water M Sedimei Drift De	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	:	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1 atic Plant n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C	4)	<u>Sec</u>	condary 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)
	Depth (in Remarks: YDROLO Vetland Hy Primary India Surface High Wa Saturati Water M Sedimen Drift Dej Algal Ma	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	:	Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Lea auna (B1 atic Plant on Sulfide C Rhizosph of Reduction Reduction	3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille	4)	<u>Sec</u> <u>X</u> C3) <u></u>	condary 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)
	Depth (in Remarks: YDROLO Vetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift Dej Algal Ma Iron Deg	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is require	Water-St     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent Ir     Thin Muc	ained Lea Fauna (B1 atic Plant on Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv eed Iron (C tion in Tille (C7)	4)	<u>Sec</u> <u>X</u> C3) <u></u>	condary 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)

Sparsely Vegetated Con	cave Surface	(B8)	Other (Explain in Remarks)			
Field Observations:						
Surface Water Present?	Yes	No X	Depth (inches):			
Water Table Present?	Yes	No X	Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	No X	_ Depth (inches):	Wetland Hydrology Present?	Yes X	No
Describe Recorded Data (stro	eam gauge, m	nonitoring	well, aerial photos, previous inspe	ections), if available:		
Remarks:						

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/21/2018
Applicant/Owner: Seneca Wind LLC		State: OH	Sampling Point: W-A18-UP
Investigator(s): JMM KMP	Section, Township, Range:	T1N R16E S4	
Landform (hillslope, terrace, etc.): Slope		ave, convex, none):	Convex
Slope (%): 3-5 Lat: 41.076685	Long: <u>-83.02002</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	ent slopes	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norma	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed,	explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	ls the Sampled Area within a Wetland?	Yes	No_X
Remarks:					
Upland sample plot					

	Absolute	Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30'</u> )	<u>% Cover</u> 15	Species? X	<u>Status</u> FACU	Number of Dominant Species		5.000
1. Quercus montana				That Are OBL, FACW, or FAC	: 1	(A)
2. Acer saccharum	15	<u> </u>	FACU	Total Number of Dominant		
3				Species Across All Strata:	6	(B)
4						
5				Percent of Dominant Species That Are OBL, FACW, or FAC		(A/B)
	30	= Total Cov	ver			()
Sapling/Shrub Stratum (Plot size: 15' )				Prevalence Index workshee	t:	
1. Acer saccharum	10	<u>X</u>	FACU	Total % Cover of:	Multiply by:	_
2. Fraxinus pennsylvanica	10	Χ	FACW	OBL species	x 1 =	_
3. Rubus occidentalis	5	Х	FACU	FACW species	x 2 =	_
4				FAC species	x 3 =	
5.				FACU species		
	25	= Total Cov		UPL species		
Herb Stratum (Plot size: 5')		- 101ai 001		Column Totals:		_
1. Carex pensylvanica	25	Х	FACU		(()	_ (0)
2. Symphyotrichum lanceolatum	5		FAC	Prevalence Index = B/A	. =	_
3 Ageratina altissima	5		FACU	Hydrophytic Vegetation Ind	icators:	
4 Persicaria virginiana	5		FAC	1 - Rapid Test for Hydrop	hytic Vegetation	
	·			2 - Dominance Test is >5		
5				3 - Prevalence Index is ≤		
6				4 - Morphological Adapta		porting
7				data in Remarks or on	a separate sheet)	ooning
8				Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	n)
9						· ·
10				<sup>1</sup> Indicators of hydric soil and v	vetland bydrology n	nust
······································	40	= Total Cov	ver	be present, unless disturbed of		luot
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Yes	No	
		= Total Cov	ver			
Remarks: (Include photo numbers here or on a separate s	sheet.)					

Depth	Matrix			ox Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	TextureRema	arks
)-12	10YR 5/3	_ <u>100</u>		_ <u>SIL</u>		_		
Туре: С=С	Concentration, D=Dep	pletion, RM	=Reduced Matrix, N	IS=Maske	d Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M	1=Matrix.
lydric Soil	Indicators:						Indicators for Problematic Hy	
Black ⊢ Hydrog Stratifie	ol (A1) Epipedon (A2) Histic (A3) en Sulfide (A4) ed Layers (A5) Huck (A10)		Sandy Strippe Loamy Loamy	Gleyed M Redox (S ed Matrix ( Mucky Mi Gleyed N ed Matrix	5) S6) neral (F1) latrix (F2)		<ul> <li>Coast Prairie Redox (A16)</li> <li>Dark Surface (S7)</li> <li>Iron-Manganese Masses (I</li> <li>Very Shallow Dark Surface</li> <li>Other (Explain in Remarks)</li> </ul>	F12) e (TF12)
_ Deplete	ed Below Dark Surfac Dark Surface (A12)	ce (A11)	Redox	Dark Surf		)	<sup>3</sup> Indicators of hydrophytic vege	etation and
	Mucky Mineral (S1) lucky Peat or Peat (S	3)	Redox	Depressio	ons (F8)		wetland hydrology must be unless disturbed or probler	
Restrictive	Layer (if observed)	:						
Туре:							Hydric Soil Present? Yes	NoX
Depth (ir	nches):							110
Remarks:								
YDROLO	DGY							
Vetland Hy	drology Indicators	:						
rimary Ind	icators (minimum of	one is requ	ired; check all that a	pply)			Secondary Indicators (minim	um of two require
_ Surface	e Water (A1)		Water-St	ained Lea	/es (B9)		Surface Soil Cracks (B6	)
_ High W	ater Table (A2)		Aquatic F	auna (B13	3)		Drainage Patterns (B10)	)
_ Saturat	tion (A3)		True Aqu	atic Plants	6 (B14)		Dry-Season Water Table	e (C2)
_ Water M	Marks (B1)		Hydroger	Sulfide C	dor (C1)		Crayfish Burrows (C8)	
	ent Deposits (B2)		Oxidized	Rhizosph	eres on Liv	ing Roots	C3) Saturation Visible on Ae	rial Imagery (C9)
_ Drift De	eposits (B3)		Presence	of Reduc	ed Iron (C4	4)	Stunted or Stressed Pla	nts (D1)

\_\_\_\_ Recent Iron Reduction in Tilled Soils (C6) \_\_\_\_ Geomorphic Position (D2) \_\_\_\_ Algal Mat or Crust (B4) \_\_\_ Iron Deposits (B5) \_\_\_\_ Thin Muck Surface (C7) \_\_\_\_ FAC-Neutral Test (D5) \_\_\_\_ Inundation Visible on Aerial Imagery (B7) \_\_\_\_ Gauge or Well Data (D9) \_\_\_\_ Sparsely Vegetated Concave Surface (B8) \_\_\_\_ Other (Explain in Remarks) Field Observations: Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_ Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_ Water Table Present? Yes \_\_\_\_\_ No \_X\_\_ Depth (inches): \_\_\_\_ Wetland Hydrology Present? Yes \_\_\_\_ No X Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Sene	eca Wind Project	City/County: Seneca	City/County: Seneca					
Applicant/Owner:	Seneca Wind		State: OH	Sampling Date: <u>9/25/2018</u> Sampling Point: <u>W-A25</u>				
Investigator(s): JN	1M KMP	Section, Township, Rang	Section, Township, Range: T002N R016E S007					
Landform (hillslope	, terrace, etc.): Depressional	Local relief (co	oncave, convex, nor	ne): Concave				
Slope (%): 0	Lat: 41.054823	Long: -83.065006	1.	Datum: NAD 83				
Soil Map Unit Nam	e: Pandora silt loam		NWI class	sification: N/A				
	logic conditions on the sile typical	for this lime of year? Yes X No	(If no, explain i	n Remarks.)				
Are Vegetation	, Soil, or Hydrology	significantly disturbed? Are 'No	ormal Circumstance	es" present? Yes 🗶 No 🔄				
Are Vegetation	, Soil, or Hydrology	naturally problematic? (If need	led, explain any ans	swers in Remarks.)				

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No	
Remarks: Cowardin: PFO				

30'	Absolute		Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30') Acer saccharinum	30	Species? X	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
2			_	matche Obl, FAGW, of FAG.		5
3				Total Number of Dominant Species Across All Strata:	5	(B)
4					-	(0)
5.		-		Percent of Dominant Species That Are OBL, FACW, or FAC:	80%	(A/B)
	30	= Total Co	/er	That Ale OBL, FACW, of FAC.		(AVD)
Sapling/Shrub Stratum (Plot size: 15' )	_			Prevalence Index worksheet:		
1. Cephalanthus occidentalis	15	X	OBL	Total % Cover of:	Multiply by:	-
2. Rosa multiflora	5	X	FACU	OBL species x	1 =	<u></u>
3.				FACW species x	2 =	
4		_		FAC species x	3 =	
5				FACU species x	4 =	
5'	20	= Total Co	ver	UPL species x	5 =	
Herb Stratum (Plot size: 5')	-			Column Totals: (A	4)	(B)
1. Carex lupulina	15	<u>X</u>	OBL			
2. Carex squarrosa	5	<u>X</u>	OBL	Prevalence Index = B/A =		-
3		_		Hydrophytic Vegetation Indica	ators:	
4	1	-		1 - Rapid Test for Hydrophy	tic Vegetation	
5				2 - Dominance Test is >50%	6	
6				3 - Prevalence Index is ≤3.0		
7				4 - Morphological Adaptation		porting
8		-	(	data in Remarks or on a	serve and the restriction of	
9				Problematic Hydrophytic Ve	getation' (Explai	n)
10		-		1		
		= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wet be present, unless disturbed or p		nust
Woody Vine Stratum (Plot size:)				be present, unless disturbed or p	problematic.	_
1		<u> </u>	<u> </u>	Hydrophytic		
2				Vegetation		
		= Total Co	ver	Present? Yes X	No	
Remarks: (Include photo numbers here or on a separate	sheet.)					

Depth	Matrix	%		ox Features	Type <sup>1</sup>	Loc <sup>2</sup>	Taukum	Demarka
(inches) 0-3	Color (moist) 10YR 3/2	100	Color (moist)	%	C	M	 SIL	Remarks
	8 <del>6</del>							
3-16	10YR 4/2	95	7.5YR 5/6		<u>с</u>	M	SICL	
Type G=C	oncentration, D=Dep	oletion, RM	M=Reduced Matrix, N	S=Masked	Sand Gr	ains.	<sup>2</sup> Location; PL:	=Pore Lining, M=Matrix.
Black H Hydroge Stratifier 2 cm Mu Deplete Thick Da Sandy M 5 cm Mu	i (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S	3)	Sandy Strippe Loamy X Deplet Redox Deplet	Gleyed Ma Redox (S5 d Matrix (S Mucky Min Cleyed Ma ed Matrix (F Dark Surfa ed Dark Su Depression	) 66) atrix (F1) 73) 53) cce (F6) rface (F7)	1	Coasi Prairi Dark Surfac Iron-Manga Other (Expl Other (Expl Indicators of hy wetland hyd	Problematic Hydric Soils <sup>3</sup> : e Redox (A16) æ (S7) nese Masses (F12) w Dark Surface (TF12) ain in Remarks) ydrophytic vegetation and rology must be present, irbed or problematic.
	Layer (if observed)	:						
Type: Depth (in	ches)						Hydric Soil Pres	ent? Yes X No
Remarks:								
YDROLO	)GY							
Wetland Hy	drology Indicators							
Netland Hy	drology Indicators		uired check all that a					dicators (minimum of two required
Vetland Hy Primary India Surface	drology Indicators: cators (minimum of e Water (A1)		Water-Sta	ained Leave	1.	_	Surface \$	Soil Cracks (B6)
Vetland Hy Primary India Surface High Wa	drology Indicators: cators (minimum of d Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Leavi auna (B13)	1		Surface & Drainage	šoil Cracks (B6) Patterns (B10)
Vetland Hy Primary India Surface High Wa Saturati	drology Indicators: cators (minimum of e Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqu	ained Leavi auna (B13) atic Plants	) (B14)		Surface & Surface & Drainage	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
Vetland Hy Primary India Surface High Wa Saturati Water M	drology Indicators: cators (minimum of e Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Leavi auna (B13) atic Plants i Sulfide Oc	) (B14) dor (C1)	ing Prot-	Surface & Surface & Drainage	Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Netland Hy Primary India Surface High Wa Saturati X Water N Sedimen	drology Indicators: cators (minimum of e Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-St: Aquatic F True Aqu Hydroger Oxidized	ained Leave auna (B13) atic Plants I Sulfide Oc Rhizospher	) (B14) dor (C1) res an Liv		C3) C33	Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
Vetland Hy Primary India Surface High Wa Saturati X Water M Sedimer Drift Dep	drology Indicators: cators (minimum of e Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Leavi auna (B13) atic Plants i Sulfide Oc	) (B14) dor (C1) res an Liv d Iron (C4	4)	Crayfish (C3) Crayfish C3 Crayfish C4 Crayfish C5 Crayfish C5 Crayfish C6 Crayfish C6 Crayfish C7 Cra	Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)

Iron Deposits (B5) Inundation Visible on A X Sparsely Vegetated Co			_ Thin Muck Surface (C7) _ Gauge or Well Data (D9) _ Other (Explain in Remarks)	FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	Yes Yes Yes ream gauge	No X No X No X	Depth (inches):	Wetland Hydrology Present? Yes _ pections), if available:	XNo
Remarks:					

Project/Site: Seneca Wind Project	t		City/County: Seneca		Sampling Date: 9/25/2018
Applicant/Owner: Seneca Wind					Sampling Point: W-A25-UP
Investigator(s): JMM KMP			Section, Township, Ra		
Landform (hillslope, terrace, etc.): FI				(concave, convex, none)	Convex
Slope (%): 0 Lat: 41.05					
Soil Map Unit Name: Pandora silt I		-		NWI classifi	
Are climatic / hydrologic conditions or		for this time of ve			
Are Vegetation, Soil,					present? Yes X No
Are Vegetation, Soil,	and the second second			eded, explain any answ	
SUMMARY OF FINDINGS -			sampling point I	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present?			In the Sampled	Area	
Hydric Soil Present?			Is the Sampled within a Wetlan		No X
Wetland Hydrology Present? Remarks:	Yes	NoX	within a wetia	iur ies	
Upland sample plot					
VEGETATION - Use scientific	c names of pl	ants.			
-		Absolute	Dominant Indicator	Dominance Test wor	ksheet:
<u>Tree Stratum</u> (Plot size:			Species? Status	Number of Dominant S That Are OBL, FACW,	
2				Total Number of Domi	
3				Species Across All Str	ata: <u>1</u> (B)
4				Percent of Dominant S	Species
5				That Are OBL, FACW,	or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:	-	)	= Total Cover	Prevalence Index wo	rksheet:
1			<u> </u>	Total % Cover of:	Multiply by:
2				OBL species	x 1 =
3				FACW species	x 2 =
4					x 3 =
5					x 4 =
Herb Stratum (Plot size: 5			= Total Cover	Contraction and	x 5 =
1 Zea mays	/	100	X UPL	Column Totals:	(A) (B)
2				Prevalence Inde	x = B/A =
3				Hydrophytic Vegetat	ion Indicators:
4				1 - Rapid Test for	Hydrophytic Vegetation
5				2 - Dominance Te	st is >50%
6				3 - Prevalence Inc	lex is ≤3.0 <sup>1</sup>
7					Adaptations <sup>1</sup> (Provide supporting
8					ks or on a separate sheet) ophytic Vegetation <sup>1</sup> (Explain)
9				Froblematic Hydro	phytic vegetation (Explain)
10			·	<sup>1</sup> Indicators of hydric se	il and wetland hydrology must
Woody Vine Stratum (Plot size:			= Total Cover	be present, unless dis	
1				Mudan - budte	
			·	Hydrophytic Vegetation	
2				1 3 4 9 9 1 1 2 9 9 1 9 1 9 1 9 1 9 1 9 1 9 1	V
2			= Total Cover	Present? Yo	es No _X

	Barley Barley	
Depth <u>Matrix</u> (inches) Color (moist) %	Redox Features Color (moist) % Type <sup>1</sup> Loo	c <sup>2</sup> Texture Remarks
0-12 10YR 4/4 100		SIL
	· ·	
	· ·	
	A-Deduced Matrix MS-Masked Sand Crains	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	A=Reduced Matrix, MS=Masked Sand Grains.	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	3
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic
5 cm Mucky Peat or Peat (S3)		unless disturbed of problematic.
5 cm Mucky Peat or Peat (S3) Restrictive Laver (if observed):		
Restrictive Layer (if observed):		
Restrictive Layer (if observed): Type: Depth (inches):		Hydric Soil Present? Yes No
Restrictive Layer (if observed): Type:	_	Hydric Soil Present? Yes No
Restrictive Layer (if observed): Type: Depth (inches):	_	Hydric Soil Present? Yes <u>No X</u>
Restrictive Layer (if observed): Type: Depth (inches): Remarks:		Hydric Soil Present? Yes NoX
Restrictive Layer (if observed): Type: Depth (inches):		Hydric Soil Present? Yes <u>No X</u>
Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY	uired: check all that apply)	Hydric Soil Present? Yes NoX Secondary Indicators (minimum of two required
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required)	uired: check all that apply) Water-Stained Leaves (B9)	
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is req.         Surface Water (A1)	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is req         Surface Water (A1)         High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
Restrictive Layer (if observed):         Type:         Depth (inches):         Depth science         Remarks:         YDROLOGY         Netland Hydrology Indicators:         Primary Indicators (minimum of one is required)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Restrictive Layer (if observed):         Type:         Depth (inches):         Depth science         Remarks:         YDROLOGY         Netland Hydrology Indicators:         Primary Indicators (minimum of one is requested)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Restrictive Layer (if observed):         Type:         Depth (inches):         Depth served):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is requestions)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Ro</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Restrictive Layer (if observed):         Type:         Depth (inches):         Depth served):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is requestions)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Ro</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Restrictive Layer (if observed):         Type:         Depth (inches):         Depth science         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is requestions)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or Crust (B4)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Ro</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils</li> <li>Thin Muck Surface (C7)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         YDROLOGY         Netland Hydrology Indicators:         Primary Indicators (minimum of one is requestion)         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 (Sparsely Vegetated Concave Surface	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Re</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils</li> <li>Thin Muck Surface (C7)</li> <li>Gauge or Well Data (D9)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         YDROLOGY         Netland Hydrology Indicators:         Primary Indicators (minimum of one is requestion)         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 (Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) B7) Gauge or Well Data (D9) (B8) 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) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Restrictive Layer (if observed):         Type:         Depth (inches):         Depth science         Remarks:    Primary Indicators (minimum of one is requesting):          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 (Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Living Ro     Presence of Reduced Iron (C4)     Recent Iron Reduction in Tilled Soils     Thin Muck Surface (C7) B7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches):	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is requestion)         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 (Sparsely Vegetated Concave Surface         Field Observations:         Surface Water Present?	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Living Ro     Presence of Reduced Iron (C4)     Recent Iron Reduction in Tilled Soils     Thin Muck Surface (C7) B7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches): No X Depth (inches):	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is requestion)         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 (Sparsely Vegetated Concave Surface         Field Observations:         Surface Water Present?	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Living Re     Presence of Reduced Iron (C4)     Recent Iron Reduction in Tilled Soils     Thin Muck Surface (C7) B7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches): No X Depth (inches):	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) oots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)

Project/Site: Sene	eca Wind Project	City/County: Seneca		Sampling Date 9/26/2018
Applicant/Owner:	Seneca Wind		State: OH	Sampling Point: W-A33
Investigator(s): JN	IM KMP	Section, Township, Rang	e: T002N R016E	S013
Landform (hillslope	e, terrace, etc.): Terrace	Local relief (co	oncave, convex, nor	ne): Concave
Slope (%): 0	Lat: 41.042266	Long: -83.077844	1.	Datum: NAD 83
Soil Map Unit Nam	e: Blount silt loam, end mora	ne, 0 to 2 percent slopes	NWI class	sification: N/A
Are climatic / hydro	ologic conditions on the sile typical	for this lime of year? Yes X No	(If no, explain i	n Remarks.)
Are Vegetation	, Soil, or Hydrology	significantly disturbed? Are 'No	ormal Circumstance	s" present? Yes 🗶 No
Are Vegetation	, Soil, or Hydrology	naturally problematic? (If need	led, explain any ans	swers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	. No
Remarks: Cowardin: PFO				

Tree Stratum (Plot size: 30' )	Absolute	Dominant Species?		Dominance Test worksheet:
1 Ulmus americana	20	X	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
2 Acer negundo	10	X	FAC	
3. Acer saccharum	10	X	FACU	Total Number of Dominant Species Across All Strata: 8 (B)
4				A.
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 87% (A/B)
	40	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15' )				Prevalence Index worksheet:
1. Ulmus americana	15	X	FACW	Total % Cover of:Multiply by:
2. Acer negundo	5	Х	FAC	OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
<b>5</b> <sup>3</sup>	20	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Boehmeria cylindrica	15	<u>X</u>	OBL	
2. Microstegium vimineum	30	<u>X</u>	FAC	Prevalence Index = B/A =
3. Toxicodendron radicans	10		FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				Z - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7			_	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8			(	data in Remarks or on a separate sheet)
9,		-	1	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.		-		
	55	= Total Cov		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 15' )		- 1014100		be present, unless disturbed or problematic.
1. Toxicodendron radicans	5	Х	FAC	Hydrophytic
2				Vegetation
	5	= Total Cov	/er	Present? Yes X No
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth (inches)	Matrix Color (moist)	%	Color (moist)	dox Feature	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-3	10YR 3/2	97	7.5YR 5/6	3	C	М	SIL	
3-8	10YR 4/2	90	7.5YR 4/4	10	С	М	SICL	
8-16	10YR 4/2	85	7.5YR 4/6	15	<u> </u>	M	SICL	
Hydric Soi Histoso Black I Hydrog Stratifie 2 cm M Deplete Thick D Sandy	Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10) ed Below Dark Surfa Dark Surface (A12) Mucky Mineral (S1)	ce (A11)	Sand Sand Strip Loan Loan X Depl Redd Depl	MS=Maske ly Gleyed M ly Redox (S ped Matrix ( ny Mucky M ny Gleyed N eted Matrix ox Dark Suri eted Dark S ox Depressio	alrix (S4) 5) S6) ineral (F1) latrix (F2) (F3) lace (F6) urface (F7)		Indicators fo Coasi Pre Dark Surf Iron-Mang Very Sha Other (Ex <sup>3</sup> Indicators of wetland h	<sup>2</sup> L=Pore Lining, M=Matrix. <b>Problematic Hydric Soils</b> <sup>3</sup> : arie Redox (A16) ace (S7) ganese Masses (F12) llow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and ydrology must be present, sturbed or problematic.
estrictive Type: Depth (i	Aucky Peat or Peat ( <b>Layer (if observed</b> nches):							esent? Yes X No
Restrictive Type: Depth (i Remarks:	E Layer (if observed		_					
Restrictive Type: Depth (i Remarks:	E Layer (if observed							
Restrictive Type: Depth (i Remarks:	E Layer (if observed	):						
Restrictive Type: Depth (i Remarks: YDROLO Wetland H Primary Ind	A Layer (if observed nches): DGY ydrology Indicators ilcators (minimum of	):					Hydric Soil Pr Secondary	esent? Yes X No
Restrictive Type: Depth (i Remarks: YDROLO Vetland H Primary Ind Surface High W Surface High W Satura Satura Satura Satura Sedime Drift De Iron De Inunda	a Layer (if observed nches): DGY ydrology Indicators	): one is req	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mu B7) Gauge	apply) Stained Lear Fauna (B1) quatic Plants en Sulfide C d Rhizosphi ce of Reduc uck Surface or Well Data Explain in R	3) s (B14) Ddor (C1) eres an Liv ed Iron (C tion in Tille (C7) a (D9)	4)	Hydric Soil Pr Secondary Surface Surface Markowski Surface Surface Crayfis (C3) Satural Stunter Stunter Stunter Stunter	esent? Yes X No
Restrictive Type: Depth (i Remarks: YDROLO YURANA Vetland H Primary Ind Surface Brimary Ind Surface Surface Surface Surface Surface High W Satura Sedime Drift De Inunda Sparse	A Layer (if observed nches): ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca	): one is req	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mu B7) Gauge	Stained Lear Fauna (B1) quatic Plants en Sulfide C d Rhizosphi ce of Reduct Iron Reduct uck Surface or Well Data	3) s (B14) Ddor (C1) eres an Liv ed Iron (C tion in Tille (C7) a (D9)	4)	Hydric Soil Pr Secondary Surface Surface Markowski Surface Surface Crayfis (C3) Satural Stunter Stunter Stunter Stunter	esent? Yes X No Indicators (minimum of two required a Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Pestrictive Type: Depth (i Remarks: YDROLO YOROLO Vetland H Primary Ind Satura Unifaci Satura	A Layer (if observed nches): OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations:	): one is req	Water-S Aquatic True Ac Hydrog Oxidize Presend Recent Thin Mu B7) Gauge (B8) Other (I	Stained Lear Fauna (B1) quatic Plants en Sulfide C d Rhizosphi ce of Reduct Iron Reduct uck Surface or Well Data	3) s (B14) Ddor (C1) eres an Liv ed Iron (C tion in Tille (C7) a (D9)	4)	Hydric Soil Pr Secondary Surface Surface Markowski Surface Surface Crayfis (C3) Satural Stunter Stunter Stunter Stunter	esent? Yes X No Indicators (minimum of two required a Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Restrictive Type: Depth (i Remarks: YDROLO Wetland H Primary Ind Surface High V Satura' Water Sedime Drift De Algal M Iron De Inunda Sparse Surface Wa	A Layer (if observed nches): OGY ydrology Indicators flcators (minimum of e Water (A1) vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Present?	): one is req I Imagery ( ve Surface	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mu B7) Gauge (B8) Other (I	Stained Lear Fauna (B1) quatic Plants en Sulfide C d Rhizosphi ce of Reduc Iron Reduc Iron Reduc uck Surface or Well Data Explain in R	3) s (B14) Ddor (C1) eres an Liv ed Iron (C tion in Tille (C7) a (D9)	4) ed Soils (C	Hydric Soil Pr Secondary Surface Surface Markowski Surface Surface Crayfis Crayfis Stunter Stunter Stunter Stunter Statural Stunter Stunter Statural Stunter Statural Stunter Statural	esent? Yes X No Indicators (minimum of two required a Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)

Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/26/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-A33-UP
Investigator(s): JMM KMP	Section, Township, Range:		
Landform (hillslope, terrace, etc.): Flat field		ave, convex, none):	Convex
Slope (%): 0 Lat: 41.04214	Long: -83.078564		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answei	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	_ No_X
Remarks:					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
		= Total Cov	/er	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Cov		UPL species x 5 =
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)
1. Glycine max	80	X	UPL	
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
10		= Total Cov		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- 10(a) COV	/ei	be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
		= Total Cov	/er	Present? Yes No X
Remarks: (Include photo numbers here or on a separate s	sheet.)			

	Matrix Color (moist) %	<u></u>	Texture Remarks
(inches) 0-12	10YR 4/4 100		SIL
Гуре: С=Со	oncentration, D=Depletion, RM=Re	educed Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
ydric Soil	Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :
_ Histosol	(A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
_ Histic Ep	pipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Hi	stic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
	en Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
	d Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_	ick (A10)	Depleted Matrix (F3)	
	d Below Dark Surface (A11)	Redox Dark Surface (F6)	3
_	ark Surface (A12)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
	lucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
	ucky Peat or Peat (S3) Layer (if observed):		unless disturbed of problematic.
Type:	ahaa);	-	Hydric Soil Present? Yes No
	ches):		
emarks:			
DROLO	GY		
	GY drology Indicators:		
etland Hyd		check all that apply)	<u>Secondary Indicators (minimum of two require</u>
etland Hyd	drology Indicators:	<u>; check all that apply)</u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two require</u> Surface Soil Cracks (B6)
etland Hyd rimary Indic _ Surface	drology Indicators: cators (minimum of one is required		
etland Hyd imary Indio _ Surface _ High Wa	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2)	Water-Stained Leaves (B9)	
etland Hyd rimary India _ Surface _ High Wa _ Saturatio	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> </ul>	Surface Soil Cracks (B6) Drainage Patterns (B10)
etland Hyd imary India _ Surface _ High Wa _ Saturatia _ Water M	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2) on (A3) larks (B1)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	<ul> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> </ul>
etland Hyd imary Indic Surface High Wa Saturatic Water M Sedimer	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> </ul>	<ul> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> </ul>
fetland Hyd rimary India _ Surface _ High Wa _ Saturatia _ Saturatia _ Sedimer _ Drift Dep	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Roots (C</li> <li>Presence of Reduced Iron (C4)</li> </ul>	<ul> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> </ul>
Vetland Hyd rimary India Surface High Wa Saturatia Water M Sedimer Drift Deg Algal Ma	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Roots (C</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C6)</li> </ul>	<ul> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> <li>Geomorphic Position (D2)</li> </ul>
rimary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of one is required Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living Roots (C</li> <li>Presence of Reduced Iron (C4)</li> </ul>	<ul> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> </ul>

Field Observations:			Other (Explain in Remark	s)	
Surface Water Present?			_ Depth (inches):		
Water Table Present?			_ Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	No _X	_ Depth (inches):	Wetland Hydrology Present?	Yes No _X
Describe Recorded Data (st	ream gauge	, monitoring	well, aerial photos, previou	s inspections), if available:	
Remarks:					

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/26/2018
Applicant/Owner: Seneca Wind, LLC			Sampling Point: W-B6-PEM
Investigator(s): <u>CV</u> , JB	Section, Township, Range:		
Landform (hillslope, terrace, etc.): Depression		ave, convex, none):	Concave
Slope (%): 0-2 Lat: 41.04581	Long: -83.027315		Datum: NAD 83
Soil Map Unit Name: Tiro silt loam, 2 to 6 percent slopes		NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks:				

Tree Stratum (Plot size: <u>30'</u> )	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u> 10	Species? X	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
	5	$\frac{x}{x}$	FAC	That Are OBL, FACW, or FAC: _4(A)
				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
15'	15	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15')	40	V		Prevalence Index worksheet:
1. Fraxinus americana	10		FACU	Total % Cover of:Multiply by:
2. Cornus florida	10	<u>X</u>	FACU	OBL species x 1 =
3. Acer rubrum	5	X	FAC	FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	25	= Total Cov	ver	UPL species x 5 =
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)
1. Pilea pumila	25	Χ	FACW	
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				Z 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	25	= Total Cov	/er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Des Depth	cription: (Describe Matrix	to the de	pth needed to docu	ment the		or confir	m the absence of	indicators.)
(inches)	Color (moist)	%	Color (moist)	<u>0x reatur</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 3/2	85	2.5YR 4/8	15	C	M	SICL	- containe
	Concentration, D=De	pletion, R	/=Reduced Matrix, N	IS=Maske	ed Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Histoso	ol (A1)		Sandy	Gleyed N	latrix (S4)			iirie Redox (A16)
Histic E	pipedon (A2)		Sandy	Redox (S	5)		Dark Surf	ace (S7)
Black H	listic (A3)		Strippe	d Matrix	(S6)		Iron-Mang	ganese Masses (F12)
Hydrog	en Sulfide (A4)				lineral (F1)			low Dark Surface (TF12)
	ed Layers (A5)				Matrix (F2)		Other (Ex	plain in Remarks)
	luck (A10)			ed Matrix	. ,			
	ed Below Dark Surfac	ce (A11)	X Redox				3	
	ark Surface (A12)				Surface (F7	)		hydrophytic vegetation and
	Mucky Mineral (S1) lucky Peat or Peat (S	3)	Redox	Depressi	ons (F8)			ydrology must be present, sturbed or problematic.
Restrictive	Layer (if observed)	:						
Туре:							Hydric Soil Pre	esent? Yes <u>×</u> No
Depth (ir	nches):							
Remarks:								
HYDROLO								
	drology Indicators							
		one is req	uired; check all that a	pply)			Secondary	Indicators (minimum of two required)
X Surface	e Water (A1)		Water-Sta	ained Lea	ves (B9)		Surface	e Soil Cracks (B6)
	ater Table (A2)		Aquatic F	auna (B1	3)		Drainag	ge Patterns (B10)
X Saturat	tion (A3)		True Aqu	atic Plant	s (B14)		Dry-Se	ason Water Table (C2)
Water M	Marks (B1)		Hydroger	Sulfide C	Odor (C1)		Crayfis	h Burrows (C8)
Sedime	ent Deposits (B2)		Oxidized	Rhizosph	eres on Liv	ing Roots	(C3) Saturat	ion Visible on Aerial Imagery (C9)
Drift De	eposits (B3)		Presence	of Reduc	ed Iron (C	4)	Stunted	d or Stressed Plants (D1)
Algal M	lat or Crust (B4)		Recent In	on Reduc	tion in Tille	d Soils (C	6) Geomo	rphic Position (D2)

(C6)	Geomorphic Po	osition (D2)
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\_\_\_\_ FAC-Neutral Test (D5)

\_\_\_ Thin Muck Surface (C7) \_\_\_ Iron Deposits (B5) \_ Inundation Visible on Aerial Imagery (B7) \_\_\_\_ Gauge or Well Data (D9) Field Observations: 
 Yes
 X
 No
 Depth (inches):
 0.25

 Yes
 X
 No
 Depth (inches):
 14
 Surface Water Present? Water Table Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No \_ Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B6 UP
Investigator(s): CV, JB	Section, Township, Range:	T1N R16E S16	
Landform (hillslope, terrace, etc.): Depression	Local relief (conc	ave, convex, none):	Linear
	Long: -83.027378		Datum: NAD 83
Soil Map Unit Name: Tiro silt loam, 2 to 6 percent slopes		NWI classific	ation:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed	, explain any answei	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locat	ions, transects	, important features, etc.

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

	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> ) 1 Acer rubrum	5 5	Species? X	<u>Status</u> FAC	Number of Dominant Species
	- 5		FAC	That Are OBL, FACW, or FAC: <u>3</u> (A)
2. Acer negundo	- <del>5</del>	$\frac{X}{X}$	FAC	Total Number of Dominant
3. Fraxinus americana	<u> </u>	<u> </u>	FACU	Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50% (A/B)
451	15	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15' )				Prevalence Index worksheet:
1. Fraxinus americana	20	<u>X</u>	FACU	Total % Cover of:Multiply by:
2. Cornus florida	10	<u>X</u>	FACU	OBL species x 1 =
3. Acer rubrum	5		FAC	FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	35	= Total Cov		UPL species x 5 =
Herb Stratum (Plot size: <u>5</u> ')		10101 000		Column Totals: (A) (B)
1. Pilea pumila	10	Х	FACW	
2.				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
5				$3$ - Prevalence Index is $\leq 3.0^1$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	10	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No X
		= Total Cov	/er	Present? Yes No X
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth	Matrix			ox Features		_		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup> Loc <sup>2</sup>		Remarks	
0-16	10YR 3/2	<u> </u>						
	ncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked S	and Grains.		Pore Lining, M=Matrix.	
Hydric Soil In Histosol			Sandy	Gleyed Matri	(\$4)		roblematic Hydric Soils <sup>3</sup> : e Redox (A16)	
	ipedon (A2)			Redox (S5)	((04)	Dark Surface		
Black His				d Matrix (S6)			nese Masses (F12)	
	n Sulfide (A4)			Mucky Miner			v Dark Surface (TF12)	
	Layers (A5)			Gleyed Matri			ain in Remarks)	
2 cm Mu				ed Matrix (F3)		0 (Explo	line in electrical (c)	
_	Below Dark Surface	(A11)		Dark Surface				
	rk Surface (A12)	(····)		ed Dark Surfa		<sup>3</sup> Indicators of hy	drophytic vegetation and	
	ucky Mineral (S1)			Depressions			ology must be present,	
_ /	cky Peat or Peat (S3)	)			()		rbed or problematic.	
	ayer (if observed):	/						
Type:								
Depth (inc	:hes):					Hydric Soil Pres	ent? Yes <u>No X</u>	
Remarks:								
YDROLO	GY							
Netland Hyd	rology Indicators:							
Primary Indic	ators (minimum of on	ne is require	ed: check all that a	pply)		Secondary Ind	licators (minimum of two required	
Surface \	Water (A1)		Water-Sta	ained Leaves	(B9)	Surface S	oil Cracks (B6)	
High Water Table (A2)		Aquatic F	auna (B13)		Drainage	Drainage Patterns (B10)		

Yes	_ <sub>No</sub> _X	_ Depth (inches):
Yes		_ Depth (inches):
Yes	X	_ Depth (inches):

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

Other (Explain in Remarks)

\_\_\_\_ True Aquatic Plants (B14)

\_\_\_\_ Hydrogen Sulfide Odor (C1)

\_\_\_\_ Thin Muck Surface (C7)

\_\_\_ Gauge or Well Data (D9)

Presence of Reduced Iron (C4)

\_\_\_\_ Recent Iron Reduction in Tilled Soils (C6)

Remarks:

\_\_\_\_ Saturation (A3)

\_\_\_ Water Marks (B1)

\_\_\_ Drift Deposits (B3)

\_\_\_ Iron Deposits (B5)

Field Observations:

Saturation Present?

Surface Water Present? Water Table Present?

(includes capillary fringe)

\_\_\_ Sediment Deposits (B2)

\_\_\_ Algal Mat or Crust (B4)

\_\_\_\_ Inundation Visible on Aerial Imagery (B7)

\_ Sparsely Vegetated Concave Surface (B8)

\_\_\_ Dry-Season Water Table (C2)

\_\_\_\_ Stunted or Stressed Plants (D1)

Wetland Hydrology Present? Yes \_\_\_\_\_ No \_\_\_\_

Crayfish Burrows (C8)

Geomorphic Position (D2)
 FAC-Neutral Test (D5)

\_\_\_\_ Oxidized Rhizospheres on Living Roots (C3) \_\_\_\_ Saturation Visible on Aerial Imagery (C9)

Project/Site: Seneca Wind	City/County: Seneca s	Sampling Date: 09/26/2018
Applicant/Owner: Seneca Wind, LLC		Sampling Point: W-B6-PFO
Investigator(s): <u>CV</u> , JB	Section, Township, Range: <u>T1N R16E S16</u>	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none):	Concave
Slope (%): 0-2 Lat: 41.045866	Long: <u>-83.027695</u>	Datum: NAD 83
Soil Map Unit Name: Tiro silt loam, 2 to 6 percent slopes	NWI classificat	tion: None
Are climatic / hydrologic conditions on the site typical for this time of y	ar? Yes X No (If no, explain in Rer	marks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" pre	esent? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology naturally pr	blematic? (If needed, explain any answers	s in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks:				

	70 COver			
1. Acer rubrum	25	X	<u>Status</u> FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Acor nocurdo	10	X	FAC	That Are OBL, FACW, or FAC: _5 (A)
				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5	35			That Are OBL, FACW, or FAC: 83% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		= Total Cov	er	Prevalence Index worksheet:
A Fravinus amoricana	5	Х	FACU	Total % Cover of: Multiply by:
			FAC	OBL species
				FACW species x 2 =
3				
4				FAC species x 3 =
5				FACU species x 4 =
Herb Stratum (Plot size: 5' )	10	= Total Cov	er	UPL species x 5 =
1. Microstegium vimineum	20	Х	FAC	Column Totals: (A) (B)
2. Pilea pumila	10	x	FACW	Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				$\overline{X}$ 2 - Dominance Test is >50%
5				$3$ - Prevalence Index is $\leq 3.0^{1}$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	30	= Total Cov	er	be present, unless disturbed or problematic.
1				Hydrophytic Vegetation
2				Present? Yes X No
Remarks: (Include photo numbers here or on a separate sh		= Total Cov	er	
	eet.)			

Depth	Matrix			ox Featur					
(inches)	Color (moist)	%	Color (moist)	%_	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
)-16	10YR 4/2	90	2.5YR 4/8	10	_ <u>C</u>	M	SICL		
		pletion, R	M=Reduced Matrix, N	IS=Maske	ed Sand Gr	ains.		=Pore Lining, M=Matrix.	
•	Indicators:			Second received	an a			Problematic Hydric Soils <sup>3</sup> :	
_ Histoso	. ,			Gleyed M				ie Redox (A16)	
	pipedon (A2)			Redox (S			Dark Surfac		
_	listic (A3) en Sulfide (A4)			ed Matrix (	ineral (F1)		_ •	inese Masses (F12)	
	ed Layers (A5)				latrix (F2)		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
_	luck (A10)			ed Matrix				an in Kenaka)	
	ed Below Dark Surfac	ce (A11)		Dark Sur					
	ark Surface (A12)	,			urface (F7	)	<sup>3</sup> Indicators of h	ydrophytic vegetation and	
_	Mucky Mineral (S1)			Depressi		, 		lrology must be present,	
_ 5 cm M	ucky Peat or Peat (S	3)					unless distu	urbed or problematic.	
estrictive	Layer (if observed)	:							
Туре:									
Depth (ir	nches):						Hydric Soil Pres	sent? Yes X No	
emarks:									
	drology Indicators		uired, check all that a	marke)			Coondrasta	diasters (minimum of the	
		une is req	uired; check all that a		(DO)			dicators (minimum of two require	
-	e Water (A1)			ained Lea	, ,			Soil Cracks (B6)	
	ater Table (A2)			auna (B1				e Patterns (B10)	
_	ion (A3)		True Aqu		. ,			son Water Table (C2)	
_	Marks (B1)			n Sulfide C	• •			Burrows (C8)	
_	ent Deposits (B2)				eres on Liv	•	· · <u> </u>	on Visible on Aerial Imagery (C9)	
_	eposits (B3)				ed Iron (C	,		or Stressed Plants (D1)	
_ Algal M	lat or Crust (B4)		Recent In	on Reduc	tion in Tille	a Soils (C	<ol> <li>Geomorphic Position (D2)</li> </ol>		

_	Geomorphic Position (D2)
~/	

X FAC-Neutral Test (D	5)
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\_\_\_ Thin Muck Surface (C7) \_\_\_ Iron Deposits (B5) \_ Inundation Visible on Aerial Imagery (B7) \_\_\_\_ Gauge or Well Data (D9) X Sparsely Vegetated Concave Surface (B8) \_\_\_\_ Other (Explain in Remarks) Field Observations: 
 Yes
 X
 No
 Depth (inches):
 0.25

 Yes
 X
 No
 Depth (inches):
 10
 Surface Water Present? Water Table Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No \_ Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B7
Investigator(s): CV, JB	Section, Township, Range:	T1N R16E S19	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (conc	ave, convex, none):	Concave
Slope (%): 0 Lat: 41.033535	Long: <u>-83.058779</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🗶 No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly		al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes X No
Remarks:			

1				That Are OBL, FACW, or FAC: _1(A)
23				Total Number of Dominant Species Across All Strata: (B)
4 5	_			Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size:)		= Total Co	ver	Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)
1. Leersia oryzoides	80	<u>X</u>	OBL	
2. Persicaria pensylvanica	15		FACW	Prevalence Index = B/A =
<sub>3.</sub> Pilea pumila	5		FACW	Hydrophytic Vegetation Indicators:
4				X 1 - Rapid Test for Hydrophytic Vegetation
5				X 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
78				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10				
Woody Vine Stratum (Plot size:)		= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic Vegetation
2		= Total Co	ver	Present? Yes X No
Remarks: (Include photo numbers here or on a separate	sheet.)			

inches)	Color (moist)	%	Color (moist)	ox Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
-3	10YR 4/1	100					SIL	
-16	10YR 4/1	75	7.5YR 5/4	25	<u> </u>	M/PL		
	oncentration, D=Dep Indicators:	oletion, RM	I=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	Gleyed M	atrix (S4)			irie Redox (A16)
	pipedon (A2)			Redox (S			Dark Surfa	
Black H	istic (A3)			d Matrix (	,			anese Masses (F12)
	en Sulfide (A4)				ineral (F1)			ow Dark Surface (TF12)
	d Layers (A5)				latrix (F2)		Other (Exp	plain in Remarks)
_	uck (A10) d Below Dark Surfac	o (A11)	X Deplete	Dark Surf				
	ark Surface (A12)	,e (A11)			urface (F0)	)	<sup>3</sup> Indicators of b	hydrophytic vegetation and
_	Aucky Mineral (S1)			Depressio		,		drology must be present,
5 cm Mucky Peat or Peat (S1)					. ,		-	
5 cm Mu	ucky Peat or Peat (S	3)					unless dist	turbed or problematic.
-	ucky Peat or Peat (S Layer (if observed)	,						turbed or problematic.
-	, ,	,						
estrictive Type: Depth (in	, ,	,						esent? Yes X No
estrictive Type: Depth (in	Layer (if observed)	,						
estrictive Type: Depth (in emarks:	Layer (if observed)	,						
Type: Depth (in emarks:	Layer (if observed) ches): OGY drology Indicators	:						
Type: Depth (in emarks: //DROLO	Layer (if observed) ches): OGY drology Indicators	:	uired; check all that a				Hydric Soil Pre	
Depth (in emarks:     Depth vin emarks:     DROLO retland Hy rimary India _ Surface	Layer (if observed) ches): OGY drology Indicators cators (minimum of Water (A1)	:	Water-Sta	ined Leav			Hydric Soil Pre	esent? Yes X No ndicators (minimum of two requ Soil Cracks (B6)
Estrictive     Estrictive     Type:     Depth (in     emarks:	Layer (if observed) ches): OGY drology Indicators cators (minimum of of Water (A1) ater Table (A2)	:	Water-Sta Aquatic Fa	ained Leav auna (B13	3)		Hydric Soil Pre	ndicators (minimum of two requ Soil Cracks (B6) e Patterns (B10)
Depth (in Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturati	Layer (if observed) ches): GGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3)	:	Water-Sta Aquatic Fa True Aqua	ained Leav auna (B13 atic Plants	3) s (B14)		Hydric Soil Pre	esent? Yes X No ndicators (minimum of two requines (Marcines (Marcin
Type: Depth (in emarks: <b>DROLO</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronometry</b> <b>Chronom</b>	Ches): Ches): drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1)	:	Water-Sta Aquatic Fa True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide C	3) s (B14) Odor (C1)		Hydric Soil Pre	ndicators (minimum of two requires Soil Cracks (B6) ie Patterns (B10) ason Water Table (C2) in Burrows (C8)
Type: Depth (in emarks: TOROLO etland Hy imary India Surface High Wa Saturatia Water M Sedime	Layer (if observed) ches): GGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	:	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe	3) s (B14) odor (C1) eres on Liv		Hydric Soil Pre	ndicators (minimum of two requ Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C
<b>Depth (in</b> Type: Depth (in emarks: <b>DROLO</b> etland Hy imary India Surface High Wa Saturatia Water M Sedimei Drift Dep	Layer (if observed) ches): GGY drology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	:	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized I Presence	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc	3) s (B14) odor (C1) eres on Liv ed Iron (C4	4)	Hydric Soil Pre	ndicators (minimum of two requised in the second se
Type: Depth (in Depth (in emarks:	Layer (if observed) ches): drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	:	Water-Sta     Aquatic Fa     True Aquat     True Aqua     Hydrogen     X Oxidized     Presence     Recent Inc	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	Hydric Soil Pre	ndicators (minimum of two requised in the second se
Type: Depth (in emarks: Depth (in emarks: DEDTH (in emarks: DEDTH DETH Surface High Wa Saturation Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep	Layer (if observed) ches): DGY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is requ	Water-Sta     Aquatic F     True Aquat     True Aqua     Hydrogen     X Oxidized     Presence     Recent Irc     Thin Muck	auna (B13 auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct c Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7)	4)	Hydric Soil Pre	ndicators (minimum of two requised in the second se
Type: Depth (in Depth (in emarks: DROLO etland Hy imary India Surface High Wa Saturatia Water M Sedimen Drift Deg Algal Ma Iron Deg Inundati	Ches): _	: one is requ Imagery (B	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Irc     Thin Mucl 37) _ Gauge or	auna (B13 auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct Surface Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Hydric Soil Pre	ndicators (minimum of two requised in the second se
Comparison of the sector	Layer (if observed) ches): drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav	: one is requ Imagery (B	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Irc     Thin Mucl 37) Gauge or	auna (B13 auna (B13 atic Plants Sulfide C Rhizosphe of Reduc on Reduct Surface Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Hydric Soil Pre	ndicators (minimum of two requised in the second se
Estrictive     Type:     Depth (in     emarks:	Ches): _Ches): Ches): Ches): _Ches):	: one is requ Imagery (E re Surface	Water-Sta     Aquatic F     True Aquat     True Aqua     Hydrogen     X Oxidized I     Presence     Recent Irc     Thin Mucl 37) Gauge or (B8) Other (Ex	auna (B13 autic Plants Sulfide C Rhizosphe of Reduct on Reduct Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two requised in the second se
Estrictive     Type:     Depth (in     emarks:	Ches): _C	Imagery (E re Surface	Water-Sta     Aquatic F     Aquatic F     True Aqua     Hydrogen     X Oxidized     Presence     Recent Irc     Thin Mucl 37) _ Gauge or	auna (B13 auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Hydric Soil Pre	ndicators (minimum of two requised in the second se

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B7 UP
Investigator(s): <u>CV</u> , JB	Section, Township, Range:	T1N R16E S19	
Landform (hillslope, terrace, etc.): Depression	Local relief (conc	ave, convex, none):	Linear
Slope (%): 0 Lat: 41.033599	Long: <u>-83.058844</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🗶 No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answei	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	NoX
Remarks:					

30'	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> )		Species?		Number of Dominant Species
1. Juglans nigra	5	<u> </u>	FACU	That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Demission
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5	<b>_</b>			That Are OBL, FACW, or FAC: 0% (A/B)
Continue (Charthe Charters (Chatalans -	5	= Total Co	ver	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)				
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co		UPL species x 5 =
Herb Stratum (Plot size: 5' )			ver	· · · · · · · · · · · · · · · · · · ·
1 Andropogon virginicus	40	Х	UPL	Column Totals: (A) (B)
Ageratina altissima	20	X	FACU	Prevalence Index = B/A =
<ol> <li>Persicaria virginiana</li> </ol>	15		FAC	
				Hydrophytic Vegetation Indicators:
4. Pilea pumila	10		FAC	1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	85	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes No X
Remarks: (Include photo numbers here or on a separate		rotar oo		
	,			

	Matrix		Redox Features		
(inches)	Color (moist)	%	<u>Color (moist)</u> <u>%</u> <u>Type<sup>1</sup></u> Loc <sup>2</sup>		
0-16	10YR 4/4	100			
		·			
		etion, RM=	Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	3.
Hydric Soil			Sandy Clayed Matrix (SA)	Indicators for Problematic Hydric Soils <sup>3</sup>	
Histosol	(A1) pipedon (A2)		Sandy Gleyed Matrix (S4) Sandy Redox (S5)	Coast Prairie Redox (A16) Dark Surface (S7)	
	istic (A3)		Stripped Matrix (S6)	Iron-Manganese Masses (F12)	
_	en Sulfide (A4)		Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)	
	d Layers (A5)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)	
_	uck (A10)		Depleted Matrix (F3)		
	d Below Dark Surfac	ο (Δ11)	Redox Dark Surface (F6)		
	ark Surface (A12)	e (A11)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and	
	lucky Mineral (S1)		Redox Depressions (F8)	wetland hydrology must be present,	
	ucky Peat or Peat (S	3)		unless disturbed or problematic.	
	Layer (if observed):				
Туре:					
	ches):			Hydric Soil Present? Yes No	<u> </u>
Remarks:					
YDROLO	GY				
	GY drology Indicators:				
Vetland Hyd	drology Indicators:		ed; check all that apply)	Secondary Indicators (minimum of two r	require
Vetland Hyd	drology Indicators:		ed: check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two r	equire
<b>/etland Hyd</b> /rimary Indic Surface	drology Indicators: cators (minimum of c		Water-Stained Leaves (B9)	Surface Soil Cracks (B6)	equire
<b>/etland Hyd</b> rimary Indic Surface High Wa	drology Indicators: cators (minimum of c Water (A1) ater Table (A2)		Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6) Drainage Patterns (B10)	equire
Vetland Hyd Primary Indic Surface High Wa Saturatio	drology Indicators: cators (minimum of c Water (A1) ater Table (A2)		Water-Stained Leaves (B9)	Surface Soil Cracks (B6)	equire

- \_\_\_\_ Oxidized Rhizospheres on Living Roots (C3) \_\_\_\_ Saturation Visible on Aerial Imagery (C9)

Drift Deposits (B3)		_	Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)	)
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled So	oils (C6)	Geomorphic Position (D2)	
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral Test (D5)	
Inundation Visible on Ae	erial Imagery (B7	7) <u> </u>	Gauge or Well Data (D9)			
Sparsely Vegetated Cor	ncave Surface (B	38)	Other (Explain in Remarks)			
Field Observations:						
Surface Water Present?	Yes I	No_×_	Depth (inches):			
Water Table Present?	Yes I	<u>∧_</u> ₀	_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes 1	No <u>×</u>	_ Depth (inches):	Wetland	Hydrology Present? Yes	No_X
Describe Recorded Data (st	eam gauge, mo	nitoring	well, aerial photos, previous inspec	tions), if av	ailable:	
Remarks:						

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date:	09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point:	W-B5-PEM1
Investigator(s): <u>CV</u> , JB	Section, Township, Range:			
Landform (hillslope, terrace, etc.): Floodplain		ave, convex, none):	Concave	
Slope (%): 0 Lat: 41.033016	Long: -83.060169		Datum: NAD 8	3
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: None	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly		al Circumstances" p	oresent? Yes 🔿	<
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks:				

		Indicator	Dominance Test worksheet:
% Cover	Species?	Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: _2 (A)
			Total Number of Dominant
			Species Across All Strata:(B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
	rotar oo		Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
			FACU species          x 4 =
			UPL species          x 5 =
<u> </u>	= Total Co	ver	
50	Х	OBL	Column Totals: (A) (B)
30	<u>x</u>	FACW	Prevalence Index = B/A =
15		FACW	Hydrophytic Vegetation Indicators:
			$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
			$\frac{1}{2}$ 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
95	= Total Co	ver	be present, unless disturbed or problematic.
			Hydrophytic
			Vegetation
			Present? Yes X No
	50	= Total Cov	= Total Cover

Profile Desc	ription: (Describe	to the dept	th needed to docur	nent the	indicator	or confirm	m the absence of indicators.)			
Depth	Matrix		Redo	x Feature	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks			
0-6	10YR 4/2	95	7.5YR 5/4	5	С	M/PL	SIL			
6-13	10YR 4/2	80	7.5YR 5/4	20	С	М	SIL			
13-16	10YR 4/2	80	7.5YR 5/4	20	С	М	GRSIL			
							-			
1							2			
	oncentration, D=Dep	pletion, RM=	Reduced Matrix, Ma	S=Maske	d Sand G	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil							Indicators for Problematic Hydric Soils <sup>3</sup> :			
Histosol				-	atrix (S4)		Coast Prairie Redox (A16)			
	pipedon (A2)			Redox (S			Dark Surface (S7)			
	istic (A3)			d Matrix (			Iron-Manganese Masses (F12)			
	en Sulfide (A4)				ineral (F1)		Very Shallow Dark Surface (TF12)			
	d Layers (A5)				latrix (F2)		Other (Explain in Remarks)			
	uck (A10)	(111)		d Matrix						
	d Below Dark Surfac	ce (A11)		Dark Sur			31 diastana af busine butin secondation and			
	ark Surface (A12)				urface (F7	)	<sup>3</sup> Indicators of hydrophytic vegetation and			
	lucky Mineral (S1)	2)	Redox l	Depressi	ons (F8)		wetland hydrology must be present, unless disturbed or problematic.			
	ucky Peat or Peat (S Layer (if observed)						unless disturbed of problematic.			
Type:										
Depth (in							Hydric Soil Present? Yes X No			
Remarks:										
HYDROLO	GY									
	drology Indicators:									
	cators (minimum of o		ed: check all that ar	(vlac			Secondary Indicators (minimum of two required)			
		one to requi	Water-Sta				Surface Soil Cracks (B6)			
1 1 1	Water (A1) ater Table (A2)						Drainage Patterns (B10)			
X Saturatio			Aquatic Fa							
	. ,				. ,		Dry-Season Water Table (C2) Crayfish Burrows (C8)			
	larks (B1)		Hydrogen X Oxidized F			in a Deate				
	nt Deposits (B2)					•				
	posits (B3)		Presence				Stunted or Stressed Plants (D1)			
	at or Crust (B4)		Recent Irc			a Solis (C				
· — ·	posits (B5)		Thin Muck				X FAC-Neutral Test (D5)			
	on Visible on Aerial v Vegetated Concav	• • •	, <u> </u>		. ,					
Field Obser		e Sunace (d			emarks)					
		/~~	No $\underline{\times}$ Depth (in	choo);						
Surface Wat			No Depth (in							
Water Table							× · · · · · · · · · · · · · · · · · · ·			
Saturation P (includes car	resent? ) oillary fringe)	res I	No Depth (in	cnes): 0		_   wet	tland Hydrology Present? Yes X No			
Describe Re	corded Data (stream	n gauge, mo	nitoring well, aerial	photos, p	revious in	spections),	, if available:			
Remarks:										

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09	/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W	-B5 UP
Investigator(s): <u>CV</u> , JB	Section, Township, Range:			
Landform (hillslope, terrace, etc.): Depression		ave, convex, none):	Linear	
Slope (%): 0 Lat: 41.033599	Long: <u>-83.058844</u>		Datum: NAD 83	
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: None	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X	No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed	, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _X Yes No _X Yes No _X	Is the Sampled Area within a Wetland?	Yes	No_X
Remarks:				

30'	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> )	<u>% Cover</u> 5	Species? X	FACU	Number of Dominant Species
1. Juglans nigra			FACU	That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
	-	= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
				FACU species          x 4 =
5				
Herb Stratum (Plot size: 5')		= Total Co	ver	UPL species x 5 = (D)
1. Andropogon virginicus	40	Х	UPL	Column Totals: (A) (B)
2 Ageratina altissima	20	X	FACU	Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	60	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No _X
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

0-16 10YR 4/4 100%	SIL
Type: C=Concentration D=Depletion RM=Reduced Matrix MS=Masked Sand Grains	
vne: C=Concentration D=Depletion RM=Reduced Matrix MS=Masked Sand Grains	
ydric Soil Indicators:	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2) Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3) Stripped Matrix (S6)	Iron-Manganese Masses (F12)
_ Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
_ Stratified Layers (A5) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6)	
Thick Dark Surface (A12) Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Redox Depressions (F8)	wetland hydrology must be present,
_ 5 cm Mucky Peat or Peat (S3)	unless disturbed or problematic.
estrictive Layer (if observed):	
Type: Depth (inches):	Hydric Soil Present? Yes No
temarks:	
YDROLOGY	
Vetland Hydrology Indicators:	
rimary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two require
_ Surface Water (A1) Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
_ High Water Table (A2) Aquatic Fauna (B13)	Drainage Patterns (B10)
_ Saturation (A3) True Aquatic Plants (B14)	Dry-Season Water Table (C2)
_ Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	(C3) Saturation Visible on Aerial Imagery (C9)
_ Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (	
Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (         Drift Deposits (B3)       Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (         Drift Deposits (B3)       Presence of Reduced Iron (C4)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)	Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (         Drift Deposits (B3)       Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

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

Water Table Present?

Saturation Present? (includes capillary fringe)

Remarks:

Wetland Hydrology Present? Yes \_\_\_\_ No \_\_\_

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date:	09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point:	W-B5-PEM2
Investigator(s): <u>CV</u> , JB	Section, Township, Range:			
Landform (hillslope, terrace, etc.): Floodplain		ave, convex, none):	Convex	
Slope (%): 0-3 Lat: 41.033555	Long: <u>-83.058283</u>		Datum: NAD 83	3
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: None	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Norm	al Circumstances" p	oresent?Yes 🚬	< №
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes X No
Remarks:			

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: _3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Demont of Deminent Origina
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: <u>5'</u> )		1010100	VCI	Column Totals: (A) (B)
1. Leersia virginica	35	Х	FACW	
2. Persicaria sagittata	30	X	OBL	Prevalence Index = B/A =
3. Pilea pumila	10		FACW	Hydrophytic Vegetation Indicators:
Impatiens capensis	20	X	FACW	X 1 - Rapid Test for Hydrophytic Vegetation
5				X 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	05			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	95	= Total Co	ver	be present, unless disturbed or problematic.
1				Hydrophytic Vegetation
2				Present? Yes X No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sneet.)			

Depth	Matrix		Red	ox Feature	es		n the absence of in			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-3	10YR 4/2	100					SIL			
3-16	10YR 4/2	90	2.5YR 4/8	10	C	М	SIL			
	-		-							
	<u></u>		<u></u>				<u> </u>			
				_						
1Tune: 0-0		- DA		- Maaka	d Cand Ca		<sup>2</sup> Legation: DI	-Dere Lining M-Metrix		
	Indicators:	epietion, Ri	M=Reduced Matrix, N	15=Maske	a Sana Gr	ains.		.=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :		
Histoso			Sandy	Gleyed M	atrix (SA)			rie Redox (A16)		
	Epipedon (A2)			Redox (S			Dark Surfa			
	Histic (A3)			ed Matrix (	,			anese Masses (F12)		
	gen Sulfide (A4)				ineral (F1)			ow Dark Surface (TF12)		
	ed Layers (A5)				latrix (F2)			lain in Remarks)		
2 cm M	luck (A10)		X Deplet	ed Matrix	(F3)					
	ed Below Dark Surfa	ace (A11)		Dark Sur						
	Dark Surface (A12)				urface (F7)			ydrophytic vegetation and		
	Sandy Mucky Mineral (S1) Redox Depressions (F8)						wetland hydrology must be present,			
	lucky Peat or Peat (	-					unless dist	urbed or problematic.		
	Layer (if observed	1):								
Type:	Automatical and a second second						Hydric Soil Pre	sent? Yes X No		
	nches):									
Remarks:										
romano.										
HYDROLO										
HYDROL( Wetland H	ydrology Indicators									
HYDROLO Wetland H	ydrology Indicators licators (minimum of		uired; check all that a	pply)			Secondary Ir	ndicators (minimum of two required)		
HYDROLO Wetland H Primary Ind	ydrology Indicators licators (minimum of e Water (A1)		Water-Sta	ained Lea			Surface	Soil Cracks (B6)		
HYDROLO Wetland H Primary Ind Surface High W	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1	3)		Surface Drainage	Soil Cracks (B6) e Patterns (B10)		
HYDROLO Wetland H Primary Ind Surface High W Satura	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3)		Water-Sta Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		Surface Drainage Dry-Sea	Soil Cracks (B6) e Patterns (B10) son Water Table (C2)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plants n Sulfide C	3) s (B14) Odor (C1)		Surface Drainage Dry-Sea Crayfish	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger Oxidized	ained Lea auna (B1 atic Plant Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv	•	C3) Casturation (C3) Ca	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4	4)	C3) C33 CC3 CC3 CC3 CC3 CC3 CC3 CC3 CC3	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Lea auna (B1 atic Plants on Sulfide C Rhizosph of Reduct on Reduct	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	Crayfish (C3) Crayfish (6) X Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)		
HYDROLO Wetland H Primary Ind Surface High W Saturat Sedime Drift De Algal M Iron De	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5)	fone is req	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7)	4)	Crayfish (C3) Crayfish (6) X Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water Water Sedime Drift De Algal M Iron De Inunda	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria	<u>f one is req</u> I Imagery (	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent In     Thin Muc B7) Gauge or	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille (C7) a (D9)	4)	Crayfish (C3) Crayfish (6) X Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water Water Sedime Drift De Algal M Iron De Inunda Sparse	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca	<u>f one is req</u> I Imagery (	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent In     Thin Muc B7) Gauge or	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille (C7) a (D9)	4)	Crayfish (C3) Crayfish (6) X Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)		
HYDROLO Wetland H Primary Ind Surface High W Satura Water Sedima Drift De Algal M Iron De Inunda Sparse Field Obse	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca	f one is req I Imagery ( Ive Surface	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     Oxidized     Presence     Recent Ir     Thin Muc B7) Gauge or     (B8) Other (Ex	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data cplain in R	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Crayfish (C3) Crayfish (6) X Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)		
HYDROLO Wetland H Primary Ind Surface High W Satural Sedime Sedime Algal M Iron De Inunda Sparse Field Obse Surface Wa	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Present?	f one is req I Imagery ( ive Surface Yes	Water-Sta Aquatic F Aquatic F Aquatic F Hydroger Oxidized Presence Recent Ir Chin Muc B7) Gauge or (B8) Other (Ex No X Depth (iii	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data cplain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Crayfish (C3) Crayfish (6) X Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)		
HYDROLO Wetland H Primary Ind Surface High W Saturat Water Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Tabl	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Present? e Present?	f one is req I Imagery ( ive Surface Yes Yes	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex No Depth (ii No Depth (ii	ained Lea auna (B1 atic Plants on Sulfide C Rhizosph on Reduc on Reduc k Surface Well Dats cplain in R nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>(C3) Saturation</li> <li>Stunted</li> <li>A Geomor</li> <li>X Geomor</li> <li>X FAC-Ne</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)		
HYDROLO Wetland H Primary Ind Surface High W Saturat Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /lat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Present? e Present?	f one is req I Imagery ( ive Surface Yes Yes	Water-Sta Aquatic F Aquatic F Aquatic F Hydroger Oxidized Presence Recent Ir Chin Muc B7) Gauge or (B8) Other (Ex No X Depth (iii	ained Lea auna (B1 atic Plants on Sulfide C Rhizosph on Reduc on Reduc k Surface Well Dats cplain in R nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>(C3) Saturation</li> <li>Stunted</li> <li>A Geomor</li> <li>X Geomor</li> <li>X FAC-Ne</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)		
HYDROLO Wetland H Primary Ind Surface High W Satura Vater Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation (includes ca	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Present? e Present? Present? apillary fringe)	f one is req I Imagery ( ive Surface Yes Yes Yes	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc B7) Gauge or (B8) Other (Ex . No _X Depth (in . No _X Depth (in	ained Lea Fauna (B1 atic Plants on Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data cplain in R nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Surface     Drainage     Dry-Sea     Crayfish     (C3) Saturatio     Stunted     X Geomor     X FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)		
HYDROLO Wetland H Primary Ind Surface High W Satura Vater Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation (includes ca	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Present? e Present? Present? apillary fringe)	f one is req I Imagery ( ive Surface Yes Yes Yes	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex No Depth (ii No Depth (ii	ained Lea Fauna (B1 atic Plants on Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data cplain in R nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Surface     Drainage     Dry-Sea     Crayfish     (C3) Saturatio     Stunted     X Geomor     X FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)		

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09262018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B5-PFO
Investigator(s): <u>CV</u> , JB	Section, Township, Range:	T1N R16E S19	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (cond	ave, convex, none):	Concave
Slope (%): 0-3 Lat: 41.033075	Long: <u>-83.05993</u>		Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes X No
Remarks: PFO			

30'	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30 )		Species?		Number of Dominant Species	
1. Acer negundo	25	<u> </u>	FAC	That Are OBL, FACW, or FAC: _4 (A)	
2. Juglans nigra	5		FACU	Total Number of Dominant	
3. Gleditsia triacanthos	5		FAC	Species Across All Strata: 4 (B)	
4				(-,	
				Percent of Dominant Species	
5	35			That Are OBL, FACW, or FAC: 100% (A/B)	
Sapling/Shrub Stratum (Plot size: 15' )		= Total Cov	ver	Prevalence Index worksheet:	
1. Acer negundo	5	х	FAC	Total % Cover of: Multiply by:	
				OBL species         x 1 =	
2					
3				FACW species x 2 =	
4				FAC species x 3 =	
5				FACU species x 4 =	
5	5	= Total Cov	ver	UPL species x 5 =	
Herb Stratum (Plot size: 5')				Column Totals: (A) (B)	
1. Leersia oryzoides	50	Х	OBL	、/、/	
2. Persicaria pensylvanica	30	Х	FACW	Prevalence Index = B/A =	
3. Pilea pumila	15		FACW	Hydrophytic Vegetation Indicators:	
Ageratina altissima	5		FACU	1 - Rapid Test for Hydrophytic Vegetation	
				$\overline{X}$ 2 - Dominance Test is >50%	
5				$3$ - Prevalence Index is $\leq 3.0^{1}$	
6					
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8					
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
10					
	100	= Total Cov		<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
Woody Vine Stratum (Plot size:)	100 = Total Cover			be present, unless disturbed or problematic.	
1				Undranductio	
2				Hydrophytic Vegetation	
2				Present? Yes No No	
Remarks: (Include photo numbers here or on a separate sheet.)					
Remains. (include photo numbers nere of on a separate sneet.)					

(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
)-6	10YR 4/2	95	7.5YR 5/4	_ 5	<u> </u>	M/PL	SIL	
6-13	10YR 4/2	80	7.5YR 5/4	20	<u>C</u>	М	SIL	
3-16	10YR 4/2	80	7.5YR 5/4	20	<u>C</u>	М	GRSIL	
Гуре: С=Со	oncentration, D=De	pletion, RM	/=Reduced Matrix, N	 IS=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
ydric Soil I	Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
_ Histosol	(A1)		Sandy	Gleyed M	atrix (S4)		Coast Pra	irie Redox (A16)
_ Histic Ep	oipedon (A2)		Sandy	Redox (S	5)		Dark Surfa	
	istic (A3)			ed Matrix (	,			anese Masses (F12)
	en Sulfide (A4)				ineral (F1)			ow Dark Surface (TF12)
_	d Layers (A5)			Gleyed N			Other (Exp	plain in Remarks)
_	uck (A10) d Below Dark Surfac	(111)	X Deplet	Dark Sur				
	ark Surface (A12)	Se (ATT)			urface (F6)	)	<sup>3</sup> Indicators of	hydrophytic vegetation and
_	lucky Mineral (S1)			Depressi	•	,		drology must be present,
	icky Peat or Peat (S	3)		Doproces			unless disturbed or problematic.	
		-						
	Layer (if observed)	:						
Туре:	Layer (if observed)	:						
Type:	Layer (if observed)	:					Hydric Soil Pre	
Туре:		:					Hydric Soil Pre	
Type: Depth (ind Remarks:	ches):						Hydric Soil Pre	
Type: Depth (ind emarks: (DROLO	ches):						Hydric Soil Pre	
Type: Depth (ind emarks: //DROLO //etland Hyd	ches): GY drology Indicators		uired: check all that a					osent? Yes <u>X</u> No
Type: Depth (ind emarks: //DROLO /etland Hyd rimary Indic	ches): GY drology Indicators cators (minimum of c		uired: check all that a		ves (B9)		Secondary I	esent? Yes X No
Type: Depth (ind emarks: /DROLO /etland Hyd rimary Indic Surface	GY drology Indicators cators (minimum of o Water (A1)		Water-St	ained Lea	, ,		Secondary I	esent? Yes X No ndicators (minimum of two requir Soil Cracks (B6)
Type: Depth (ind emarks: //DROLO /etland Hyd rimary Indic Surface High Wa	Ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2)		Water-St Aquatic F	ained Lea Fauna (B1	3)		<u>Secondary I</u> Surface Drainag	esent? Yes X No ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10)
Type: Depth (ind emarks: //DROLO /etland Hyd rimary Indic Surface High Wa & Saturatio	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3)		Water-St Aquatic F True Aqu	ained Lea Fauna (B1 atic Plant	3) s (B14)		Secondary I Surface Drainag Dry-Sea	ndicators (minimum of two requir Soil Cracks (B6) re Patterns (B10) ason Water Table (C2)
Type: Depth (ind emarks: //DROLO /etland Hyd rimary Indic Surface High Wa & Saturatic Water M	Ches): GY drology Indicators cators (minimum of of Water (A1) ater Table (A2)		Water-St Aquatic F True Aqu Hydroger	ained Lea Fauna (B1 natic Plants n Sulfide C	3) s (B14) Odor (C1)	ving Roots	Secondary I Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8)
Type: Depth (ind emarks: //DROLO /etland Hyd rimary Indic Surface High Wat Saturatic Water M Sedimer	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1)		Water-St Aquatic F True Aqu Hydroger X Oxidized	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on Liv		Secondary I Surface Drainag Dry-Sea Crayfish (C3) Saturati	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9)
Type: Depth (ind emarks: (DROLO /etland Hyd rimary India Surface High Wa X Saturatia Water M Sedimer Drift Dep	GY drology Indicators cators (minimum of e Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-St Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1)	4)	<u>Secondary I</u> <u>Surface</u> <u>Drainag</u> <u>Dry-Sea</u> <u>Crayfish</u> (C3) <u>Saturati</u> <u>Stunted</u>	ndicators (minimum of two requir Soil Cracks (B6) re Patterns (B10) ason Water Table (C2)
Type: Depth (ind emarks: //DROLO /etland Hyd /etland Hyd /etland Hyd /imary India Surface High Wa / Saturatio Water M Sedimer Drift Dep Algal Ma	GY drology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-St     Aquatic F     True Aqu     Hydroger     X Oxidized     Presence     Recent Ir	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille	4)	<u>Secondary I</u> Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomo	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (ind emarks: (DROLO /etland Hyd rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	: one is req	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph of Reduc ron Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7)	4)	<u>Secondary I</u> Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomo	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Type: Depth (ind remarks: (DROLO Vetland Hyd rimary Indic Surface High Wa Saturatic Water M Sedimer Naturatic Drift Dep Algal Ma Iron Dep Inundatic	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one is req Imagery (	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge o	ained Lea Fauna (B1 atic Plants n Sulfide C Rhizosph of Reduc fon Reduc ck Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4)	<u>Secondary I</u> Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomo	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (ind emarks: //DROLO /etland Hyd rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Iron Dep Inundatic Sparsely	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav	: one is req Imagery (	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge o	ained Lea Fauna (B1 natic Plants n Sulfide C Rhizosph of Reduc on Reduc k Surface r Well Data	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4)	<u>Secondary I</u> Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomo	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (ind temarks: YDROLO Vetland Hyd rimary Indic Surface High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely ield Obser	GY drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations:	: one is req Imagery ( re Surface	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge o	ained Lea Fauna (B1 aatic Plants n Sulfide C Rhizosph of Reduc on Reduc on Reduc con Reduc con Reduc k Surface r Well Data xplain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) od Soils (C	<u>Secondary I</u> Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomo	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc Remarks: YDROLO Yetland Hyc Primary Indic Surface High Wa X Saturatio Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser	GY drology Indicators cators (minimum of e Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present?	: one is req Imagery ( re Surface Yes	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroger     X Oxidized     Presence     Recent Ir     Thin Muc B7) Gauge of     (B8) Other (Es	ained Lea Fauna (B1 aatic Plants n Sulfide C Rhizosph e of Reduc on Reduc con Reduc co	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	<u>Secondary I</u> Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomo	ndicators (minimum of two requir Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)
Type: Depth (inc Remarks: YDROLO YDROLO Vetland Hyo Primary India Surface High Wa Saturatio Water M Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Surface Water	GY drology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concav vations: er Present? Present?	Imagery ( re Surface res	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge of     (B8) Other (Estended)	ained Lea Fauna (B1 latic Plants n Sulfide C Rhizosph of Reduc on Reduc k Surface r Well Data xplain in R nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary I          Surface         Drainag         Dry-Sea         Crayfish         (C3)       Saturati         Stunted         6)       Geomon         X       FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) on Visible on Aerial Imagery (C9 or Stressed Plants (D1) rphic Position (D2)

Remarks:

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date:	09/26/2018
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point:	W-B4
Investigator(s): <u>CV</u> , JB	Section, Township, Range:	T1N R16E S19		
Landform (hillslope, terrace, etc.): Depression	Local relief (conc	ave, convex, none):	Concave	
Slope (%): 0 Lat: 41.032896	Long: <u>-83.063504</u>		Datum: NAD 8	3
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: <u>NA</u>	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	resent?Yes 🚬	<no< td=""></no<>
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answei	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes_X	No
Remarks:				

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _1 (A)
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				
5				Percent of Dominant Species
		= Total Co		That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)		- 10tai 00	461	Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
				FACW species         x 2 =
3				
4				FAC species x 3 =
5				FACU species x 4 =
Herb Stratum (Plot size: 5' )		= Total Co	ver	UPL species x 5 =
1. Ludwigia alternifolia	60	х	FACW	Column Totals: (A) (B)
2. Glycine max	10		UPL	Prevalence Index = B/A =
2. Orycine max 3. Panicum dichotomiflorum			FACW	
	_ 5			Hydrophytic Vegetation Indicators:
4. Xanthium strumarium	5		FAC	X 1 - Rapid Test for Hydrophytic Vegetation
5				X 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
			_	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	80	T.1.0		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	00	= Total Co	ver	be present, unless disturbed or problematic.
1				
				Hydrophytic Vegetation
2				Present? Yes No
Demonitory (include alterte avantere here er en e concrete		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sneet.)			

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
-14	10YR 4/2	95	7.5YR 5/4	5	C	M/PL	SIL	Kemarks
4-16	10YR 4/2	95	7.5YR 5/4		- <del>C</del>	M	GRCL	
	concentration, D=Dep	oletion, RM	I=Reduced Matrix, M	S=Maske	ed Sand Gr	ains.		: PL=Pore Lining, M=Matrix.
dric Soil	Indicators:						Indicators	for Problematic Hydric Soils <sup>3</sup> :
_ Histoso				-	latrix (S4)			Prairie Redox (A16)
_	pipedon (A2)			Redox (S				surface (S7)
_	listic (A3)			d Matrix				anganese Masses (F12)
	en Sulfide (A4) d Layers (A5)				ineral (F1) /atrix (F2)			hallow Dark Surface (TF12) (Explain in Remarks)
_	uck (A10)			oleyeu in d Matrix	(E3)			
_	d Below Dark Surfac	ce (A11)		Dark Sur				
	ark Surface (A12)	. ,			urface (F7	)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Redox	Depressi	ons (F8)		wetland	d hydrology must be present,
	ucky Peat or Peat (S						unless	disturbed or problematic.
estrictive	Layer (if observed)	-						
controlive	Layer (II Observeu)	:						
Type:	Layer (il Observed)	:					Hudria Sail	Brasant? Vas X No
Type: Depth (ir	nches):						Hydric Soil	Present? Yes X No
Type: Depth (ir							Hydric Soil	Present? Yes <u>X</u> No
Type: Depth (ir emarks:	nches):						Hydric Soil	Present? Yes <u>X</u> No
Type: Depth (ir emarks: //DROLC	oches): DGY /drology Indicators		ired: check all that a	nniv)				
Type: Depth (ir emarks: //DROLC /etland Hy rimary Ind	OGY rdrology Indicators icators (minimum of d						<u>Seconda</u>	ary Indicators (minimum of two requi
Type: Depth (ir emarks:	DGY rdrology Indicators icators (minimum of o		Water-Sta	ained Lea			<u>Seconda</u>	ary Indicators (minimum of two requi ace Soil Cracks (B6)
Type: Depth (ir emarks:	OGY vdrology Indicators icators (minimum of o water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1	3)		<u>Seconda</u> Surf Drai	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10)
Type: Depth (ir emarks: //DROLC /etland Hy rimary Indi Surface Saturat	DGY vdrology Indicators icators (minimum of of Water (A1) ater Table (A2) ion (A3)		Water-Sta Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		<u>Seconda</u> Surf Drai Dry-	ary Indicators (minimum of two requi face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Type: Depth (ir emarks: /DROLC /etland Hy rimary Indi Surface Surface Saturat Saturat Water M	DGY vdrology Indicators icators (minimum of of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant Sulfide (	3) s (B14) Ddor (C1)	ving Roots	<u>Seconda</u> Surl Drai Dry- Cray	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8)
Type: Depth (ir emarks: //DROLC /etland Hy rimary Ind Surface Surface Saturat Saturat Sedime	DGY rdrology Indicators icators (minimum of e Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger X_ Oxidized	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on Liv	•	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> <u>Cray</u> s (C3) <u>Satu</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) ıration Visible on Aerial Imagery (C9
Type: Depth (ir emarks: //DROLC /etland Hy rimary Indi Surface High W Saturat Water M Sedime Drift De	DGY rdrology Indicators icators (minimum of d Water (A1) ater Table (A2) ion (A3) Marks (B1) mt Deposits (B2) iposits (B3)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> <u>Cra</u> s (C3) <u>Satu</u> <u>Stur</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 tted or Stressed Plants (D1)
Type: Depth (ir emarks: //DROLC /etland Hy rimary Indi Surface Saturat Water M Saturat Uvater M Sedime Drift De Algal M	DGY rdrology Indicators icators (minimum of e Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduction Reduction	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Cray</u> s (C3) <u>Satu</u> Stur 6) <u>Geo</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) ıration Visible on Aerial Imagery (C9
Type: Depth (ir temarks: //DROLC //etland Hy rimary Indi X Surface X High W Saturat Usaturat Usaturat Drift De Algal M Iron De	DGY rdrology Indicators icators (minimum of of water (A1) ater Table (A2) ion (A3) Marks (B1) mt Deposits (B2) posits (B3) at or Crust (B4)	: one is requ	Water-Sta Aquatic F True Aqu Hydrogen X Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7)	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Cray</u> s (C3) <u>Satu</u> Stur 6) <u>Geo</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (ir emarks: //DROLC /etland Hy rimary Indi X Surface X High W Saturat Usedime Sedime Drift De Algal M Iron De Inundat	DGY rdrology Indicators: icators (minimum of of water Table (A2) ion (A3) Marks (B1) mt Deposits (B2) oposits (B3) at or Crust (B4) posits (B5)	: one is requ	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydroger     X Oxidized     Presence     Recent In     Thin Muc 37) Gauge or	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9)	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Cray</u> s (C3) <u>Satu</u> Stur 6) <u>Geo</u>	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 tted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (ir Remarks: YDROLC Yetland Hy Yrimary Indi X Surface X High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Sparse	DGY vdrology Indicators icators (minimum of of water (A1) ater Table (A2) ion (A3) Marks (B1) wh Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations:	is required in the second seco	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc 37) Gauge or (B8) Other (Ex	alined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Liv eres on Liv ered Iron (C tion in Tille (C7) a (D9) demarks)	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Cray</u> s (C3) <u>Satu</u> Stur 6) <u>Geo</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind X Surface X High W X Saturat Water M Saturat Drift De Drift De Algal M Iron De Inundat Sparse Wield Obse	DGY rdrology Indicators: icators (minimum of d Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations: ter Present?	Imagery (E e Surface /es X	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc     Gauge or     (B8) Other (Ex     No Depth (in	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) cemarks) .5	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Cray</u> s (C3) <u>Satu</u> Stur 6) <u>Geo</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (ir Remarks: YDROLC YDROLC Yetland Hy Primary Ind X Surface X High W X Saturat Water M Saturat Urift De Drift De Algal M Iron De Inundat Sparse Field Obse	DGY rdrology Indicators: icators (minimum of d Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations: ter Present?	Imagery (E e Surface /es X	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc 37) Gauge or (B8) Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) cemarks) .5	4)	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Cray</u> s (C3) <u>Satu</u> Stur 6) <u>Geo</u>	ary Indicators (minimum of two requin face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (ir remarks: //DROLC //etland Hy rimary Indi X Surface X High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Iron De Inundat Isparse ield Obse aturation F	DGY rdrology Indicators: icators (minimum of of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (E e Surface res X res X	Water-Sta     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc     Gauge or     (B8) Other (Ex     No Depth (in	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R plain in R	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) cemarks) .5	4) ed Soils (C	<u>Seconda</u> <u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Crav</u> (C3) <u>Satu</u> (C3) <u>Stur</u> (6) <u>Geo</u> X FAC	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 tted or Stressed Plants (D1) morphic Position (D2)

Remarks:

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/26/2018	
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B4 UP	
Investigator(s): <u>CV</u> , JB	Section, Township, Range:			
Landform (hillslope, terrace, etc.): Depression	Local relief (cond	cave, convex, none):	Linear	
Slope (%): 0 Lat: 41.03286	Long: <u>-83.0636</u>		Datum: NAD 83	
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded	NWI classific	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Norn	nal Circumstances" p	present? Yes X No	_
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed	l, explain any answe	rs in Remarks.)	

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

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

	Absolute	Dominant India	
Tree Stratum (Plot size:)	<u>% Cover</u>	Species? Sta	Induliber of Dominant Species
1			That Are OBL, FACW, or FAC: _0 (A)
2			Total Number of Dominant
3			
4			
5.			Percent of Dominant Species
			—— That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size: )		= Total Cover	Prevalence Index worksheet:
1			
2			OBL species x 1 =
3			
4			FAC species x 3 =
5			FACU species x 4 =
		= Total Cover	UPL species x 5 =
Herb Stratum (Plot size: 5')			Column Totals: (A) (B)
1. Glycine max	80	X UPI	( - / ( - / _
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			
5			
6			
7			4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9			
10			1. Substanting of the device of the second states o
		= Total Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			be present, unless disturbed of problematic.
1			Hydrophytic
2			Vegetation
		= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate			
	sneet.)		

Depth	Matrix		Redox Features	. 2	-	
(inches)	Color (moist)	%	Color (moist)%Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 4/4	100			SIL	
		letion, RM=	Reduced Matrix, MS=Masked Sand Grain	15.	<sup>2</sup> Location: PL=Pore	
	I Indicators:					ematic Hydric Soils <sup>3</sup> :
Histoso			Sandy Gleyed Matrix (S4)		Coast Prairie Re	
	Epipedon (A2)		Sandy Redox (S5)		Dark Surface (Si	
	Histic (A3) jen Sulfide (A4)		Stripped Matrix (S6) Loamy Mucky Mineral (F1)		Iron-Manganese	rk Surface (TF12)
	ed Layers (A5)		Loamy Gleyed Matrix (F2)		Other (Explain in	
	luck (A10)		Depleted Matrix (F3)			,
_	ed Below Dark Surfac	e (A11)	Redox Dark Surface (F6)			
Thick D	Dark Surface (A12)		Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrop	hytic vegetation and
	Mucky Mineral (S1)		Redox Depressions (F8)		wetland hydrolog	y must be present,
	lucky Peat or Peat (S				unless disturbed	or problematic.
Restrictive	Layer (if observed):					
Туре:					Hydric Soil Present?	YesNo_X
Depth (ir	nches):				Hyunc Son Fresent?	
Remarks:						
YDROLO	DGY					
Wetland Hy	ydrology Indicators:					
Primary Ind	licators (minimum of c	one is require	ed; check all that apply)		Secondary Indicate	ors (minimum of two required
Surface	e Water (A1)		Water-Stained Leaves (B9)		Surface Soil C	cracks (B6)
High W	/ater Table (A2)		Aquatic Fauna (B13)		Drainage Patte	erns (B10)
Saturat	tion (A3)		True Aquatic Plants (B14)		Dry-Season W	/ater Table (C2)
Water I	Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burro	ows (C8)
Sedime	ent Deposits (B2)		Oxidized Rhizospheres on Living	g Roots (0	C3) Saturation Vis	ible on Aerial Imagery (C9)
Drift De	eposits (B3)		Presence of Reduced Iron (C4)		Stunted or Str	essed Plants (D1)

\_\_\_\_ Thin Muck Surface (C7)

\_\_\_ Gauge or Well Data (D9)

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

\_\_\_\_ Recent Iron Reduction in Tilled Soils (C6)

Saturation Present? (includes capillary fringe)

\_\_\_ Iron Deposits (B5)

Field Observations:

Surface Water Present?

Water Table Present?

\_\_\_\_ Algal Mat or Crust (B4)

\_\_\_\_ Inundation Visible on Aerial Imagery (B7)

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

Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_

\_\_\_\_ Sparsely Vegetated Concave Surface (B8) \_\_\_\_ Other (Explain in Remarks)

Remarks:

\_\_\_ Geomorphic Position (D2)

Wetland Hydrology Present? Yes \_\_\_\_ No X

\_\_\_\_ FAC-Neutral Test (D5)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No
Remarks: PEM			

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: _5(A)
2				Total Number of Dominant
3				Species Across All Strata: _5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Co	ver	
Sapling/Shrub Stratum (Plot size: 15' )				Prevalence Index worksheet:
1. Acer negundo	5	Χ	FAC	Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
···	5	= Total Co	vər	UPL species x 5 =
Herb Stratum (Plot size: <u>5</u> )		- 10(a) 00	VCI	Column Totals:         (A)         (B)
1. Saururus cernuus	15	Х	OBL	
2. Elymus riparius	10	X	FACW	Prevalence Index = B/A =
3. Polygonum pensylvanicum	10	X	FACW	Hydrophytic Vegetation Indicators:
<sup>4</sup> Pilea pumila	10	X	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Symplocarpus foetidus	5		OBL	2 - Dominance Test is >50%
				$3$ - Prevalence Index is $\leq 3.0^{1}$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	50	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Des	cription: (Describe	to the depth	n needed to docu	ment the i	indicator	or confirm	m the absence	of indicators.)
Depth	Matrix			x Feature		. 2		-
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 4/2	98	7.5YR 5/4	2	C	M	SaCL	
							· · · · · · · · · · · · · · · · · · ·	
<sup>1</sup> Type: C=C	Concentration, D=De	pletion, RM=F	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
	Indicators:							for Problematic Hydric Soils <sup>3</sup> :
Histosc	ol (A1)		Sandy	Gleyed Ma	atrix (S4)		Coast F	Prairie Redox (A16)
Histic E	pipedon (A2)		Sandy I	Redox (S5	5)		Dark Si	urface (S7)
	listic (A3)			d Matrix (S	,			anganese Masses (F12)
	en Sulfide (A4)			Mucky Mir				nallow Dark Surface (TF12)
	ed Layers (A5)		1.1	Gleyed Ma			Other (I	Explain in Remarks)
	luck (A10) ed Below Dark Surfa	o (A11)	X Deplete	Dark Surfa	,			
·	ark Surface (A12)			ed Dark Suna		)	<sup>3</sup> Indicators	of hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio		,		hydrology must be present,
	ucky Peat or Peat (S	33)			. ,			disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:								X
Depth (ir	nches):						Hydric Soil	Present? Yes X No
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicators	:						
Primary Ind	icators (minimum of	one is require	d; check all that ap	oply)			Seconda	ry Indicators (minimum of two required)
Surface	e Water (A1)		Water-Sta	ined Leav	es (B9)		Surfa	ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa				X Drain	nage Patterns (B10)
Saturat	ion (A3)		True Aqua	atic Plants	(B14)		Dry-\$	Season Water Table (C2)
Water I	Marks (B1)		Hydrogen	Sulfide O	dor (C1)		Cray	fish Burrows (C8)
Sedime	ent Deposits (B2)		Oxidized I	Rhizosphe	res on Liv	ing Roots	(C3) Satu	ration Visible on Aerial Imagery (C9)
X Drift De	eposits (B3)		Presence	of Reduce	ed Iron (C	4)	Stun	ted or Stressed Plants (D1)
Algal M	lat or Crust (B4)		Recent Irc	n Reducti	on in Tille	d Soils (C	6) X Geor	morphic Position (D2)
Iron De	posits (B5)		Thin Muck	Surface (	(C7)		X FAC	-Neutral Test (D5)
Inundat	tion Visible on Aerial	Imagery (B7)	Gauge or	Well Data	(D9)			
Sparse	ly Vegetated Concav	e Surface (B	8) Other (Exp	plain in Re	emarks)			
Field Obse								
Surface Wa	ter Present?	res N	o <u>×</u> Depth (in	ches):		_		
Water Table	e Present?	res N	o <u>×</u> Depth (in	ches):		_		
Saturation F		res N	o 🗙 Depth (in	ches):		Wet	land Hydrology	Present? Yes X No
	apillary fringe) ecorded Data (strear		itoring well aerial	nhotos nr	evious in	enections)	if available:	
Describe N	Solucia Data (Sileal	guuge, mon	acidi della	prioros, pr	S 11503 III	speciello),		
Remarks:								
Romarka.								

Project/Site: Seneca Wind	City	/County: Seneca	s	_ Sampling Date: 09/24/18			
Applicant/Owner: Seneca Wind, LLC			State: OH s	Sampling Point: W	-B2 UP		
Investigator(s): <u>CV</u> , RA	Sec	tion, Township, Rar	nge: T1N R15E S24				
Landform (hillslope, terrace, etc.): Terrace		Local relief	(concave, convex, none): _L	_inear			
Slope (%): 0 Lat: 41.033544	Lon	g: <u>-83.078496</u>	[	Datum: NAD 83			
Soil Map Unit Name: Chagrin silt loam, occasi			NWI classificat				
Are climatic / hydrologic conditions on the site typic	cal for this time of year?						
Are Vegetation, Soil, or Hydrology					No		
Are Vegetation, Soil, or Hydrology							
SUMMARY OF FINDINGS – Attach sit	e map showing sa	mpling point lo	ocations, transects,	important feat	ures, etc		
Hydrophytic Vegetation Present? Yes	No X						
Hydric Soil Present? Yes	<u>N₀_X</u>	Is the Sampled Area within a Wetland? Yes NoX					
Wetland Hydrology Present? Yes Remarks:	№_ <u>X</u>	within a wetlan	169				
VEGETATION – Use scientific names of	•	ominant Indicator	Dominance Test works	neet.			
Tree Stratum (Plot size: <u>30'</u> )		becies? Status	Number of Dominant Spe				
<sub>1.</sub> Juglans nigra	5	FACU	That Are OBL, FACW, or	•	(A)		
2			Total Number of Dominar	nt			
3			Species Across All Strata	2	(B)		
4			Persont of Dominant Sna	aiaa			

23			
4 5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15' )	-		Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2.			OBL species x 1 =
3			FACW species x 2 =
4			FAC species x 3 =
5			FACU species x 4 =
		= Total Cover	UPL species x 5 =
Herb Stratum (Plot size: 5')			Column Totals: (A) (B)
1. Glycine max	40	<u>    X       UPL</u>	(1)
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			
6			3 - Prevalence Index is ≤3.0 <sup>1</sup>
7			4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9			
10			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	40	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
1			
2			Vegetation     Present?     Yes No _X
		= Total Cover	

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature: %	_Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/4	100					SICL	
8-16	10YR 5/4	100					CL	
	·							
	Concentration, D=Dep	bletion, RM=I	Reduced Matrix, M	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.
	Indicators:							for Problematic Hydric Soils <sup>3</sup> :
Histoso				Gleyed Ma				Prairie Redox (A16)
	pipedon (A2) listic (A3)			Redox (S5 d Matrix (S				Surface (S7) anganese Masses (F12)
	en Sulfide (A4)			Mucky Mir	,			Shallow Dark Surface (TF12)
	d Layers (A5)			Gleyed Ma				(Explain in Remarks)
2 cm M	uck (A10)		Deplete	ed Matrix (I	=3)			
Deplete	ed Below Dark Surfac	e (A11)	Redox	Dark Surfa	ice (F6)			
	ark Surface (A12)			ed Dark Su				of hydrophytic vegetation and
	Mucky Mineral (S1)		Redox	Depressio	ns (F8)			d hydrology must be present,
5 cm M	ucky Peat or Peat (S	3)					unless	disturbed or problematic.
	Laura Cf. als a second	-						
Restrictive	Layer (if observed)							
Restrictive Type:			_				Hydric Soil	Present? Yes No X
Restrictive							Hydric Soil	Present? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks:	nches):						Hydric Soil	Present? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks: YDROLC	nches):						Hydric Soil	Present? Yes <u>No X</u>
Restrictive Type: Depth (ir Remarks: YDROLC	nches):		ed: check all that a	oply)				
Restrictive Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind	nches): DGY /drology Indicators:			pply) iined Leave	es (B9)		<u>Seconda</u>	
Restrictive Type: Depth (ir Remarks: YDROLC Yetland Hy Primary Ind Surface	DGY /drology Indicators: icators (minimum of c		Water-Sta				<u>Seconda</u>	ary Indicators (minimum of two require
Restrictive Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W	DGY vdrology Indicators: icators (minimum of c water (A1)		Water-Sta Aquatic Fa	ined Leave	)		<u>Seconda</u> Surl Dra	ary Indicators (minimum of two require face Soil Cracks (B6)
Restrictive Type: Depth (ir Remarks: YDROLC YUROLC Vetland Hy Primary Ind Surface Surface High W Saturat Water N	DGY /drology Indicators: icators (minimum of c water (A1) ater Table (A2) ion (A3) Marks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ained Leave auna (B13) atic Plants Sulfide Oo	) (B14) dor (C1)		<u>Seconda</u> Suri Dra Dry Cra	ary Indicators (minimum of two require face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)
Restrictive Type: Depth (ir Remarks: YDROLC YDROLC Wetland Hy Primary Ind Surface High W Saturat Saturat Saturat Sedime	DGY rdrology Indicators: icators (minimum of c Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I	ained Leave auna (B13) atic Plants Sulfide Oo Rhizosphe	) (B14) dor (C1) res on Liv	-	Seconda Surt Dra Dra Dry Cra (C3) Satu	ary Indicators (minimum of two require face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Restrictive Type: Depth (ir Remarks: YDROLC YDROLC Netland Hy Primary Ind Surface High W Saturat Water M Sedime Drift De	DGY rdrology Indicators: icators (minimum of c water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Sta     Aquatic Fa     True Aqua     True Aqua     Hydrogen     Oxidized I     Presence	auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce	) (B14) dor (C1) res on Liv d Iron (C4	4)	<u>Seconda</u> Surt Dra Dry Cra (C3) Satu Stur	ary Indicators (minimum of two require face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
Restrictive Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M	DGY vdrology Indicators: icators (minimum of co water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro	auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce	) (B14) dor (C1) res on Liv d Iron (C4 on in Tilled	4)	<u>Seconda</u> Surt Dra Dry Cra (C3) Satu Stur 6) Geo	ary Indicators (minimum of two require face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
Restrictive Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Saturat High W Saturat Water M Sedime Drift De Algal M Iron De	DGY /drology Indicators: icators (minimum of c Water (A1) iater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5)	one is require	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Thin Muck	auna (B13) atic Plants Sulfide Oc Rhizosphe of Reduce on Reduction	) (B14) dor (C1) res on Liv d Iron (C4 on in Tilled C7)	4)	<u>Seconda</u> Surt Dra Dry Cra (C3) Satu Stur 6) Geo	ary Indicators (minimum of two require face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
Restrictive Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Saturat High W Saturat Water N Sedime Drift De Algal M Iron De Inundat	DGY vdrology Indicators: icators (minimum of co water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	one is require	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Iro Gauge or	auna (B13) atic Plants Sulfide Oo Rhizosphe of Reduce	) (B14) dor (C1) res on Liv d Iron (C4 on in Tilled C7) (D9)	4)	<u>Seconda</u> Surt Dra Dry Cra (C3) Satu Stur 6) Geo	ary Indicators (minimum of two require face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)

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

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

 Saturation Present?
 Yes \_\_\_\_\_ No X\_\_\_\_ Depth (inches): \_\_\_\_\_\_\_

 (includes capillary fringe)
 Depth (inches): \_\_\_\_\_\_\_

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

 Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date:	9/26/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point:	W-A34
Investigator(s): JMM KMP	Section, Township, Range:	T1N R15E S24		
Landform (hillslope, terrace, etc.): Linear	Local relief (conc	ave, convex, none):	Concave	
Slope (%): 2-3 Lat: 41.032194	Long: <u>-83.080509</u>		Datum: NAD 8	3
Soil Map Unit Name: Chagrin silt loam, occasionally flooded		NWI classific	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	oresent? Yes 🗋	<u>К No</u>
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PFO			

Tree Stratum (Plot size: 30		Absolute	Dominant		Dominance Test worksheet:
1       15       X       FACW       Initial Ale OBL, PACW, 0 FAC.       0       (A)         2       Ulmus americana       15       X       FACW       Tatal Number of Dominant       Species Across All Strata:       7       (B)         3       Acer saccharum       15       X       FACW       Tatal Number of Dominant       Species Across All Strata:       7       (B)         3       40       = Total Cover       Total % Cover of:       Multiply by:       OBL species       At =	Tree Stratum (Plot size:)				
3. Acer saccharum       15       X       FACU       Total Number of Dominant       7       (B)         4.		·			That Are OBL, FACW, or FAC: 6 (A)
3. More obtained       10       115       115       X       FACW       Prevalence Index worksheet:         1. Ulmus americana       15       X       FACW       Prevalence Index worksheet:       Multiply by:         2. Acer negundo       5       X       FAC       OBI species       x 1 =					Total Number of Dominant
5.	3. Acer saccharum	15		FACU	Species Across All Strata: 7 (B)
5.       40       = Total Cover       FACW protects       66% (AB)         Sapling/Shub Stratum (Plot size: 15')       15       X       FACW       FACW protects       Multiply by:         2. Acer negundo       5       X       FAC       Multiply by:       0BL species       x1 =	4				Percent of Dominant Species
Saping/Shrub Stratum (Plot size: 15' )       40 = Total Cover         1. Ulmus americana       15 X FACW         2. Acer negundo       5 X FAC         3					
1. Ulmus americana       15       X       FACW         2. Acer negundo       5       X       FAC         3	451	40	= Total Cov	er	
2. Acer negundo       5       X       FAC         3	Sapling/Shrub Stratum (Plot size: 15 )				Prevalence Index worksheet:
3.	1. Ulmus americana	15	<u>X</u>	FACW	Total % Cover of:Multiply by:
3.	2. Acer negundo	5	Х	FAC	OBL species x 1 =
4.					FACW species x 2 =
5.					FAC species x 3 =
Herb Stratum (Plot size: 5')       20       = Total Cover       UPL species       x 5 =         1. Phalaris arundinacea       40       X       FACW       Prevalence Index = B/A =       (A)       (B)         2. Pilea pumilia       10       FACW       Prevalence Index = B/A =       (B)         3. Microstegium vimineum       20       X       FAC       Hydrophytic Vegetation Indicators:         4. Lysimachia nummularia       10       FACW       1 - Rapid Test for Hydrophytic Vegetation       X         5. Verbesina alternifolia       10       FACW       X       2 - Dominance Test is >50%       1 - Rapid Test for Hydrophytic Vegetation         6. Ageratina altissima       5       FACU       3 - Prevalence Index is ≤3.0'       4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)       -       Problematic Hydrophytic Vegetation ' (Explain)         10.       100       = Total Cover       'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.       'Indicators of hydric soil and wetland hydrology must be present?       Yes X       No					FACU species x 4 =
Herb Stratum (Plot size: 5)       )         1. Phalaris arundinacea       40       X       FACW         2. Pilea pumilia       10       FACW         3. Microstegium vimineum       20       X       FAC         4. Lysimachia nummularia       10       FACW       Hydrophytic Vegetation Indicators:         5. Verbesina alternifolia       10       FACW       X       2 - Dominance Test is >50%         6. Ageratina altissima       5       FACU       3 - Prevalence Index is ≤3.0 <sup>1</sup> X       2 - Dominance Test is >50%         8.		20	= Total Cov	er	UPL species x 5 =
1. Phalaris arundinacea       40       X       FACW         2. Pilea pumilia       10       FACW       Prevalence Index = B/A =	Herb Stratum (Plot size: 5')				
3.       Microstegium vimineum       20       X       FAC         4.       Lysimachia nummularia       10       FACW         5.       Verbesina alternifolia       10       FACW         6.       Ageratina altissima       5       FACU         7.       Symphyotrichum racemosum       5       FACW         8.	<ol> <li>Phalaris arundinacea</li> </ol>	40	Х	FACW	
4.       Lysimachia nummularia       10       FACW         5.       Verbesina alternifolia       10       FACW         6.       Ageratina altissima       5       FACU         7.       Symphyotrichum racemosum       5       FACW         8.		10		FACW	Prevalence Index = B/A =
5.       Verbesina alternifolia       10       FACW       X 2 - Dominance Test is >50%         6.       Ageratina altissima       5       FACU       3 - Prevalence Index is ≤3.01         7.       Symphyotrichum racemosum       5       FACW       4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)         9.	3. Microstegium vimineum	20	X	FAC	Hydrophytic Vegetation Indicators:
5.       Verbesina alternifolia       10       FACW       X 2 - Dominance Test is >50%         6.       Ageratina altissima       5       FACU       3 - Prevalence Index is ≤3.01         7.       Symphyotrichum racemosum       5       FACW       4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)         9.	4 Lysimachia nummularia	10		FACW	1 - Rapid Test for Hydrophytic Vegetation
6. Ageratina altissima       5       FACU      3 - Prevalence Index is ≤3.0 <sup>1</sup> 7. Symphyotrichum racemosum       5       FACW      4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         8		10		FACW	X 2 - Dominance Test is >50%
8.		5		FACU	
8.	7. Symphyotrichum racemosum	5		FACW	
9 Problematic Hydrophytic Vegetation (Explain) 10 10 Woody Vine Stratum (Plot size:) 1 2 = Total Cover = Total Cover = Total Cover = Total Cover Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No	8				data in Remarks or on a separate sheet)
10.		·			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:)     100 = Total Cover     Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.       1					
Woody Vine Stratum     (Plot size:)      Hydrophytic       2	10	100			
1.	Woody Vine Stratum (Plot size:	100	= Total Cov	ver	be present, unless disturbed or problematic.
2 = Total Cover Vegetation Present? Yes X No					
= Total Cover Present? Yes X No					
	2				Present? Yes X No
remains. (monute photo numbers here of on a separate sneet.)	Pomarke: (Include photo numbers here or on a concrete -		= 10tal C0\	er	
	remarks. (include proto numbers here of on a separate s	sieet.)			

Depth	Matrix			lox Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>		ture	Remarks
0-3	10YR 4/2	97	7.5YR 5/6	3	C	M	SIL		
3-16	10YR 5/2	95	7.5YR 5/8	_ 5	<u>C</u>	M	SIL		
Type: C=C	Concentration, D=Dep	letion, RM=	Reduced Matrix, N	//S=Maske	ed Sand Gr	ains.	<sup>2</sup> L	ocation:	PL=Pore Lining, M=Matrix.
	Indicators:								or Problematic Hydric Soils <sup>3</sup> :
Histoso	l (A1)		Sandy	Gleved N	latrix (S4)			Coast F	Prairie Redox (A16)
	pipedon (A2)			Redox (S					Inface (S7)
Black H	listic (A3)		Strippe	ed Matrix	(S6)			Iron-Ma	nganese Masses (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky M	ineral (F1)		_	Very Sh	allow Dark Surface (TF12)
_ Stratifie	d Layers (A5)		Loamy	Gleyed N	Aatrix (F2)		_	Other (I	Explain in Remarks)
_	uck (A10)			ed Matrix	. ,				
	ed Below Dark Surfac	e (A11)		Dark Sur			3.		
	ark Surface (A12)				urface (F7	)			of hydrophytic vegetation and
	Mucky Mineral (S1)	2)	Redox	Depressi	ons (F8)				hydrology must be present,
	ucky Peat or Peat (S: Layer (if observed):							uniess	disturbed or problematic.
_	Luyer (il observeu).								
Туре:							Hydi	ric Soil I	Present? Yes X No
Туре:	nches):						Hydi	ric Soil I	Present? Yes <u>X</u> No
Type: Depth (in							Hydi	ric Soil I	Present? Yes <u>X</u> No
Type: Depth (in Remarks: YDROLC	nches):						Hydi	ric Soil I	Present? Yes <u>X</u> No
Type: Depth (in Remarks: YDROLC Wetland Hy	nches): DGY /drology Indicators:								
Type: Depth (in Remarks: YDROLC Wetland Hy	nches):								Present? Yes X No
Type: Depth (in Remarks: YDROLC Netland Hy Primary Indi	nches): DGY /drology Indicators:			apply)	ves (B9)			econda	y Indicators (minimum of two require
Type: Depth (in Remarks: YDROLC Vetland Hy Primary Indi Surface High Wa	DGY /drology Indicators: icators (minimum of c e Water (A1) later Table (A2)		Water-St Aquatic F	ained Lea Fauna (B1	3)			Gecondar Surfa Drair	<u>y Indicators (minimum of two require</u> ice Soil Cracks (B6) iage Patterns (B10)
Type: Depth (in Remarks: YDROLC Vetland Hy Primary Indi Surface High Wa	DGY /drology Indicators: icators (minimum of c water (A1)		Water-St Aquatic F	ained Lea	3)			Gecondar Surfa Drair	y Indicators (minimum of two require
Type: Depth (in Remarks: YDROLC YDROLC Vetland Hy Primary Indi Surface High Wa Saturati Saturati Water M	DGY vdrology Indicators: icators (minimum of c Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water-St Aquatic F True Aqu Hydroger	ained Lea Fauna (B1 uatic Plant n Sulfide (	3) s (B14) Ddor (C1)		<u>s</u>	econdai Surfa Drair Dry-{ Cray	y Indicators (minimum of two require ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Type: Depth (in Remarks: YDROLC Vetland Hy Primary Indi Surface High Wa Saturati Saturati Water M	DGY /drology Indicators: icators (minimum of c water (A1) ater Table (A2) ion (A3)		Water-St Aquatic F True Aqu Hydroger Oxidized	ained Lea Fauna (B1 uatic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on Liv		<u>s</u>	econdar Surfa Drair Cray Satu	<u>y Indicators (minimum of two require</u> ice Soil Cracks (B6) iage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Type: Depth (in Remarks: YDROLC Wetland Hy Primary Indi Surface High Wa Saturati Saturati Saturati Saturati Saturati	DGY vdrology Indicators: icators (minimum of c Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water-St Aquatic F True Aqu Hydroger Oxidized	ained Lea Fauna (B1 uatic Plant n Sulfide ( Rhizosph	3) s (B14) Ddor (C1)		<u>§</u>    	econdar Surfa Drair Cray Satur Sturi	<u>y Indicators (minimum of two require</u> ice Soil Cracks (B6) iage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Type: Depth (in Remarks: YDROLC Wetland Hy Primary Indi Surface High Wa Saturati Saturati Sedime Drift De	DGY rdrology Indicators: icators (minimum of co water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea Fauna (B1 Jatic Plant n Sulfide ( Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv	4)	<u><u> </u></u>	iecondar Surfa Drair Cray Cray Saturi Sturi Sturi	y Indicators (minimum of two require ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Type: Depth (in Remarks: YDROLC Vetland Hy Primary Indi Saturati Usaturati Water M Sedime Drift De Algal M	DGY vdrology Indicators: icators (minimum of co water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-St     Aquatic F     True Aqu     True Aqu     Hydroger     Oxidized     Presence     Recent Ir	ained Lea Fauna (B1 Jatic Plant n Sulfide ( Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille	4)	<u><u> </u></u>	iecondar Surfa Drair Cray Cray Saturi Sturi Sturi	<u>y Indicators (minimum of two require</u> ice Soil Cracks (B6) iage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Type: Depth (in Remarks: YDROLC Wetland Hy Primary Indi Surface High Wi Saturati Saturati Sedime Drift De Algal M Iron De	DGY /drology Indicators: icators (minimum of c Water (A1) iater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	one is requi	Water-St     Aquatic F     True Aqu     Hydrogen     Oxidized     Presence     Recent Ir     Thin Muc	ained Lea Fauna (B1 atic Plant n Sulfide ( Rhizosph e of Reduct ron Reduct	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7)	4)	<u><u> </u></u>	iecondar Surfa Drair Cray Cray Saturi Sturi Sturi	y Indicators (minimum of two require ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)

Sparsely vegetated Col	icave Sunace (Bo)	Other (Explain in Remarks)			
Field Observations:					
Surface Water Present?	Yes No _X_				
Water Table Present?	Yes No _X	_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No _X	_ Depth (inches):	Wetland Hydrology Present?	Yes X	No
Describe Recorded Data (st	ream gauge, monitoring v	well, aerial photos, previous inspec	tions), if available:		
Remarks:					

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/26/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-A34-UP
Investigator(s): JMM KMP	Section, Township, Range:	T1N R15E S24	
Landform (hillslope, terrace, etc.): Slope	Local relief (cond	ave, convex, none):	Convex
Slope (%): 3-5 Lat: 41.032434	Long: <u>-83.08041</u>		Datum: NAD 83
Soil Map Unit Name: Milton variant loam, 2 to 6 percent slopes	;	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _ Yes No _ Yes No _	Is the Sampled Area within a Wetland?	Yes	No X
Remarks:				
Upland sample plot				

	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> ) 1. Celtis occidentalis	<u>% Cover</u> 15	Species? X	FAC	Number of Dominant Species
				That Are OBL, FACW, or FAC: _2 (A)
2. Prunus serotina	_ 5	<u> </u>	FACU	Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)
	00	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15' )		- 10(a) 00		Prevalence Index worksheet:
1. Acer saccharum	5	Х	FACU	Total % Cover of:Multiply by:
2				OBL species x 1 =
				FACW species x 2 =
3				
4				FAC species x 3 =
5				FACU species x 4 =
5'	5	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5')	15	х	FAC	Column Totals: (A) (B)
1. Polygonum virginianum				
2. Ageratina altissima		_X	FACU	Prevalence Index = B/A =
3. Verbesina alternifolia	_ 5		FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
······································	30	= Total Cov	/er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No _X_
		= Total Cov	/er	Present? Yes No X
Remarks: (Include photo numbers here or on a separate	sheet.)			

	cription: (Describe to Matrix	o the depth		ment the in ox Features	dicator o	or confirm	n the absence of	findicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-12	10YR 5/2	100					SIL	- Contarko	
	Concentration, D=Deple	etion, RM=Re	educed Matrix, M	S=Masked S	Sand Gra	ins.		PL=Pore Lining, M=Matrix.	
Histoso Histic E Black H Hydrog	pipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5)		Sandy Strippe Loamy Loamy	Gleyed Matr Redox (S5) d Matrix (S6 Mucky Mine Gleyed Matr	) ral (F1) rix (F2)		Coast Pr Dark Sur Iron-Man Very Sha	or Problematic Hydric Soils <sup>3</sup> : airie Redox (A16) face (S7) ganese Masses (F12) allow Dark Surface (TF12) xplain in Remarks)	
<ul> <li>2 cm Muck (A10)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>5 cm Mucky Peat or Peat (S3)</li> </ul>			<ul> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> </ul>				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Туре:	Layer (if observed):		_				Hydric Soil P	resent? Yes <u>No X</u>	
Remarks:									
	<pre>/drology Indicators: icators (minimum of on</pre>	e is required	check all that a	nnlv)			Secondary	Indicators (minimum of two required	
Surface	e Water (A1) later Table (A2)	<u>e is requiled</u>	Water-Sta	ained Leaves auna (B13)	s (B9)		Surfac	e Soil Cracks (B6) age Patterns (B10)	

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; che	ck all that apply)	Secondary Indicators (minimum of two required)
Drift Deposits (B3)	<ul> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> <li>Geomorphic Position (D2)</li> <li>FAC-Neutral Test (D5)</li> </ul>	
Field Observations:		
Surface Water Present? Yes No	_ Depth (inches):	
Water Table Present? Yes No	_ Depth (inches):	
Saturation Present? Yes No (includes capillary fringe)	_ Depth (inches):	Netland Hydrology Present? Yes No _X
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspection	ns), if available:
Remarks:		

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/24/18
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B1-PEM
Investigator(s): <u>CV</u> , RA	Section, Township, Range:		
Landform (hillslope, terrace, etc.): <u>Terrace</u>		cave, convex, none):	Concave
Slope (%): 0 Lat: 41.030759	Long: -83.080429		Datum: NAD 83
Soil Map Unit Name: Chagrin silt loam, occasionally flooded (C	Ch)	NWI classific	ation: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norr	nal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	a sampling point loca	tions, transects	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No           Yes         X         No	ls the Sampled Area within a Wetland?	Yes X No
Remarks:			

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size: 15 )		= Total Co	over	Prevalence Index worksheet:
1. Salix nigra	5	Х	OBL	Total % Cover of: Multiply by:
2				OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5)		- Total Oc		Column Totals: (A) (B)
1. Phalaris arundinacea	95	Х	FACW	
2. Impatiens capensis	20		FACW	Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				│ X 1 - Rapid Test for Hydrophytic Vegetation
5				$\times$ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	115	= Total Co	over	be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
۷.		= Total Co		Present? Yes X No
	1 A			

(inches) Color (moist) %	<u></u>	Texture Remarks		
	7.5YR 5/4 5 C M/PL			
<u>0-16</u> <u>5Y 3/1</u> <u>95</u>	<u>7.51K 5/4</u> <u>5</u> <u>C</u> <u>IM/PL</u>			
· · · · · · · · · · · · · · · · · · ·	Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :		
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)		
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)		
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)		
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)		
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)		
2 cm Muck (A10)	Depleted Matrix (F3)			
Depleted Below Dark Surface (A11)	X Redox Dark Surface (F6)	<sup>3</sup> Indicators of budges budges up to the second		
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and		
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Layer (if observed):				
Restrictive Layer (il observed).				
Tuner				
Туре:		Hydric Soil Present? Yes X No		
Depth (inches):		Hydric Soil Present? Yes X No		
		Hydric Soil Present? Yes X No		
Depth (inches):		Hydric Soil Present? Yes X No		
Depth (inches):		Hydric Soil Present? Yes X No		
Depth (inches):		Hydric Soil Present? Yes X No		
Depth (inches):		Hydric Soil Present? Yes X No		
Depth (inches): Remarks: YDROLOGY		Hydric Soil Present? Yes X No		
Depth (inches): Remarks: YDROLOGY		Hydric Soil Present? Yes X No		
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:	red; check all that apply)			
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:	red: check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6)		
Depth (inches):		Secondary Indicators (minimum of two required		
Depth (inches):	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6)		
Depth (inches):	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6) X Drainage Patterns (B10)		
Depth (inches): Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) X Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)		
Depth (inches):	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) X Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)		
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>X Oxidized Rhizospheres on Living Roman</li> </ul>	<ul> <li><u>Secondary Indicators (minimum of two required</u></li> <li>Surface Soil Cracks (B6)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> </ul>		
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>X Oxidized Rhizospheres on Living Rom</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Secondary Indicators (minimum of two required		

	chai magery (Dr)			
Sparsely Vegetated Col	ncave Surface (B8)	Other (Explain in Remarks)		
Field Observations:				
Surface Water Present?	Yes No _	X Depth (inches):		
Water Table Present?	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):	Wetland Hydrology Present?	Yes X No
Describe Recorded Data (st	ream gauge, monito	ring well, aerial photos, previous inspec	tions), if available:	
Remarks:				

Project/Site: Seneca Wind	_ City/County: Seneca Sampling Date: 09/24/18				
Applicant/Owner: Seneca Wind, LLC	State: <u>OH</u> Sampling Point: <u>W-B1-UP</u>				
Investigator(s): <u>CV, RA</u>	_ Section, Township, Range: T1N R15E S24				
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): Linear				
Slope (%): 0 Lat: <u>41.030671</u>	_ Long: <u>-83.080942</u> Datum: <u>NAD 83</u>				
Soil Map Unit Name: Chagrin silt loam, occasionally flooded (					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No	-				
Hydric Soil Present? Yes No X	Is the Sampled Area				
Wetland Hydrology Present? Yes No _X					
Remarks:					

30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	<u>% Cover</u> 5	Species? X	FACU	Number of Dominant Species
1. Juglans nigra	_ <u> </u>		FACU	That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
	-	= Total Cov	ver	
Sapling/Shrub Stratum (Plot size: 15 )				Prevalence Index worksheet:
1	<u> </u>			Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Cov		UPL species x 5 =
Herb Stratum (Plot size: <u>5</u> )		10101 00		Column Totals: (A) (B)
1. Glycine max	40	Χ	UPL	
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	10			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	40	= Total Cov	ver	be present, unless disturbed or problematic.
1				Hydrophytic Vegetation
2				Present? Yes No X
Demontra (la de de state combras have a comparte		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sneet.)			

Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (moist)	<u>x Features</u> %		Loc <sup>2</sup>	Texture Rema	arks	
)-8	10YR 4/4	100					SICL		
3-16	10YR 5/4	100					CL		
				_					
	Concentration, D=Dep	oletion, RM=R	educed Matrix, MS	S=Masked	 Sand Gra	iins.	<sup>2</sup> Location: PL=Pore Lining, M		
•	il Indicators:						Indicators for Problematic Hy		
_	sol (A1)			Bleyed Mat			Coast Prairie Redox (A16)		
_	Epipedon (A2) Histic (A3)			Redox (S5) I Matrix (S			Dark Surface (S7) Iron-Manganese Masses (	F12)	
_	gen Sulfide (A4)			Mucky Min	,		Very Shallow Dark Surface	,	
	ied Layers (A5)		_ ,	Gleyed Ma	• •		Other (Explain in Remarks		
	Muck (A10)			d Matrix (F				,	
_	ted Below Dark Surfac	e (A11)		Dark Surfac					
_ Thick	Dark Surface (A12)		Depleted Dark Surface (F7)				<sup>3</sup> Indicators of hydrophytic vegetation and		
_ Sandy	/ Mucky Mineral (S1)		Redox Depressions (F8)				wetland hydrology must be present,		
_ 5 cm I	Mucky Peat or Peat (S	3)					unless disturbed or probler	matic.	
estrictiv	e Layer (if observed)	:							
Type: _			_				Hudria Sail Dresant? Vas	NoX	
Depth (	(inches):		_				Hydric Soil Present? Yes	NO	
emarks:									
<b>YDROL</b>									
	lydrology Indicators:		a na statute					i to secondaria	
	dicators (minimum of c	one is required					Secondary Indicators (minim		
_	ce Water (A1)		Water-Stai				Surface Soil Cracks (B6		
High Water Table (A2)				Aquatic Fauna (B13)			Drainage Patterns (B10)		
_	ation (A3)		True Aqua				Dry-Season Water Table	e (C2)	
-	Marks (B1)		Hydrogen				Crayfish Burrows (C8)		
Sedim	nent Deposits (B2)		Oxidized F			•	· · <u> </u>	• • •	
_	Deposits (B3)		Presence	of Reduced	d Iron (C4	)	Stunted or Stressed Pla	nts (D1)	
_ Drift D	,					,	_	. ,	
_ Drift D _ Algal I	Mat or Crust (B4)		Recent Iro		n in Tilleo	,	<ul> <li>Geomorphic Position (D</li> </ul>	. ,	
Drift D Algal I Iron D	,			Surface (0	on in Tilleo C7)	,	_	. ,	

Inundation Visible on A	erial imagery (B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Co	ncave Surface (B8)	Other (Explain in Remarks)			
Field Observations:					
Surface Water Present?	Yes No _>	Markov Content Cont	_		
Water Table Present?	Yes No _>	Markov Depth (inches):	_		
Saturation Present? (includes capillary fringe)	Yes No _>	C Depth (inches):	_ Wetland Hydrology Present? Ye	esNoX	
Describe Recorded Data (s	ream gauge, monitorir	ng well, aerial photos, previous insp	ections), if available:		
Remarks:					

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/24/18
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B1-PFOa
Investigator(s): CV, RA	Section, Township, Range:	T1N R15E S24	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (cond	ave, convex, none):	Linear
Slope (%): 0 Lat: 41.030787	Long: <u>-83.080914</u>		Datum: NAD 83
Soil Map Unit Name: Chagrin silt loam, occasionally flooded (C	ንh)	NWI classific	ation: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	ls the Sampled Area within a Wetland?	Yes X No
Remarks: PFOa			

30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. Acer rubrum	15	<u>X</u>	FAC	That Are OBL, FACW, or FAC: _7 (A)
2. Ulmus americana	10	<u>X</u>	FACW	Total Number of Dominant
<sub>3.</sub> Juglans nigra	10	Х	FACU	Species Across All Strata: 9 (B)
4. Populus deltoides	5		FAC	
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 77 (A/B)
	40	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15 )				Prevalence Index worksheet:
1. Acer negundo	10	Х	FAC	Total % Cover of: Multiply by:
2. Fraxinus pennsylvanica	10	Х	FACW	OBL species x 1 =
3. Rosa multiflora	5	X	FACU	FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	15	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5)		- 10141 001		Column Totals:         (A)         (B)
1. Elymus riparius	15	Х	FACW	
2. Pilea pumila	10	X	FACW	Prevalence Index = B/A =
3. Polygonum pensylvanicum	10	X	FACW	Hydrophytic Vegetation Indicators:
4 Saururus cernuus	5		OBL	1 - Rapid Test for Hydrophytic Vegetation
5. Symphyotrichum pilosum	5		FACU	X 2 - Dominance Test is >50%
				$3$ - Prevalence Index is $\leq 3.0^{1}$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	45	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>ox Feature</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 4/2		7.5YR 5/4	2	С	M	SaCL	
	oncentration, D=Dep	bletion, RM=F	Reduced Matrix, M	S=Maske	d Sand Gr	ains.		on: PL=Pore Lining, M=Matrix.
	Indicators:							rs for Problematic Hydric Soils <sup>3</sup> :
_ Histosol				Gleyed Ma Redox (St				st Prairie Redox (A16)
	pipedon (A2) istic (A3)			d Matrix (S	,			Surface (S7) Manganese Masses (F12)
	en Sulfide (A4)			Mucky Mi	,			Shallow Dark Surface (TF12)
	d Layers (A5)		Loamy	Gleyed M	atrix (F2)			r (Explain in Remarks)
_	uck (A10)		$\underline{\times}$ Deplete	ed Matrix (	F3)			
	d Below Dark Surfac	e (A11)		Dark Surfa			3	
	ark Surface (A12)			ed Dark Su		)		rs of hydrophytic vegetation and
	/lucky Mineral (S1) ucky Peat or Peat (S	3)	Redox	Depressio	ns (F8)			nd hydrology must be present, ss disturbed or problematic.
								si distarbed of problematic.
Restrictive I	Laver (if observed):							
	Layer (if observed):							
Type: Depth (in	Layer (if observed):		_				Hydric So	il Present? Yes <u>X</u> No
Type: Depth (in							Hydric So	nil Present? Yes X No
Type: Depth (in							Hydric So	nil Present? Yes <u>X</u> No
Type: Depth (ind Remarks: YDROLO	ches):						Hydric So	oil Present? Yes <u>X</u> No
Type: Depth (inc Remarks: YDROLO Vetland Hyd	ches): IGY drology Indicators:							
Type: Depth (inc Remarks: YDROLO Vetland Hyd	ches):							oil Present? Yes X No
Type: Depth (ind Remarks: YDROLO Yetland Hyd Primary India Surface	ches): IGY drology Indicators: cators (minimum of c Water (A1)		Water-Sta	ained Leav			<u>Secon</u>	dary Indicators (minimum of two require
Type: Depth (ind temarks: YDROLO Vetland Hyd trimary India Surface High Wa	ches): GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Leav auna (B13	5)		<u>Secon</u>	dary Indicators (minimum of two require urface Soil Cracks (B6) ainage Patterns (B10)
Type: Depth (ind Remarks: YDROLO Vetland Hyd Primary Indid Surface High Wa Saturatio	ches): GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqua	ained Leav auna (B13 atic Plants	i) (B14)		Secon <u>Secon</u> <u>S</u> Dr Dr	dary Indicators (minimum of two require Irface Soil Cracks (B6) rainage Patterns (B10) y-Season Water Table (C2)
Type: Depth (ind temarks: YDROLO Vetland Hyd trimary Indid Surface High Wa Saturatid Water M	ches): GGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) farks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	6) (B14) dor (C1)		<u>Secon</u> Su Dr Dr Cr	dary Indicators (minimum of two require Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8)
Type: Depth (inc Remarks: YDROLO Yetland Hyo Primary India Surface High Wa Saturatio Saturatio Sedimen	ches): GGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	) (B14) dor (C1) eres on Liv		<u>Secon</u> <u>X</u> Dr <u>C</u> (C3) Sa	dary Indicators (minimum of two require Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Type: Depth (in: Remarks: YDROLO Vetland Hy Primary India Surface High Wa Saturatia Saturatia Sedimer X Drift Dep	ches): GGY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Lived Iron (C	4)	<u>Secon</u> <u>X</u> Dr <u>Cr</u> (C3) <u>St</u>	dary Indicators (minimum of two require urface Soil Cracks (B6) rainage Patterns (B10) y-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Type: Depth (inc Remarks: YDROLO Yetland Hyp Primary India Surface High Wa Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia	ches): GGY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	i) (B14) dor (C1) eres on Liv ed Iron (C4 ion in Tille	4)	<u>Secon</u> <u>X</u> Dr Dr (C3) St 6) <u>X</u> Ge	dary Indicators (minimum of two require urface Soil Cracks (B6) rainage Patterns (B10) y-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) eomorphic Position (D2)
Type: Depth (in Remarks: YDROLO YDROLO Netland Hyp Primary India Surface High Wa Saturatio Water M Sedimer Sedimer Algal Ma Iron Dep	ches): GGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is require	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface	(B14) dor (C1) eres on Liv ed Iron (C- ion in Tille (C7)	4)	<u>Secon</u> <u>X</u> Dr Dr (C3) St 6) <u>X</u> Ge	dary Indicators (minimum of two require urface Soil Cracks (B6) rainage Patterns (B10) y-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Type: Depth (inc Remarks: YDROLO Vetland Hyd Primary India Surface High Wa Saturatic	ches): GGY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	one is require	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Liv ed Iron (C- ion in Tille (C7) (D9)	4)	<u>Secon</u> <u>X</u> Dr Dr (C3) St 6) <u>X</u> Ge	dary Indicators (minimum of two require urface Soil Cracks (B6) rainage Patterns (B10) y-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) eomorphic Position (D2)

Field Observations:					
Surface Water Present?	Yes No _				
Water Table Present?	Yes No _				
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):	Wetland Hydrology Present?	Yes X	No
	ream gauge, monito	ring well, aerial photos, p	previous inspections), if available:		
Remarks:					

Project/Site: Seneca Wind	City/County: Seneca		Sampling Date: 09/24/18
Applicant/Owner: Seneca Wind, LLC		State: OH	Sampling Point: W-B1-PFOb
Investigator(s): CV, RA	Section, Township, Range:	T1N R15E S24	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (cond	ave, convex, none):	Linear
Slope (%): 0 Lat: 41.031301	Long: <u>-83.080186</u>		Datum: NAD 83
Soil Map Unit Name: Chagrin silt loam, occasionally flooded (C	ንh)	NWI classific	ation: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	ls the Sampled Area within a Wetland?	Yes X No
Remarks: PFOa			

30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. Acer rubrum	15	<u>X</u>	FAC	That Are OBL, FACW, or FAC: _7 (A)
2. Ulmus americana	10	<u> </u>	FACW	Total Number of Dominant
<sub>3.</sub> Juglans nigra	10	Х	FACU	Species Across All Strata: 9 (B)
4. Populus deltoides	5		FAC	
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 77 (A/B)
	40	= Total Cov	/er	
Sapling/Shrub Stratum (Plot size: 15 )				Prevalence Index worksheet:
1. Acer negundo	10	Х	FAC	Total % Cover of: Multiply by:
2. Fraxinus pennsylvanica	10	Х	FACW	OBL species x 1 =
3. Rosa multiflora	5	X	FACU	FACW species x 2 =
4				FAC species x 3 =
5.				FACU species x 4 =
	15	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5)		- 10141 001		Column Totals:         (A)         (B)
1. Elymus riparius	15	Х	FACW	
2. Pilea pumila	10	X	FACW	Prevalence Index = B/A =
3. Polygonum pensylvanicum	10	X	FACW	Hydrophytic Vegetation Indicators:
4 Saururus cernuus	5		OBL	1 - Rapid Test for Hydrophytic Vegetation
5. Symphyotrichum pilosum	5		FACU	X 2 - Dominance Test is >50%
				$3$ - Prevalence Index is $\leq 3.0^{1}$
6				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	45	= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes X No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

	Matrix Color (moist)	%		ox Feature %	4	Loc <sup>2</sup>	Toxturo	Remarks
(inches)			Color (moist)		Type'		Texture	Remains
0-16	10YR 4/2	98	7.5YR 5/4		<u>C</u>	M	SaCL	
			<u>19-2-</u>					
			<u></u>				2	
	ncentration, D=Dep	letion, RM	Reduced Matrix, N	IS=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
ydric Soil I								or Problematic Hydric Soils <sup>3</sup> :
_ Histosol				Gleyed Ma				Prairie Redox (A16)
_	ipedon (A2)			Redox (S5				Irface (S7)
_ Black His	. ,			d Matrix (S	,			nganese Masses (F12)
	n Sulfide (A4)			Mucky Mi				allow Dark Surface (TF12)
	Layers (A5)		×7	Gleyed M			Other (I	Explain in Remarks)
_ 2 cm Mu	. ,			ed Matrix (	,			
	Below Dark Surfac	e (A11)		Dark Surfa			3	
	rk Surface (A12)			ed Dark Su		)		of hydrophytic vegetation and
	ucky Mineral (S1)		Redox	Depressio	ns (F8)			hydrology must be present,
	cky Peat or Peat (S						unless	disturbed or problematic.
octrictivo I	ayer (if observed):							
Configure L	, , , , , , , , , , , , , , , , , , , ,							$\checkmark$
Type:	,						LL data October	
							Hydric Soil I	Present? Yes X No
Type: Depth (inc							Hydric Soil I	Present? Yes <u> </u>
Type: Depth (inc							Hydric Soil I	Present? Yes <u> </u>
Type: Depth (inc							Hydric Soil I	Present? Yes <u> </u>
Type: Depth (inc							Hydric Soil I	Present? Yes <u> </u>
Type: Depth (inc							Hydric Soil I	Present? Yes <u> </u>
Type: Depth (inc temarks:	:hes):						Hydric Soil I	Present? Yes <u>    No    </u> No <u> </u>
Type: Depth (inc Remarks: YDROLO	GY						Hydric Soil I	Present? Yes <u>    No    </u> No <u> </u>
Type: Depth (inc temarks: YDROLOO	GY GY Indicators:		red: check all that a					
Type: Depth (inc emarks: /DROLOO	GY Irology Indicators: ators (minimum of o						<u>Secondar</u>	y Indicators (minimum of two require
Type: Depth (inc temarks: YDROLOO Vetland Hyc trimary Indic Surface 1	GY GY Irology Indicators: ators (minimum of o Water (A1)		Water-Sta	ained Leav			<u>Secondar</u> Surfa	y Indicators (minimum of two require
Type: Depth (inc emarks: //DROLOG /etland Hyc rimary Indic Surface ' High Wa	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2)		Water-Sta Aquatic F	ained Leav auna (B13	)		<u>Secondar</u> Surfa X Drair	<u>y Indicators (minimum of two requir</u> ice Soil Cracks (B6) iage Patterns (B10)
Type: Depth (inc Remarks: YDROLOO Yetland Hyc Primary Indic Surface Y High Wa Saturatic	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3)		Water-Sta Aquatic F True Aqu	ained Leav auna (B13 atic Plants	) (B14)		<u>Secondar</u> <u>Surfa</u> <u>X</u> Drair _ Dry-5	y Indicators (minimum of two requir ice Soil Cracks (B6) iage Patterns (B10) Season Water Table (C2)
Type: Depth (inc Remarks: YDROLOO Yetland Hyo Yrimary Indic Surface High Wa Saturatic Water M	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants n Sulfide O	) (B14) dor (C1)		Secondar Surfa X Drair Dry-S Cray	y Indicators (minimum of two requir ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Type: Depth (inc temarks: YDROLOO Vetland Hyc Trimary Indic Surface V High Wa Saturatic Water M. Sedimen	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger Oxidized	ained Leav auna (B13 atic Plants n Sulfide O Rhizosphe	) (B14) dor (C1) eres on Liv	•	<u>Secondar</u> <u>Surfa</u> X Drair Dry-S Crayi (C3) Satu	y Indicators (minimum of two requir ice Soil Cracks (B6) iage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Type: Depth (inc Remarks: YDROLOO Yetland Hyc Yrimary Indic Surface V High Wa Saturatic Water M. Sedimen	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1)		Water-Sta Aquatic F True Aqu Hydroger Oxidized	ained Leav auna (B13 atic Plants n Sulfide O	) (B14) dor (C1) eres on Liv	•	Secondar Surfa X Drair Dry-S Crayi (C3) Satur Sturf	y Indicators (minimum of two require ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) red or Stressed Plants (D1)
Type: Depth (inc Remarks: YDROLOO Vetland Hyc Primary Indic Surface V High Wa Saturatic Water M Sedimen X Drift Dep	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Leav auna (B13 atic Plants n Sulfide O Rhizosphe	) (B14) dor (C1) eres on Lived Iron (C	4)	Secondar Surfa X Drair Dry-S Crayi (C3) Satur Sturf	y Indicators (minimum of two requir ice Soil Cracks (B6) iage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Type: Depth (inc Remarks: YDROLOO Yetland Hyc Primary Indic Surface V High Wa Saturatic Water M Sedimen Sedimen Drift Dep Algal Ma	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	) (B14) dor (C1) eres on Liv ed Iron (C ion in Tille	4)	<u>Secondar</u> <u>Surfa</u> <u>X</u> Drair Dry-5 <u>Crayt</u> (C3) <u>Sturf</u> 6) <u>X</u> Geor	y Indicators (minimum of two require ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) red or Stressed Plants (D1)

	enarinagery (Br) Gauge of weir Da		
Sparsely Vegetated Cor	ncave Surface (B8) Other (Explain in	Remarks)	
Field Observations:			
Surface Water Present?	Yes No $\stackrel{\textstyle \times}{}$ Depth (inches): _		
Water Table Present?	Yes No $\stackrel{\textstyle  imes}{}$ Depth (inches): _		
Saturation Present? (includes capillary fringe)	Yes No X Depth (inches): _	Wetland Hydrology Present? Yes X No	-
Describe Recorded Data (st	tream gauge, monitoring well, aerial photos,	previous inspections), if available:	
Remarks:			

Project/Site: Sene	eca Wind P	roject	City/County: Senec	a	Sampling Date: 9/26/2018
Applicant/Owner:	Seneca Wi	nd		State: OH	Sampling Point: W-A28
Investigator(s): JN	IM KMP		Section, Township, I	Range: T002N R016E	S014
Landform (hillslope	, terrace, etc	.): Terrace	Local reli	ef (concave, convex, nor	ne): Concave
Slope (%): 0			Long: -83.112750		Datum: NAD 83
Soil Map Unit Nam	e: Pandora	a silt loam		NWI class	sification: N/A
Are climatic / hydro	logic conditi	ons on the sile typical	for this lime of year? Yes 🗶 No	(If no, explain i	n Remarks.)
Are Vegetation	Soil	, or Hydrology	significantly disturbed? Ar	e 'Normal Circumstance	s" present? Yes X No
Are Vegetation	, Soil	, or Hydrology	naturally problematic? (If	needed, explain any ans	swers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes_X	. No
Remarks: Cowardin: PEM				

and with the state of the second	Absolute		Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1			_	That Are OBL, FACW, or FAC: _3	(A)
2			_	Total Number of Dominant	
3				Species Across All Strata: 3	(B)
4				Remark of Deminant Consist	
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100%	(A/B)
	1	= Total Co	ver	Contraction of the state of the	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of:Multiply by:	_
2				OBL species x 1 =	
3.				FACW species x 2 =	
4		-		FAC species x 3 =	_
5.				FACU species x 4 =	100
<u></u>		= Total Co	ver	UPL species x 5 =	
Herb Stratum (Plot size: 5')	· · · · ·			Column Totals: (A)	
1. Typha latifolia	50	<u>X</u>	OBL		/
2. Phalaris arundincea	20	Х	FACW	Prevalence Index = B/A =	
3. Leerzia oryzoides	20	Х	OBL	Hydrophytic Vegetation Indicators:	
4. Scirpus atrovirens	10		OBL	X 1 - Rapid Test for Hydrophytic Vegetation	
5		-		2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
7				4 - Morphological Adaptations <sup>1</sup> (Provide sup	oporting
8				data in Remarks or on a separate sheet	)
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Expla	ain)
		-			
10		= Total Co		<sup>1</sup> Indicators of hydric soil and wetland hydrology	must
Woody Vine Stratum (Plot size:)	100	= Total Co	ver	be present, unless disturbed or problematic.	
1				Hydrophytic	
2.		-		Vegetation	
		= Total Co	ver	Present? Yes X No	

Depth (inches)	Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2		7.5YR 4/4	10	C	M/PL	SIL	
8-16	10YR 4/1		7.5YR 4/4	20	C	M/PL	SL	
Type: C=Co Hydric Soil I	oncentration, D=Dep	letion, RM=R	educed Matrix, M	15=Maske	d Sand G	ains.		tion: PL=Pore Lining, M=Matrix.
	and a second		Banda	Channed M	ald Index			
Histosal Histic Er	oipedon (A2)			Redox (S	airix (S4) 5)			asl Prairie Redox (A16) k Surface (S7)
Black Hi				ed Matrix (				-Manganese Masses (F12)
	en Sulfide (A4)		Loamy	Mucky M	ineral (F1)		Ver	y Shallow Dark Surface (TF12)
	d Layers (A5)				latrix (F2)		Oth	ier (Explain in Remarks)
Depleted Thick Da Sandy M	uck (A10) d Below Dark Surface ark Surface (A12) Jucky Mineral (S1) ucky Peat or Peat (S3		Redox Deplet	ed Matrix Dark Sur ed Dark S Depressi	lace (F6) urface (F7	)	wet	tors of hydrophytic vegetation and land hydrology must be present, ess disturbed or problematic.
	Layer (if observed):						-	
	Layer (if observed):							
Restrictive L			-				Hydric S	ioil Present? Yes X No
Restrictive L Type: Depth (ind Remarks:	ches):		-				Hydric S	ioil Present? Yes <u>X</u> No
Restrictive I Type: Depth (ind Remarks:	ches):		-				Hydric S	ioil Present? Yes <u>X</u> No
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd	ches):		d check all that a	ιρρίγ)				ioil Present? Yes X No
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic	ches): GY drology Indicators:			ipply) ained Lea	ves (89)		Seco	
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic Surface	ches): GY drology Indicators: cators (minimum of o		Water-Sta		1		Seco	ndary Indicators (minimum of two required
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic Surface	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Lea	3)		<u>Seco</u> S	ndary Indicators (minimum of two required Surface Soil Cracks (B6)
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatio	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1 atic Plant	3) s (B14)		Seco S C C	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatic Water M	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14) Odor (C1)	ving Roots (	Seco S C C C	ndary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary India X Surface X High Wa Saturatio Water M Sedimer	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1)		Water-Sta Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1)		Seco S C C (C3)S S	ndary 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)
Restrictive I Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence Recent In	ained Lea auna (B1 atic Plant n Sulfide C Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1) eres an Liv eed Iron (C tion in Tille		Seco S C C (C3)S S	ndary 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) Seomorphic Position (D2)
Restrictive I Type: Depth (ind Remarks: TYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	ne is require	Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plant n Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres an Liv ed Iron (C tion in Tille (C7)	4)	Seco S C C (C3)S S	ndary 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)
Restrictive I Type: Depth (ind Remarks: TYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic	Ches): GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	ne is require magery (B7)	Water-Sta Aquatic F True Aqu Hydroger X Oxidized Presence Recent In Thin Muc Gauge or	ained Lea auna (B1 atic Plant n Sulfide C Rhizosph of Reduc on Reduc	3) s (B14) Ddor (C1) eres an Liv red Iron (C tion in Tille (C7) a (D9)	4)	Seco S C C (C3)S S	ndary 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) Seomorphic Position (D2)

Surface Water Present? Water Table Present?	Yes X Yes X		Depth (inches): 2			
Water Table Present?	Yes X	No	the second			
	10 Or 5 Or	140	Depth (inches): 0	and the second s		
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 0	Wetland Hydrology Present?	Yes X	No_
Remarks:						

Project/Site: Sene	eca Wind F	Project	City/County: Seneca		Sampling Date: 9/25/2018
Applicant/Owner:	Seneca Wi	nd		State: OH	Sampling Point: W-A28-UP
Investigator(s): _JN	IM KMP		Section, Township, Ra	nge: T002N R016E	S014
Landform (hillslope	, terrace, etc	:): Flat field	Local relief	(concave, convex, nor	ne): Convex
Slope (%): 0	Lat: _	41.048842	Long: -83.106344		Datum: NAD 83
Soil Map Unit Nam	e: Blount s	ilt loam, end morai	ne, 0 to 2 percent slopes	NWI class	sification: <u>N/A</u>
Are climatic / hydro	logic conditi	ons on the site typical	for this time of year? Yes $X$ No _	(If no, explain in	n Remarks.)
Are Vegetation	, Soil	, or Hydrology	significantly disturbed? Are	Normal Circumstance	s" present? Yes X No
Are Vegetation	, Soil	, or Hydrology	naturally problematic? (If ne	eded, explain any ans	swers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No _X	
Remarks: Upland sample plot						

	Absolute		Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: _0(	(A)
2				Total Number of Dominant	
3					(B)
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 0% (	(A/B)
Sapling/Shrub Stratum (Plot size:)		= Total Co	ver	Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2				OBL species x 1 =	
3				FACW species x 2 =	
4		-		FAC species x 3 =	
5.				FACU species x 4 =	
		= Total Co	Ver	UPL species x 5 =	
Herb Stratum (Plot size: 5' )	-	10101 00	VOI	Column Totals: (A)	
1. Glycine max	85	Х	UPL		1-7
2. Equisetum pratense	10		FACW	Prevalence Index = B/A =	
3. Ambrosia trifida	5	)	FAC	Hydrophytic Vegetation Indicators:	
4				1 - Rapid Test for Hydrophytic Vegetation	
5				2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
7				4 - Morphological Adaptations <sup>1</sup> (Provide suppo	orting
8				data in Remarks or on a separate sheet)	
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	)
10					
	100	= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.	ust
Woody Vine Stratum (Plot size:)				be present, unless disturbed or problematic.	_
1				Hydrophytic	
2			-	Vegetation	
		= Total Co	ver	Present? Yes No _X	
Remarks: (Include photo numbers here or on a separate	sheet.)				_

Depth (inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 4/4	100			SIL	Keinarka
			+			1
					4	5
-	2					-
	-		· · · · · · · · · · · · · · · · · · ·		-	1-
			· · · · · · · · · · · · · · · · · · ·		3	Carton and a state of the
		epletion, RM	=Reduced Matrix, MS=Masked Sand Gr	rains.		: PL=Pore Lining, M=Matrix.
	Indicators:		Condu Claused Mathew (CA)			for Problematic Hydric Soils <sup>3</sup> :
_ Histosol	(A1) Dipedon (A2)		Sandy Gleyed Matrix (S4) Sandy Redox (S5)			Prairie Redox (A16) Surface (S7)
	stic (A3)		Stripped Matrix (S6)			anganese Masses (F12)
	n Sulfide (A4)		Loamy Mucky Mineral (F1)			shallow Dark Surface (TF12)
	Layers (A5)		Loamy Gleyed Matrix (F2)			(Explain in Remarks)
	ick (A10)		Depleted Matrix (F3)			
Deplete	d Below Dark Surf	ace (A11)	Redox Dark Surface (F6)			
	ark Surface (A12)		Depleted Dark Surface (F7	)		s of hydrophytic vegetation and
	lucky Mineral (S1		Redox Depressions (F8)			d hydrology must be present,
	icky Peat or Peat	the second se			unless	disturbed or problematic.
estrictive l	Layer (if observe	d):				
Type:					Hydric Soil	Present? Yes No _X
Depth (in	ches):				nyune son	
<b>YDROLO</b>	GY					
YDROLO	GY drology Indicator	s:	icad: check all that apply)		Second	any Indicators (minimum of two require
YDROLO Vetland Hy	GY drology Indicator cators (minimum c	s:	ired: check all that apply)			ary Indicators (minimum of two require
YDROLO Vetland Hyr Yrimary India Surface	<b>GY</b> drology Indicator cators (minimum c Water (A1)	s:	Water-Stained Leaves (B9)		Sur	face Soil Cracks (B6)
YDROLO Vetland Hy Primary India Surface High Wa	<b>GY</b> drology Indicator cators (minimum o Water (A1) ater Table (A2)	s:	Water-Stained Leaves (B9) Aquatic Fauna (B13)		Sur Dra	face Soil Cracks (B6) inage Patterns (B10)
YDROLO Vetland Hyd Primary India Surface High Wa Saturatia	<b>GY</b> drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)	s:	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> </ul>		Suri Dra Dry	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)
YDROLO Vetland Hyd Primary India Surface High Wa Saturatia Water M	<b>GY</b> drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1)	s:	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	line Poots (C	Suri Dra Dry Cra	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)
YDROLO Vetland Hyd Primary India Surface High Wa Saturatio Saturatio Saturatio Saturatio Saturatio	<b>GY</b> drology Indicator cators (minimum c Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	s:	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> </ul>		Suri Dra Dry Cra 3) Sati	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)
YDROLO Vetland Hyd Primary India Surface High Wa Saturatio Saturatio Saturatio Saturatio Drift Deg	<b>GY</b> drology Indicator cators (minimum c Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	s:	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> <li>Presence of Reduced Iron (C</li> </ul>	4)	Suri Dra Dry Cra :3) Satu Stu	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
YDROLO Vetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	s:	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> <li>Presence of Reduced Iron (C Recent Iron Reduction in Tille</li> </ul>	4)	Suri Dra Dry Cra 3) Sati Sturi Geo	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland Hy Primary India Surface High Wa Saturatia Vater M Sedimer Drift Dep Algal Ma Iron Dep	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	s: fone is requ	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> <li>Presence of Reduced Iron (C-</li> <li>Recent Iron Reduction in Tille</li> <li>Thin Muck Surface (C7)</li> </ul>	4)	Suri Dra Dry Cra 3) Sati Sturi Geo	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)
YDROLO Vetland Hyr Primary India Surface High Wa Saturatio Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria	s: fone is requ al Imagery (B	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> <li>Presence of Reduced Iron (C</li> <li>Recent Iron Reduction in Tille</li> <li>Thin Muck Surface (C7)</li> <li>Gauge or Well Data (D9)</li> </ul>	4)	Suri Dra Dry Cra 3) Sati Sturi Geo	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland Hyd Surface High Wa Saturatid Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conce	s: fone is requ al Imagery (B	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> <li>Presence of Reduced Iron (C</li> <li>Recent Iron Reduction in Tille</li> <li>Thin Muck Surface (C7)</li> <li>Gauge or Well Data (D9)</li> </ul>	4)	Suri Dra Dry Cra 3) Sati Sturi Geo	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland Hyn Primary India Surface High Wa Saturatio Saturatio Saturatio Inft Dep Algal Ma Iron Dep Inundati Sparsely Vield Obser	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conc: vations:	r <b>s:</b> <u>f one is requ</u> al Imagery (B ave Surface (	<ul> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Liv</li> <li>Presence of Reduced Iron (C</li> <li>Recent Iron Reduction in Tille</li> <li>Thin Muck Surface (C7)</li> <li>Gauge or Well Data (D9)</li> <li>(B8) Other (Explain in Remarks)</li> </ul>	4)	Suri Dra Dry Cra 3) Sati Sturi Geo	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland Hy Primary India Surface High Wa Saturatia Vater M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) oosits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present?	s: fone is requ al Imagery (B ave Surface ( Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Lix     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9)     (B8) Other (Explain in Remarks)  No X Depth (inches):	4)	Suri Dra Dry Cra 3) Sati Sturi Geo	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland Hyu Primary India Surface High Wa Saturatia Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present?	s: fone is requ al Imagery (B ave Surface ( Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Liv     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches): No X Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra 3) Satu Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
YDROLO Vetland Hyu Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat Vater Table Saturation P	GY drology Indicator cators (minimum of Water (A1) ther Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present? Present? resent?	s; fone is requ al Imagery (B ave Surface ( Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Lix     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9)     (B8) Other (Explain in Remarks)  No X Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra 3) Satu Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)
YDROLO Vetland Hy Primary India Surface High Wa Saturatio Saturatio Drift Deg Drift Deg Algal Ma Iron Deg Inundati Sparsely Field Obser Surface Wat Vater Table Saturation P includes ca	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present? Present? present? pillary fringe)	s: fone is requ al Imagery (B ave Surface ( Yes Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Liv     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches): No X Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra Sturi Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
YDROLO Netland Hyu Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Water Surface Water Saturation P includes cap Describe Re	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present? Present? present? pillary fringe)	s: fone is requ al Imagery (B ave Surface ( Yes Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Liv     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches):     Depth (inches):     Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra Sturi Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Primary India Surface High Wa Saturatio Water M Sedimer Drift Der Algal Ma Iron Der Inundati Sparsely Field Obser Surface Wat Nater Table Saturation P includes ca	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present? Present? present? pillary fringe)	s: fone is requ al Imagery (B ave Surface ( Yes Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Liv     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches):     Depth (inches):     Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra Sturi Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
YDROLO Vetland Hyu Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wate Vater Table Saturation P includes cap Describe Re	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present? Present? present? pillary fringe)	s: fone is requ al Imagery (B ave Surface ( Yes Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Liv     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches):     Depth (inches):     Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra Sturi Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
YDROLO Netland Hyu Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Water Surface Water Saturation P includes cap Describe Re	GY drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conce vations: er Present? Present? present? pillary fringe)	s: fone is requ al Imagery (B ave Surface ( Yes Yes Yes	Water-Stained Leaves (B9)     Aquatic Fauna (B13)     True Aquatic Plants (B14)     Hydrogen Sulfide Odor (C1)     Oxidized Rhizospheres on Liv     Presence of Reduced Iron (C     Recent Iron Reduction in Tille     Thin Muck Surface (C7)     Gauge or Well Data (D9) (B8) Other (Explain in Remarks)  No X Depth (inches):     Depth (inches):     Depth (inches):	4) ed Soils (C6)	Suri Dra Dry Cra Sturi Sturi Geo FAC	face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)

Project/Site: Seneca Wind Project		City/County:	Seneca		Sampling Date: 9/2	6/2018
Applicant/Owner: Seneca Wind				State: OH		
Investigator(s): JMM KMP		Section, To	wnship, Ra	nge: T1N R15E S14		
2 - 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2				(concave, convex, none):	Concave	
Soil Map Unit Name: Pandora silt loam				NWI classific		
Are climatic / hydrologic conditions on the site typical for thi	e time of ve	ar2 Vec >	1			
Are Vegetation, Soil, or Hydrologys				"Normal Circumstances"		No
	-					_ INO
Are Vegetation, Soil, or Hydrology r SUMMARY OF FINDINGS – Attach site map				eeded, explain any answe		ures, etc.
	lo					
	lo	Is the	e Sampled			
Wetland Hydrology Present? Yes X N	lo	withi	in a Wetla	nd? Yes X	No	
Remarks: Cowardin: PEM						
VEGETATION – Use scientific names of plants	Absolute	Dominant	Indicator	Dominance Test work	rshoot:	
Tree Stratum         (Plot size:)           1.        )	% Cover	Species?	Status	Number of Dominant S That Are OBL, FACW,	pecies	(A)
2				Total Number of Domin Species Across All Stra	0	(B)
4				Percent of Dominant S That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size:)		= Total Cov	er	Prevalence Index wor	kshoot.	
1)					Multiply by	v:
2				OBL species		
3				FACW species		
4				FAC species		
5				FACU species		
		= Total Cov	er	UPL species	x 5 =	
Herb Stratum (Plot size: <u>5</u> ')	_		<b>FA 0) 4</b> (	Column Totals:	(A)	(B)
1. Symphyotrichum racemosum	- 5		FACW	Developmented	- 5/4 -	
2. Phalaris arundincea 3. Leerzia oryzoides	_ <u>35</u> 50	$\frac{X}{X}$	FACW OBL	Prevalence Index Hydrophytic Vegetatio		
<ul> <li><u>Leerzia oryzoides</u></li> <li><u>Scirpus atrovirens</u></li> </ul>	- 50	<u>~</u>	OBL	X 1 - Rapid Test for I		
				$\frac{1}{2}$ 2 - Dominance Tes		n
5				3 - Prevalence Ind		
6				_	Adaptations <sup>1</sup> (Provide	supporting
7				data in Remark	s or on a separate sh	eet)
8				Problematic Hydro	phytic Vegetation <sup>1</sup> (E:	xplain)
9						
Woody Vine Stratum (Plot size:)	100	= Total Cov	rer	<sup>1</sup> Indicators of hydric solution be present, unless dist		ogy must
1				Hydrophytic		
2				Vegetation	$\mathbf{Y}$	
		= Total Cov	er	Present? Ye	s_X_ No	-
Remarks: (Include photo numbers here or on a separate	sheet.)					

Depth	Matrix			ox Featur			m the absence	· · · · · · · · · · · · · · · · · · ·
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2	90	7.5YR 4/4	10	С	M/PL	SIL	
8-16	10YR 4/1	80	7.5YR 4/4	20	С	M/PL	SL	
lydric Soil	Indicators:	pletion, RM	/			ains.	Indicators	: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :
Histoso				Gleyed M Redox (S	latrix (S4)			Prairie Redox (A16)
	pipedon (A2) listic (A3)			ed Matrix				urface (S7) anganese Masses (F12)
	en Sulfide (A4)				lineral (F1)			hallow Dark Surface (TF12)
	d Layers (A5)				Aatrix (F2)			(Explain in Remarks)
2 cm M Deplete Thick D Sandy M	uck (A10) ed Below Dark Surfa ark Surface (A12) Mucky Mineral (S1)		X Deplet Redox Deplet	ed Matrix Dark Sur	(F3) face (F6) Surface (F7	)	<sup>3</sup> Indicators wetland	of hydrophytic vegetation and d hydrology must be present,
	ucky Peat or Peat (S						unless	disturbed or problematic.
Restrictive	Layer (if observed)	):						
Type:								
Type: Depth (in Remarks:	nches):						Hydric Soil	Present? Yes X No
Depth (in	Subtraction of the second s						Hydric Soil	Present? Yes X No
Depth (in Remarks:	iches):						Hydric Soil	Present? Yes X No
Depth (in Remarks: YDROLC	iches):						Hydric Soil	Present? Yes <u>X</u> No
Depth (in Remarks: YDROLC Netland Hy	nches): DGY rdrology Indicators	:	uired: check all that a	apply)				Present? Yes X No
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface	DGY rdrology Indicators cators (minimum of 9 Water (A1)	:		apply)	ves (B9)		<u>Seconda</u>	
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface X High W	DGY rdrology Indicators cators (minimum of water (A1) ater Table (A2)	:	Water-St		. ,		<u>Seconda</u>	ary Indicators (minimum of two require
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface X High Wa	DGY rdrology Indicators cators (minimum of water (A1) ater Table (A2)	:	Water-St Aquatic F	ained Lea	3)		<u>Seconda</u> Surf Drai	ary Indicators (minimum of two require face Soil Cracks (B6)
Depth (in Remarks: YDROLC Yetland Hy Primary Indi X Surface X High Wa Saturati	DGY rdrology Indicators cators (minimum of water (A1) ater Table (A2)	:	Water-St Aquatic F True Aqu	ained Lea Fauna (B1	3) s (B14)		<u>Seconda</u> Surf Drai Dry-	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10)
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface X High Wa Saturati Water N	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3)	:	Water-St Aquatic F True Aqu	ained Lea Fauna (B1 Natic Plant	3) s (B14) Ddor (C1)	ring Roots	<u>Seconda</u> <u>Surf</u> Drai <u>Dry-</u> Cray	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface X High Wa Saturati Saturati Saturati Saturati Saturati	DGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)	:	Water-St Aquatic f True Aqu Hydroge X Oxidized	ained Lea Fauna (B1 natic Plant n Sulfide ( Rhizosph	3) s (B14) Ddor (C1)		<u>Seconda</u> <u>Seconda</u> <u>Drai</u> <u>Drai</u> <u>Cray</u> (C3) <u>Satu</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8)
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface X High W Saturati Saturati Uster M Sedime Drift De	DGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)	:	Water-St Aquatic f True Aqu Hydroge X Oxidized Presence	ained Lea Fauna (B1 Natic Plant In Sulfide ( Rhizosph e of Reduc	3) s (B14) Ddor (C1) eres on Liv	4)	<u>Seconda</u> <u>Seconda</u> <u>Drai</u> <u>Dry-</u> (C3) <u>Satu</u> <u>Stur</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) ıration Visible on Aerial Imagery (C9)
Depth (in Remarks: YDROLC Wetland Hy Primary Indi X Surface X High Wi Saturati U Sedime Drift De Algal M	DGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)	:	Water-St     Aquatic F     True Aqu     Hydroge     X Oxidized     Presence     Recent In	ained Lea Fauna (B1 Natic Plant In Sulfide ( Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv ced Iron (C4 tion in Tille	4)	<u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1)
Depth (in Remarks: YDROLC Vetland Hy Primary Indi X Surface X High Wi X Saturati Usedime Drift De Algal M Iron De Inundat	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	: one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge o	ained Lea Fauna (B1 atic Plant n Sulfide ( Rhizosph e of Reduction ron Reduction	3) s (B14) Odor (C1) eres on Liv ced Iron (C4 tion in Tille (C7)	4)	<u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Depth (in Remarks: YDROLC Wetland Hy Primary Indi X Surface X High W: X Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	DGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav	: one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge o	ained Lea Fauna (B1 patic Plant n Sulfide ( Rhizosph e of Reduct con Reduct ck Surface	3) s (B14) Ddor (C1) eres on Liv ced Iron (C4 tion in Tille (C7) a (D9)	4)	<u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Depth (in Remarks: YDROLC Wetland Hy Primary Indi X Surface X High W: X Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav rvations:	: one is requ Imagery (I ve Surface	Water-St     Aquatic F     Aquatic F     True Aqu     Hydroge     X Oxidized     Presence     Recent In     Thin Muc B7) Gauge o (B8) Other (E	ained Lea Fauna (B1 attic Plant In Sulfide ( Rhizosph of Reduc on Reduc on Reduc ick Surface r Well Dat xplain in F	3) s (B14) Odor (C1) eres on Liv ced Iron (C- tion in Tille (C7) a (D9) cemarks)	4)	<u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Depth (in Remarks: IYDROLC Wetland Hy Primary Indi X Surface X High W X Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obser	DGY drology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (I ve Surface	Water-St     Aquatic f     Aquatic f     True Aqu     Hydroge     X Oxidized     Presence     Recent II     Thin Muc B7) Gauge o (B8) Other (E  No Depth (i	ained Lea Fauna (B1 patic Plant n Sulfide ( Rhizosph e of Reduc on Reduc con	3) s (B14) Odor (C1) eres on Liv ced Iron (C- tion in Tille (C7) a (D9) cemarks)	4)	<u>Seconda</u> <u>Surf</u> <u>Drai</u> <u>Dry</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u> (C3) <u>Satu</u>	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)
Depth (in Remarks: YDROLC Wetland Hy Primary Indi X Surface X High W X Saturati Saturati Drift De Drift De Algal M Iron De Inundat Sparsel Field Obser	DGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (I ve Surface Yes X Yes X	Water-St     Aquatic f     Aquatic f     True Aqu     Hydroge     X Oxidized     Presence     Recent II     Thin Muc B7) Gauge o (B8) Other (E  No Depth (i	ained Lea Fauna (B1 attic Plant In Sulfide ( Rhizosph of Reduc on Reduc on Reduc ick Surface r Well Dat xplain in F	3) s (B14) Odor (C1) eres on Liv ced Iron (C- tion in Tille (C7) a (D9) cemarks)	4) d Soils (C	<u>Seconda</u> Surf Drai Dry- Cray (C3) Satu Stur 6) <u>X</u> Geo FAC	ary Indicators (minimum of two require face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2)

Remarks:

Project/Site: Seneca Wind Project		(	City/County:	Seneca	Sampling Date: <u>9/25/2018</u>
Applicant/Owner: Seneca Wind					State: OH Sampling Point: W-A29-UP
Investigator(s): JMM KMP		:	Section, To	wnship, Rai	nge: T1N R15E S14
Landform (hillslope, terrace, etc.): Fla	t field		i	ocal relief	(concave, convex, none): Convex
Slope (%): 0 Lat: 41.050	298		Long: <u>-83.</u>	104225	Datum: NAD 83
Soil Map Unit Name: Pandora silt lo	am				NWI classification: N/A
Are climatic / hydrologic conditions on		his time of yea	ar? Yes _>	<no< td=""><td> (If no, explain in Remarks.)</td></no<>	(If no, explain in Remarks.)
Are Vegetation, Soil, or	Hydrology	_ significantly	disturbed?	Are "	'Normal Circumstances" present? Yes 🔀 No
Are Vegetation, Soil, or	Hydrology	_ naturally pro	blematic?	(If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site ma	p showing	sampling	g point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes	No X			
Hydric Soil Present?	Yes	NO X		e Sampled	
Wetland Hydrology Present?	Yes	No <u>X</u>	with	in a Wetlan	nd? Yes No
Remarks: Upland sample plot					
VEGETATION - Use scientific	names of plant	s.			
		Absolute	Dominant		Dominance Test worksheet:
Tree Stratum         (Plot size:			Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2					Total Number of Dominant
3					Species Across All Strata: (B)
4					Percent of Dominant Species
5			= Total Cov	or	That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size: _	)		- 101ai 000	ei	Prevalence Index worksheet:
1					Total % Cover of:Multiply by:
2					OBL species x 1 =
3					FACW species x 2 =
4					FAC species x 3 =
5					FACU species x 4 =
Herb Stratum (Plot size: 5'	)		= Total Cov	er	UPL species x 5 =
1. Glycine max	/	85	Х	UPL	Column Totals: (A) (B)
2. Equisetum pratense		10		FACW	Prevalence Index = B/A =
3. Ambrosia trifida		5		FAC	Hydrophytic Vegetation Indicators:
4					1 - Rapid Test for Hydrophytic Vegetation
5					2 - Dominance Test is >50%
6					3 - Prevalence Index is ≤3.0 <sup>1</sup>
7					4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9					
10					<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:	)	100	= Total Cov	er	be present, unless disturbed or problematic.
1					Hudronbutio
2.					Hydrophytic Vegetation
			= Total Cov	er	Present? Yes <u>No X</u>
Remarks: (Include photo numbers he	ere or on a separat				·

Depth (inches)	Matrix Color (moist)	%	<u></u>	2 Touture	Remarks
0-12	10YR 4/4	100		SIL	
		· ·			
		pletion, RM=	Reduced Matrix, MS=Masked Sand Grains.		ion: PL=Pore Lining, M=Matrix.
Histoso Histic E Black H Hydrog Stratifie	Epipedon (A2) Histic (A3) Jen Sulfide (A4) ed Layers (A5)		<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> </ul>	Coa Darl Iron Very	ors for Problematic Hydric Soils <sup>3</sup> : ast Prairie Redox (A16) k Surface (S7) -Manganese Masses (F12) y Shallow Dark Surface (TF12) er (Explain in Remarks)
Deplete Thick I Sandy 5 cm M	luck (A10) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) lucky Peat or Peat (S	3)	<ul> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> </ul>	wetla	ors of hydrophytic vegetation and and hydrology must be present, ess disturbed or problematic.
Type:	Layer (if observed)	:		Hydric S	oil Present? Yes No
Remarks:					
YDROLO	DGY				
Vetland Hy	ydrology Indicators:				
rimary Ind	icators (minimum of o	one is require	ed; check all that apply)	Secor	ndary Indicators (minimum of two require
_	e Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
_ •	ater Table (A2)		Aquatic Fauna (B13)		Prainage Patterns (B10)
_	tion (A3)		True Aquatic Plants (B14)		Pry-Season Water Table (C2)
_	Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
_	ent Deposits (B2)		Oxidized Rhizospheres on Living Ro	· / <u>—</u>	aturation Visible on Aerial Imagery (C9)
	eposits (B3)		Presence of Reduced Iron (C4)		itunted or Stressed Plants (D1)
_ Algal M	lat or Crust (B4)		Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7)	· · —	Geomorphic Position (D2) AC-Neutral Test (D5)
	eposits (B5)				

Inundation Visible on A	erial Imager	y (B7)	Gauge or Well Data (D9)		
Sparsely Vegetated Co	ncave Surfa	ice (B8) _	_ Other (Explain in Remarks	s)	
Field Observations:					
Surface Water Present?	Yes	No	Depth (inches):		
Water Table Present?	Yes	No	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):	Wetland Hydrology Present? Yes	No
Describe Recorded Data (s	tream gauge	e, monitorin	g well, aerial photos, previou	s inspections), if available:	
Remarks:					

				interest rogion	•	
Project/Site: Seneca Wind Project		_ City/County: Seneca Sampling Date: 9/26			26/2018	
Applicant/Owner: Seneca Wind				State: OH		
Investigator(s): JMM KMP				nge: T1N R15E S14		
Landform (hillslope, terrace, etc.): Terrace			Local relief	(concave, convex, none	): Concave	
		Long: -83.	10562		Datum: NAD 83	
Soil Map Unit Name: Pandora silt Ioam				NWI classif		
Are climatic / hydrologic conditions on the site ty	pical for this time of v	ear? Yes				
Are Vegetation, Soil, or Hydrolog				"Normal Circumstances"		No
Are Vegetation, Soil, or Hydrolog				eeded, explain any answ		
SUMMARY OF FINDINGS – Attach s	ite map showing	g samplin	ig point l	ocations, transect	s, important feat	tures, etc
	_X_ №		Comula			
	_X_ №		ne Sampled		6	
Wetland Hydrology Present? Yes _	<u> </u>	. with	nin a Wetla	nd? Yes _/	< №	
VEGETATION – Use scientific names	of plants. Absolute	e Dominant	Indicator	Dominance Test wor	rksheet:	
Tree Stratum (Plot size:)		r Species?		Number of Dominant		
1				That Are OBL, FACW		(A)
2				Total Number of Dom	inant	
3				Species Across All St	rata: <u>3</u>	(B)
4				Percent of Dominant		
5		_ = Total Co		That Are OBL, FACW	, or FAC: 100%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'	)		vei	Prevalence Index wo	orksheet:	
1. Salix nigra		<u>    X                                </u>	OBL	Total % Cover of:	Multiply b	oy:
2				OBL species	x 1 =	
3				FACW species		
4				FAC species		
5				FACU species		
Herb Stratum (Plot size: 5' )	30	_ = Total Co	ver	UPL species		
1. Typha latifolia	10		OBL	Column Totals:	(A)	(B)
2. Phalaris arundincea	30	X	FACW	Prevalence Inde	ex = B/A =	
3. Leersia oryzoides	50	X	OBL	Hydrophytic Vegetat		
4. Scirpus atrovirens	10		OBL		· Hydrophytic Vegetati	on
5				2 - Dominance Te		
6				3 - Prevalence In	dex is ≤3.0 <sup>1</sup>	

\_\_\_\_

\_\_\_\_\_

100 = Total Cover

_	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
_	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)

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

Yes X No \_\_\_\_\_

Hydrophytic Vegetation

Present?

	_ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.)	

2.\_\_\_\_\_

10. \_\_\_\_\_\_

Woody Vine Stratum (Plot size: \_\_\_\_\_)

7.\_\_\_\_\_

Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>dox Featur</u> %	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks	
0-8	10YR 4/2	90	7.5YR 4/4	10	C	M/PL	SIL	Kemarka	
8-16	10YR 4/1	80	7.5/YR 4/4	- 10	- <del>c</del>	M/PL	SL		
		·	7.0/11				·		
<sup>1</sup> Type: C=C	Concentration, D=Dep	pletion, RM=	Reduced Matrix, I	MS=Maske	ed Sand Gr	ains.	<sup>2</sup> Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:							r Problematic Hydric Soils <sup>3</sup> :	
Histoso	ol (A1)		Sandy	Gleyed N	Aatrix (S4)		Coast Pra	airie Redox (A16)	
Histic E	pipedon (A2)		Sandy	Redox (S	5)		Dark Surf	ace (S7)	
	listic (A3)			ed Matrix	. ,			ganese Masses (F12)	
_ , ,	en Sulfide (A4)				lineral (F1)		_ /	llow Dark Surface (TF12)	
	ed Layers (A5)		1		Matrix (F2)		Other (Ex	plain in Remarks)	
_	luck (A10) ed Below Dark Surfac	o (A11)		ted Matrix k Dark Sur					
	ark Surface (A12)	æ (ATT)			Surface (FO)	)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,		
	Mucky Mineral (S1)			c Depressi		,			
_ ,	lucky Peat or Peat (S	3)						sturbed or problematic.	
	Layer (if observed)	,							
Type:									
Depth (ir	nches):						Hydric Soil Pr	esent? Yes X No	
Remarks:									
YDROLO									
	drology Indicators:			an a huì			0 constants	Indicators (minimum of two or 1	
× /	icators (minimum of c	one is requir						Indicators (minimum of two required	
	Water (A1)			tained Lea				e Soil Cracks (B6)	
🔼 High W	ater Table (A2)			Fauna (B1				ge Patterns (B10)	
Y	ion (A3)			uatic Plant			_ /	ason Water Table (C2)	
X Saturat			Hydroge	n Sulfide (	Jdor (C1)		Crayfis	h Burrows (C8)	
Water M	Marks (B1)						(00)	. ,	
Water M	ent Deposits (B2)		X Oxidized		eres on Liv			tion Visible on Aerial Imagery (C9)	
Water M Sedime Drift De	ent Deposits (B2) eposits (B3)		X Oxidized	e of Reduc	eres on Liv ced Iron (C	4)	Stunted	tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)	
Water M Sedime Drift De Algal M	ent Deposits (B2) eposits (B3) lat or Crust (B4)		X Oxidized Presenc Recent I	e of Reduc	eres on Liv ced Iron (Co ction in Tille	4)	6) X Geomo	tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)	
Water M Sedime Drift De Algal M Iron De	ent Deposits (B2) eposits (B3)		X Oxidized Presenc Recent I Thin Mu	e of Reduc	eres on Liv ced Iron (Co ction in Tille e (C7)	4)	6) X Geomo	tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)	

Sparsely Vegetated Cor	ncave Surface (B8)	Other (Explain in Remarks)		
Field Observations:				
Surface Water Present?	Yes X No			
Water Table Present?	Yes X No	Depth (inches): 0		
Saturation Present? (includes capillary fringe)	Yes X No	Depth (inches): 0	Wetland Hydrology Present?	Yes X No
Describe Recorded Data (str	ream gauge, monite	oring well, aerial photos, previous i	nspections), if available:	
Remarks:				

Project/Site: Seneca Wind Project				(	City/County	: <u>Seneca</u>		Sampling Date: 9/26/2	2018
Applicant/Owner: Seneca Wind					State: OH Sampling Point: W-A37				37
Investigator(s): JMM KMP					Section, To	wnship, Ra	nge: T1N R15E S15		
Landform (hillslope, terrace, etc.): Terrac							(concave, convex, none):	Concave	
Slope (%): 0 Lat: 41.04426									
Soil Map Unit Name: Pandora silt loam					•		NWI classific		
Are climatic / hydrologic conditions on the		pical for	this tin	ne of ve	ar? Yes				
Are Vegetation, Soil, or Hy							"Normal Circumstances" p		No
Are Vegetation, Soil, or Hy							eeded, explain any answe		
SUMMARY OF FINDINGS - Atta									es, etc.
Hydrophytic Vegetation Present?		X				51	•	<u>.</u>	
Hydric Soil Present?		X				ne Sampled			
Wetland Hydrology Present?	Yes _	<u> </u>	No _		with	in a Wetla	nd? Yes 🔨	No	
Remarks:									
Cowardin: PEM									
VEGETATION – Use scientific na	mes o	of plan	nts.						
				bsolute		Indicator	Dominance Test work	sheet:	
<u>Tree Stratum</u> (Plot size:					Species?	<u>Status</u>	Number of Dominant Sp That Are OBL, FACW, o		(A)
2							Total Number of Domin	ant	
3							Species Across All Stra	4	_ (B)
4							Percent of Dominant Sp	oecies	
5							That Are OBL, FACW, o		_ (A/B)
Sapling/Shrub Stratum (Plot size: 15'		)	-		= Total Co	ver	Prevalence Index wor	ksheet:	
1. Salix nigra				0	Х	FACW	Total % Cover of:	Multiply by:	
2							OBL species	x 1 =	
3							FACW species	x 2 =	_
4							FAC species	x 3 =	_
5							FACU species	× 4 =	_
Herb Stratum (Plot size: 5'	,		_		= Total Co	ver	· · ·	x 5 =	_
1. Phalaris arundincea	)		5	50	х	FACW	Column Totals:	(A)	(B)
2. Leerzia oryzoides				30	X	OBL	Prevalence Index	= B/A =	
3. Scirpus atrovirens				20	X	OBL	Hydrophytic Vegetatio		
4							X 1 - Rapid Test for H	Hydrophytic Vegetation	
5.				_			2 - Dominance Tes	it is >50%	
6							3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
7							4 - Morphological A	Adaptations <sup>1</sup> (Provide su	pporting
8								s or on a separate sheet	
9								phytic Vegetation <sup>1</sup> (Expl	ain)
10							<sup>1</sup> Indicators of hydric soi	and wetland hydrology	must
Woody Vine Stratum (Plot size:		`	_1	00	= Total Co	ver	be present, unless distu		must
							11		
1							Hydrophytic Vegetation		
					= Total Co	ver	Present? Yes	s_X_ No	
Remarks: (Include photo numbers here	or on a	separa	te she				1		

Depth	Matrix			ox Featur		1.0-2	Taxture	Domester
(inches)	Color (moist)	%	Color (moist)	%	Type'	<u>Loc<sup>2</sup></u> M/PL	Texture	Remarks
0-8	10YR 4/2	90	7.5YR 4/4	10	_ <u>C</u>		SIL	
8-16	10YR 4/1	80	7.5YR 4/4	_ 20	<u> </u>	M/PL	SL	
						_	_	
		epletion, RM	I=Reduced Matrix, N	IS=Maske	ed Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Histos Histic   Black   Hydrog Stratifi 2 cm N Deplet Thick   Sandy	il Indicators: ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10) ted Below Dark Surf Dark Surface (A12) Mucky Mineral (S1 Mucky Peat or Peat	)	X Sandy Strippo Loamy X Deplet Redox Deplet	Redox (S ed Matrix ( Mucky M Gleyed M ed Matrix Dark Sur	(S6) ineral (F1) Matrix (F2) (F3) face (F6) surface (F7	)	Coast I Dark S Iron-Ma Very SI Other ( <sup>3</sup> Indicators wetland	for Problematic Hydric Soils <sup>3</sup> : Prairie Redox (A16) urface (S7) anganese Masses (F12) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.
Restrictive	e Layer (if observe						Hydric Soil	
Remarks:								
	OGY							
YDROL								
Wetland H	lydrology Indicator							
Wetland H Primary Inc	lydrology Indicator dicators (minimum c		uired; check all that a	ipply)			Seconda	ry Indicators (minimum of two required)
Wetland H Primary Ind X Surfac	lydrology Indicator dicators (minimum c se Water (A1)		Water-St	ained Lea			Surfa	ace Soil Cracks (B6)
Wetland H Primary Ind X Surfac X High V	lydrology Indicator dicators (minimum c e Water (A1) Vater Table (A2)		Water-St Aquatic F	ained Lea <sup>-</sup> auna (B1	3)		Surfa Draii	ace Soil Cracks (B6) nage Patterns (B10)
Wetland H Primary Ind X Surfac X High V	lydrology Indicator dicators (minimum c se Water (A1)		Water-St Aquatic F True Aqu	ained Lea <sup>5</sup> auna (B1 atic Plant	3) s (B14)		Surfa Drain Dry-:	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Wetland H Primary Ind X Surfac X High V X Satura	lydrology Indicator dicators (minimum c e Water (A1) Vater Table (A2)		Water-St Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14) Ddor (C1)		Surfa Drain Dry- Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) /fish Burrows (C8)
Wetland H Primary Ind X Surfac X High V X Satura Water	lydrology Indicator dicators (minimum o ce Water (A1) Vater Table (A2) ation (A3)		Water-St Aquatic F True Aqu	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14) Ddor (C1)	ing Roots	Surfa Drain Dry- Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Wetland H Primary Inc X Surfac X High V X Satura Water Sedim	lydrology Indicator dicators (minimum o ee Water (A1) Vater Table (A2) ttion (A3) Marks (B1)		Water-St Aquatic F True Aqu Hydroger X Oxidized	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Ddor (C1)	•	Surfa Drain Dry Cray (C3) Satu Stun	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9) ited or Stressed Plants (D1)
Wetland H Primary Ind X Surfac X High V X Satura Water Sedim Drift D	lydrology Indicator dicators (minimum o ee Water (A1) Vater Table (A2) tition (A3) Marks (B1) ent Deposits (B2)		Water-St Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv	4)	Surfa Drain Dry Cray (C3) Satu Stun	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) ıration Visible on Aerial Imagery (C9)

Inundation Visible on Aer	ial Imagery (B7)	Gauge or Well Data (D9)							
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)									
Field Observations:									
Surface Water Present?	Yes X No	_ Depth (inches): 2	_						
Water Table Present?	Yes X No	_ Depth (inches): 0							
Saturation Present? (includes capillary fringe)	Yes X No	_ Depth (inches): 0	_ Wetland Hydrology Present? Yes X No _						
Describe Recorded Data (stre	eam gauge, monitoring v	well, aerial photos, previous ins	pections), if available:						
Remarks:									

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/25/2018
Applicant/Owner: Seneca Wind			Sampling Point: W-A37-UP
Investigator(s): JMM KMP	Section, Township, Range:	T1N R15E S15	
Landform (hillslope, terrace, etc.): Flat field	Local relief (cond	cave, convex, none):	Convex
Slope (%): 0 Lat: 41.044371	Long: <u>-83.113093</u>		Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 0 to 2 perc	ent slopes	NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norn	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	l, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NoX NoX NoX	ls the Sampled Area within a Wetland?	Yes	_ No_X
Remarks: Upland sample plot					

	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species	? Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: _0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
		= Total Co		That Are OBL, FACW, of FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)		- 10(a) 0(		Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co		UPL species x 5 =
Herb Stratum (Plot size: 5')		10tai 0t	JVEI	Column Totals:         (A)         (B)
1. Glycine max	85	Х	UPL	
2 Equisetum pratense	10		FACW	Prevalence Index = B/A =
3. Ambrosia trifida	5		FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9				
10	100			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	100	= Total Co	over	be present, unless disturbed or problematic.
1)				
				Hydrophytic Vegetation
2		= Total Co		Present? Yes <u>No X</u>

Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (moist)	<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-12	10YR 4/4	100					SIL	Remarks	
0.12									
Type: C=C	Concentration, D=De	pletion, RM=I	Reduced Matrix, MS	=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for	or Problematic Hydric Soils <sup>3</sup> :	
Histosc	l (A1)		Sandy G	Bleyed Mat	rix (S4)		Coast Pr	rairie Redox (A16)	
	pipedon (A2)			Redox (S5)				rface (S7)	
	listic (A3)			Matrix (S6	,			nganese Masses (F12)	
_ , ,	en Sulfide (A4)			Aucky Mine				allow Dark Surface (TF12)	
	ed Layers (A5) uck (A10)			Gleyed Mat d Matrix (F:			Other (E	xplain in Remarks)	
_	ed Below Dark Surfa	ce (A11)		ark Surfac	,				
	ark Surface (A12)			d Dark Sur	. ,		<sup>3</sup> Indicators o	f hydrophytic vegetation and	
	Mucky Mineral (S1)		Redox D	epression	s (F8)			hydrology must be present,	
5 cm M	ucky Peat or Peat (S	\$3)					unless d	isturbed or problematic.	
Destrictive	Layer (if observed								
Restrictive	Layer (il observed	):							
Type:		):					Hudria Cail D	recent? Yes No.	×
Туре:		):					Hydric Soil P	resent? Yes No _	x
Type: Depth (ir		):					Hydric Soil P	resent? Yes No _	<u>×</u>
Type:		):					Hydric Soil P	resent? Yes No _	×
Type: Depth (ir		): 					Hydric Soil P	resent? Yes No _	×
Type: Depth (ir		):					Hydric Soil P	resent? Yes No _	×
Type: Depth (ir							Hydric Soil P	resent? Yes No _	<u>×</u>
Type: Depth (ir Remarks:	nches):	): 					Hydric Soil P	resent? Yes No _	×
Type: Depth (ir Remarks: YDROLC	nches):								
Type: Depth (ir Remarks: YDROLC	nches):		ed; check all that ap	ply)				resent? Yes No _	
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind	nches): DGY /drology Indicators		ed: check all that ap		s (B9)		Secondary		
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface	DGY /drology Indicators icators (minimum of			ned Leave	s (B9)		<u>Secondary</u> Surfac	/ Indicators (minimum of two re	
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W	DGY vdrology Indicators icators (minimum of e Water (A1)		Water-Stai	ned Leave una (B13)			<u>Secondary</u> Surfac Draina	/ Indicators (minimum of two re ce Soil Cracks (B6)	
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W Saturat	DGY /drology Indicators icators (minimum of e Water (A1) fater Table (A2)		Water-Stai Aquatic Fa	ned Leave una (B13) tic Plants (I	B14)		<u>Secondary</u> <u>Surfac</u> <u>Draina</u> <u>Dry-Surfac</u>	<u>/ Indicators (minimum of two re</u> ce Soil Cracks (B6) age Patterns (B10)	
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Surface High W Saturat Water I	DGY /drology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3)		Water-Stai Aquatic Fa True Aqua Hydrogen 5 Oxidized R	ned Leave una (B13) tic Plants (I Sulfide Odo thizosphere	B14) or (C1) es on Livi	-	<u>Secondary</u> Surfac Draina Dry-Si Crayfi	<u>/ Indicators (minimum of two re</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)	quired
Type: Depth (ir Remarks: YDROLC YDROLC Wetland Hy Primary Ind Surface High W Saturat Saturat Saturat Saturat	DGY /drology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water-Stai Aquatic Fa True Aqua Hydrogen 3 Oxidized R Presence o	ned Leave una (B13) tic Plants (I Sulfide Odo thizosphere of Reduced	B14) or (C1) es on Livi I Iron (C4	•)	<u>Secondary</u> Surfac Draina Dry-So Crayfi (C3) Satura Sturte	<u>/ Indicators (minimum of two re</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)	quired
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	DGY /drology Indicators icators (minimum of Water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Recent Iro	ned Leave una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction	B14) or (C1) es on Livi I Iron (C4 n in Tilleo	•)	<u>Secondary</u> Surfac Draina Dry-Si Crayfi (C3)Satura Stunte 6)Geom	/ Indicators (minimum of two rece Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2)	quired
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Saturat High W Saturat Water I Sedime Drift De Algal M Iron De	DGY /drology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5)	: one is require	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Recent Iroi Thin Muck	ned Leaves una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C	B14) or (C1) es on Livi I Iron (C4 n in Tilleo C7)	•)	<u>Secondary</u> Surfac Draina Dry-Si Crayfi (C3)Satura Stunte 6)Geom	<u>/ Indicators (minimum of two re</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1)	quired
Type: Depth (ir Remarks: YDROLO Yetland Hy Primary Ind Surface High W Saturat High W Saturat Sedime Sedime Drift De Algal M Iron De Inundat	DGY vdrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) ion Visible on Aerial	: one is require Imagery (B7)	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Recent Iron Gauge or V	ned Leaves una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C Well Data (I	B14) or (C1) es on Livi d Iron (C4 n in Tilleo C7) D9)	•)	<u>Secondary</u> Surfac Draina Dry-Si Crayfi (C3)Satura Stunte 6)Geom	/ Indicators (minimum of two rece Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2)	quired
Type: Depth (ir Remarks: YDROLC Yetland Hy Primary Ind Surface High W Saturat Saturat Saturat Sedime Sedime Drift De Algal M Iron De Inundat Sparse	DGY /drology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav	: one is require Imagery (B7)	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Recent Iron Gauge or V	ned Leaves una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C Well Data (I	B14) or (C1) es on Livi d Iron (C4 n in Tilleo C7) D9)	•)	<u>Secondary</u> Surfac Draina Dry-Si Crayfi (C3)Satura Stunte 6)Geom	/ Indicators (minimum of two rece Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2)	quired
Type: Depth (ir Remarks: YDROLC YDROLC Yetland Hy Primary Ind Surface High W Saturat Saturat Sedime Sedime Drift De Algal M Iron De Inundat Sparse Field Obse	DGY rdrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations:	inagery (B7)	Water-Stai     Aquatic Fa     True Aqua     Hydrogen     Oxidized R     Presence c     Recent Iron     Thin Muck     Gauge or V 8) Other (Exp	ned Leaves una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C Well Data (I Islain in Ren	B14) or (C1) es on Livi d Iron (C4 n in Tillec C7) D9) narks)	.) 1 Soils (Cl	<u>Secondary</u> Surfac Draina Dry-Si Crayfi (C3)Satura Stunte 6)Geom	/ Indicators (minimum of two rece Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2)	quired
Type: Depth (ir Remarks: YDROLC YDROLC Wetland Hy Primary Ind Surface High W Saturat Saturat Saturat Sedime Drift De Algal M Iron De Inundat Sparse Field Obse	DGY rdrology Indicators icators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations: ter Present?		Water-Stai     Aquatic Fa     True Aqua     Hydrogen 3     Oxidized R     Presence 0     Recent Iroi     Thin Muck     Gauge or V 8) Other (Exp	ned Leaves una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C Well Data (I Islain in Ren	B14) or (C1) es on Livi I Iron (C4 n in Tilleo C7) D9) narks)	) I Soils (Co	<u>Secondary</u> Surfac Draina Dry-Si Crayfi (C3)Satura Stunte 6)Geom	/ Indicators (minimum of two rece Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2)	quired
Type: Depth (ir Remarks: YDROLC YDROLC Wetland Hy Primary Ind Surface High W Saturat Saturat Saturat Sedime Drift De Algal M Iron De Inundat Sparse Field Obse	DGY /drology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations: ter Present? Present?	Imagery (B7) ve Surface (B Yes N Yes N	Water-Stai     Aquatic Fa     True Aqua     Hydrogen 3     Oxidized R     Presence 0     Recent Iron     Thin Muck     Gauge or N     Other (Exp     Depth (inc     Depth (inc	ned Leave: una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C Well Data (I dain in Ren	B14) or (C1) es on Livi d Iron (C4 n in Tilleo C7) D9) narks)	.) 1 Soils (C(	<u>Secondary</u> Surfac Draina Dry-Sc Crayfi (C3) Satura Sturte 6) Geom FAC-M	<u>/ Indicators (minimum of two re</u> ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2) Neutral Test (D5)	(C9)
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W Saturat Saturat Sedime Drift De Algal M Iron De Inundat Sparse Surface Wa Vater Table Saturation F	DGY /drology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations: ter Present? Present?	Imagery (B7) ve Surface (B Yes N Yes N	Water-Stai     Aquatic Fa     True Aqua     Hydrogen 3     Oxidized R     Presence 0     Recent Iroi     Thin Muck     Gauge or V 8) Other (Exp	ned Leave: una (B13) tic Plants (I Sulfide Odd thizosphere of Reduced n Reduction Surface (C Well Data (I dain in Ren	B14) or (C1) es on Livi d Iron (C4 n in Tilleo C7) D9) narks)	.) 1 Soils (C(	<u>Secondary</u> Surfac Draina Dry-Sc Crayfi (C3) Satura Sturte 6) Geom FAC-M	/ Indicators (minimum of two rece Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery ed or Stressed Plants (D1) iorphic Position (D2)	(C9)

Remarks:

Project/Site: Seneca Wind Project	City/County: Seneca	_ Sampling Date: <u>9/24/2018</u>
Applicant/Owner: Seneca Wind	State: OH	Sampling Point: W-A27
Investigator(s): JMM KMP	Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none	e): Concave
Slope (%): 0 Lat: 41.040703	Long: <u>-83.125579</u>	Datum: NAD 83
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fr	equently flooded NWI classif	fication: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances"	' present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answ	vers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes_X	No
Remarks: Cowardin: PEM				

#### **VEGETATION** – Use scientific names of plants.

	Absolute		t Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:)		Species?		Number of Dominant Species		
1				That Are OBL, FACW, or FAC: _2 (A)		
2				Total Number of Dominant		
3				Species Across All Strata: (B)		
4						
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)		
		= Total Co	Vor	That Are OBL, FACW, of FAC: (A/B)		
Sapling/Shrub Stratum (Plot size:)		- 10(a) 00	VCI	Prevalence Index worksheet:		
1				Total % Cover of:Multiply by:		
2				OBL species x 1 =		
3				FACW species x 2 =		
				FAC species x 3 =		
4			·	FACU species          x 4 =		
5						
Herb Stratum (Plot size: <u>5</u> )		= Total Co	ver	UPL species x 5 = (D)		
1 Phalaris arundinacea	60	Х	FACW	Column Totals: (A) (B)		
2. Scirpus atrovirens	10		OBL	Prevalence Index = B/A =		
3. Leerzia oryzoides	$-\frac{10}{30}$	X	OBL	Hydrophytic Vegetation Indicators:		
				$\times$ 1 - Rapid Test for Hydrophytic Vegetation		
4				$\frac{1}{2}$ 2 - Dominance Test is >50%		
5						
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>		
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
9						
10				1		
	100	= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation		
	= Total Cover		ver	Present? Yes X No		
Remarks: (Include photo numbers here or on a separate sheet.)						

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### SOIL

	arintian. (Deceribe t	a tha danth .	and to doou	a a mé éb a	indicator		n the choose	Camping Font.
	cription: (Describe to	o the depth i				or confin	n the absend	ce of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Featur</u> %	Type1_	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2		5YR 4/6	10	C	M	SL	
8-16	10YR 4/2	80 7.	5 YR 4/6	20		м	LS	
	·							
	· · · · · · · · · · · · · · · · · · ·							
	concentration, D=Deple	etion, RM=Re	duced Matrix, MS	S=Maske	d Sand Gr	ains.		on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histoso					atrix (S4)			st Prairie Redox (A16)
	pipedon (A2)			Redox (S				(Surface (S7)
	listic (A3) en Sulfide (A4)			Matrix (	56) ineral (F1)			-Manganese Masses (F12) / Shallow Dark Surface (TF12)
	d Layers (A5)				latrix (F2)			er (Explain in Remarks)
	uck (A10)			d Matrix			Oune	
_	d Below Dark Surface	(A11)			ace (F6)			
	ark Surface (A12)				urface (F7)		<sup>3</sup> Indicato	ors of hydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Redox [	Depressio	ons (F8)		wetla	and hydrology must be present,
5 cm M	ucky Peat or Peat (S3)	)					unle	ss disturbed or problematic.
Restrictive	Layer (if observed):							
Туре:			_				Liudaio Co	oil Present? Yes X No
Depth (ir	nches):		_				Hydric Sc	oil Present? Yes X No
Remarks:								
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
	icators (minimum of on	e is required	check all that ap	ply)			Secon	dary Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ned Lea	ves (B9)		Si	urface Soil Cracks (B6)
X High W	ater Table (A2)		Aquatic Fa	una (B1	3)		D	rainage Patterns (B10)
X Saturat	ion (A3)		True Aqua	tic Plants	s (B14)		D	ry-Season Water Table (C2)
	Aarks (B1)		Hydrogen					rayfish Burrows (C8)
_	nt Deposits (B2)		Oxidized F	Rhizosph	eres on Liv	ing Roots		aturation Visible on Aerial Imagery (C9)
	posits (B3)		Presence					tunted or Stressed Plants (D1)
Algal M	at or Crust (B4)		Recent Iro	n Reduc	tion in Tille	d Soils (C	6) 🔀 G	eomorphic Position (D2)
Iron De	posits (B5)		Thin Muck	Surface	(C7)		F/	AC-Neutral Test (D5)
Inundat	ion Visible on Aerial In	nagery (B7)	Gauge or	Well Data	a (D9)			
Sparse	y Vegetated Concave	Surface (B8)	Other (Exp	lain in R	emarks)			

ave Surface (B8)	Other (Explain in Remarks)		
Yes No _X	_ Depth (inches):		
Yes X No	_ Depth (inches): 0		
Yes X No	_ Depth (inches): 0	Wetland Hydrology Present?	Yes X No
am gauge, monitoring	well, aerial photos, previous inspe	ctions), if available:	
	Yes No _X Yes _X No Yes _X No	Yes         X         No         Depth (inches):         0           Yes         X         No         Depth (inches):         0	Yes         No         X         Depth (inches):           Yes         X         No         Depth (inches):

### WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date:	9/25/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point:	W-A27-UP
Investigator(s): JMM KMP	Section, Township, Range:			
Landform (hillslope, terrace, etc.): Flat field	Local relief (conc	ave, convex, none):	Convex	
Slope (%): 0 Lat: 41.040651	Long: <u>-83.125427</u>		Datum: NAD 8	3
Soil Map Unit Name: Shoals silt loam, 0 to 2 percent slopes, fro	equently flooded	NWI classifica	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	resent? Yes 🚬	KNo
Are Vegetation, Soil, or Hydrology naturally pre	oblematic? (If needed	, explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	sampling point locat	ions, transects,	important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _X Yes No _X Yes No _X	Is the Sampled Area within a Wetland? Yes NoX
Remarks: Upland sample plot		

### **VEGETATION** – Use scientific names of plants.

1.		Absolute		t Indicator	Dominance Test worksheet:	
2.	Tree Stratum (Plot size:)					
3.					That Are OBL, FACW, or FAC:	(A)
4.					Total Number of Dominant	
5.					Species Across All Strata:	(B)
Sapling/Shrub Stratum (Plot size:)       = Total Cover       Prevalence Index worksheet:         1.						
Sapling/Shrub Stratum       (Plot size:)         1.	o				That Are OBL, FACW, or FAC: 076	(A/B)
1.	Sapling/Shrub Stratum (Plot size: )		= Total Co	ver	Prevalence Index worksheet:	
2.		. <u> </u>			Total % Cover of:Multiply b	y:
3.					OBL species x 1 =	
4.					FACW species x 2 =	
5.					FAC species x 3 =	
Herb Stratum (Plot size: $5'$ )= Total CoverUPL species x 5 =1. Zea mays100XUPL2100XUPL3456789Problematic Hydrophytic Vegetation 1 (Explain)					FACU species x 4 =	
1. Zea mays       100       X       UPL $Prevalence Index = B/A =         2.      $				ver	UPL species x 5 =	
2.       Prevalence Index = B/A =         3.       Hydrophytic Vegetation Indicators:         4.		400	X		Column Totals: (A)	(B)
3.						
4.						
5.	3					
6.	4					n
7.	5					
8.	6					
9 Problematic Hydrophytic Vegetation (Explain)						
					Problematic Hydrophytic Vegetation <sup>1</sup> (E	xplain)
10	10			·		
Indicators of hydric soil and wetland hydrology mu	10.			wer		
Woody Vine Stratum (Plot size:)	Woody Vine Stratum (Plot size:)		- 10(a) 00	VCI	be present, unless disturbed or problematic.	
1 Hydrophytic	1				Hydrophytic	
2 Vegetation					Vegetation	
= Total Cover Yes No			= Total Co	ver	Present? Yes No	_

Depth	Matrix		Redox Features	_	
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-12 1	0YR 4/4	100			
		etion, RM=F	educed Matrix, MS=Masked Sand Grains.		re Lining, M=Matrix.
Hydric Soil Indi Histosol (A1 Histic Epipe Black Histic Hydrogen S Stratified La	1) edon (A2) : (A3) Sulfide (A4)		<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> </ul>	Coast Prairie R Dark Surface (\$ Iron-Manganes	67) e Masses (F12) ark Surface (TF12)
2 cm Muck Depleted Be Thick Dark 3 Sandy Mucl			<ul> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> </ul>	<sup>3</sup> Indicators of hydro wetland hydrolo	pphytic vegetation and gy must be present, d or problematic.
	ver (if observed):			Hydric Soil Present	? Yes No_X
Remarks:	,				
YDROLOGY	r logy Indicators:				
		ne is require	d; check all that apply)	Secondary Indica	tors (minimum of two required
Surface Wa			Water-Stained Leaves (B9)	Surface Soil	
High Water			Aquatic Fauna (B13)	Drainage Pa	
			True Aquatic Plants (B14)		Water Table (C2)

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check	all that apply)	Secondary Indicators (minimum of two required)
High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Field Observations:		
Surface Water Present? Yes No _X	Depth (inches):	
Water Table Present? Yes No X	Depth (inches):	
Saturation Present? Yes No _X (includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No _X
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous inspecti	ions), if available:
Remarks:		

### WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date: 9/26/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point: W-A31
Investigator(s): JMM KMP	Section, Township, Range:	T1N R15E S16	
Landform (hillslope, terrace, etc.): Terrace	Local relief (conc	ave, convex, none):	Concave
Slope (%): 0 Lat: 41.036866	Long: <u>-83.138714</u>		Datum: NAD 83
Soil Map Unit Name: Haskins loam, 2 to 6 percent slopes		NWI classific	ation: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			

Cowardin: PEM

Soils continued: Digby loam, 1 to 4 percent slopes

VEGETATION - Use scientific names of plants.

	Absolute		t Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: _3 (A)	
2				Total Number of Dominant	
3				Species Across All Strata: (B)	
4					
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	
		= Total Co	ver		
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2				OBL species x 1 =	
3				FACW species x 2 =	
4				FAC species x 3 =	
5				FACU species x 4 =	
		= Total Co	ver	UPL species x 5 =	
Herb Stratum (Plot size: 5' )				Column Totals: (A) (B)	
1. Phalaris arundinacea	35	Х	FACW	, , ,, , ,	
2. Leersia oryzoides	25	Х	OBL	Prevalence Index = B/A =	
3. Polygonum sagittatum	20	Х	OBL	Hydrophytic Vegetation Indicators:	
4. Bidens frondosa	5		FACW	X 1 - Rapid Test for Hydrophytic Vegetation	
5. Pilea pumilia	15		FACW	X 2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting	
8				data in Remarks or on a separate sheet)	
9				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
10.					
	100	= Total Co	ver	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
Woody Vine Stratum (Plot size:)				be present, unless disturbed or problematic.	
1				Hydrophytic	
2				Vegetation	
		= Total Co		Present? Yes <u>No</u>	
Remarks: (Include photo numbers here or on a separate s	sheet.)				

### SOIL

Depth (inches)	Matrix		Red	ox Featur	es			
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
)-6	10YR 5/2	90 7	′.5YR 4/6	10	С	M/PL	SL	
6-18	10YR 4/1	80 7	′.5YT 4/	20	С	M/PL	SCL	
ype: C=C	oncentration, D=De	pletion, RM=R	educed Matrix, N	IS=Maske	d Sand Gr	ains.	<sup>2</sup> Location: PL	.=Pore Lining, M=Matrix.
	Indicators:							Problematic Hydric Soils <sup>3</sup> :
_ Histoso	I (A1)		Sandy	Gleyed N	atrix (S4)		Coast Prair	rie Redox (A16)
Histic E	pipedon (A2)		Sandy	Redox (S	5)		Dark Surfa	ce (S7)
_ Black H	listic (A3)		Strippe	ed Matrix (	S6)		Iron-Manga	anese Masses (F12)
_ Hydroge	en Sulfide (A4)				ineral (F1)		Very Shallo	ow Dark Surface (TF12)
	d Layers (A5)		Loamy	Gleyed N	latrix (F2)		Other (Exp	lain in Remarks)
_	uck (A10)	(111)	X Deplet					
	ed Below Dark Surface ark Surface (A12)	ce (A11)		Dark Sur	urface (F6)		<sup>3</sup> Indicators of h	wdrophytic vegetation and
_	Mucky Mineral (S1)			Depressi	• •			ydrophytic vegetation and drology must be present,
- '	ucky Peat or Peat (S	3)		Depressi	0115 (1-0)			urbed or problematic.
	Layer (if observed)	-						
Type:								~
	iches):						Hydric Soil Pres	sent? Yes <u>×</u> No
emarks:								
	OGY							
	OGY drology Indicators	:						
etland Hy			d; check all that a	ipply)			Secondary Ir	ndicators (minimum of two requir
etland Hy rimary Indi Surface	rdrology Indicators			apply) ained Lea	ves (B9)			ndicators (minimum of two requir Soil Cracks (B6)
/etland Hy rimary Indi Surface ∠ High Wa	rdrology Indicators icators (minimum of Water (A1) ater Table (A2)		Water-St Aquatic F	ained Lea auna (B1	3)		Surface Drainage	Soil Cracks (B6) e Patterns (B10)
<mark>/etland Hy</mark> rimary Indi Surface ⊻ High Wa	rdrology Indicators icators (minimum of Water (A1) ater Table (A2)		Water-St Aquatic F	ained Lea	3)		Surface Drainage	Soil Cracks (B6)
/etland Hy rimary Indi Surface ≤ High Wa ≤ Saturati	rdrology Indicators icators (minimum of Water (A1) ater Table (A2)		Water-St Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14) Odor (C1)		Surface Drainage Dry-Sea Crayfish	Soil Cracks (B6) e Patterns (B10)
/etland Hy rimary Indi Surface ≤ High Wa ≤ Saturati _ Water M	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3)		Water-St Aquatic F True Aqu Hydroger X_ Oxidized	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on Liv		Surface Drainage Dry-Sea Crayfish (C3) Saturatio	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
/etland Hy rimary Indi Surface High W Saturati Saturati Sedime Drift De	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) iposits (B3)		Water-St     Aquatic F     True Aqu     Hydroger     X Oxidized     Presence	ained Lea auna (B1 atic Plant n Sulfide C Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Liv red Iron (C4	4)	C3) CC3) Caracter Car	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
/etland Hy rimary Indi Surface ✓ High Wa ✓ Saturati ✓ Water M – Sedime – Drift De – Algal M	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3) at or Crust (B4)		Water-St     Aquatic F     True Aqu     Hydroger     X Oxidized     Presence     Recent Ir	ained Lea auna (B1 atic Plant on Sulfide ( Rhizosph of Reduction on Reduction	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille	4)	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Vetland Hy rimary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M Iron De	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) mt Deposits (B2) oposits (B3) at or Crust (B4) posits (B5)	<u>one is required</u>	Water-St     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent Ir     Thin Muc	ained Lea Fauna (B1 atic Plant on Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille (C7)	4)	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Vetland Hy rimary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M Iron De	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3) at or Crust (B4)	<u>one is required</u>	Water-St     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent Ir     Thin Muc	ained Lea auna (B1 atic Plant on Sulfide ( Rhizosph of Reduction on Reduction	3) s (B14) Odor (C1) eres on Liv eed Iron (C4 tion in Tille (C7)	4)	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Vetland Hy rimary Indi Surface High Wa Saturati Water N Sedime Drift De Algal M Inon De Inon De Inundat	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) mt Deposits (B2) oposits (B3) at or Crust (B4) posits (B5)	one is required Imagery (B7)	Water-St     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc     Gauge o	ained Lea Fauna (B1 atic Plant on Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9)	4)	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
/etland Hy rimary Indi Surface High Wi Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concav	one is required Imagery (B7) re Surface (B8	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent Ir     Thin Muc     Gauge oi )      Other (Ex	ained Lea Fauna (B1 atic Plant on Sulfide ( Rhizosph of Reduc on Reduc on Reduc k Surface r Well Dat cplain in R	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9)	4)	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Vetland Hy rimary Indi Surface High Wi Saturati Sedime Drift De Algal M Iron De Inundat Sparsel ield Obser	rdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial ly Vegetated Concav rvations: ter Present?	Imagery (B7) re Surface (B8 Yes No	Water-St Aquatic F True Aqu Hydrogen X Oxidized Presence Recent Ir Gauge of Other (E: Depth (i	ained Lea Fauna (B1 atic Plant: Sulfide C Rhizosph of Reduc on Reduc on Reduc k Surface r Well Dat cplain in R	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9)	4)	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
rimary Indi Surface High Wi Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel ield Obser	rdrology Indicators icators (minimum of i water (A1) ater Table (A2) ion (A3) Marks (B1) ion Deposits (B2) ion of Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concav rvations: ter Present?	Imagery (B7) ve Surface (B8 Yes No	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent Ir     Thin Muc     Gauge or ) Other (E:      X Depth (i	ained Lea Fauna (B1 atic Plant on Sulfide ( Rhizosph of Reduc on Reduc on Reduc k Surface r Well Dat cplain in R	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9)	d Soils (Cr	<ul> <li>Surface</li> <li>Drainage</li> <li>Dry-Sea</li> <li>Crayfish</li> <li>Saturation</li> <li>Stunted</li> <li>Sea</li> </ul>	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

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

Remarks:

Saturation Present? (includes capillary fringe)

### WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Seneca Wind Project	City/County: Seneca		Sampling Date:	9/26/2018
Applicant/Owner: Seneca Wind		State: OH	Sampling Point:	W-A32
Investigator(s): JMM KMP	Section, Township, Range:	T1N R15E S21		
Landform (hillslope, terrace, etc.): Terrace	Local relief (cond	ave, convex, none):	Concave	
Slope (%): 0 Lat: 41.036735	Long: <u>-83.138688</u>		Datum: NAD 8	3
Soil Map Unit Name: Haskins loam, 2 to 6 percent slopes		NWI classific	ation: <u>N</u> /A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>X</u> No	_ (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	nal Circumstances" p	oresent? Yes 🚬	< №
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answe	rs in Remarks.)	
			·	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         X         No           Yes         X         No           Yes         X         No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			
Cowardin: PEM			

### **VEGETATION** – Use scientific names of plants.

	Absolute		t Indicator	Dominance Test worksheet	t:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC	c: <u>3</u>	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	3	(B)
4						
5				Percent of Dominant Species That Are OBL, FACW, or FAC		(A/B)
		= Total Co	ver		0	(700)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index workshee	et:	
1				Total % Cover of:	Multiply by:	_
2				OBL species	x 1 =	_
3				FACW species	x 2 =	
4				FAC species	x 3 =	
5				FACU species		
<u> </u>		= Total Co	wer	UPL species		
Herb Stratum (Plot size: <u>5</u> ')		- 10(a) 00		Column Totals:		
1. Phalaris arundinacea	35	Х	FACW		(A)	_ (0)
2. Leersia oryzoides	25	Х	OBL	Prevalence Index = B//	A =	_
3 Polygonum sagittatum	20	Х	OBL	Hydrophytic Vegetation Ind	licators:	
A Bidens frondosa	5		FACW	X 1 - Rapid Test for Hydro		
5. Pilea pumilia	15		FACW	X 2 - Dominance Test is >8		
				3 - Prevalence Index is ≤		
6				4 - Morphological Adapta		norting
7				data in Remarks or or	n a separate sheet)	porting
8				Problematic Hydrophytic		n)
9					(	
10				<sup>1</sup> Indicators of hydric soil and	wetland bydrology n	oust
······································	100	= Total Co	over	be present, unless disturbed		lust
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Yes	No	
		= Total Co	over			
Remarks: (Include photo numbers here or on a separate	sheet.)					

### SOIL

Depth	Matrix	~ ~ ~		ox Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Remarks
0-6	10YR 5/2	90	7.5YR 4/6	10		M/PL	SL	
6-18	10YR 4/1	80	7.5YT 4/	_ 20	_ <u>C</u>	M/PL	SCL	
Type: C=C	Concentration, D=De	pletion, RM	I=Reduced Matrix, N	IS=Maske	ed Sand Gr	ains.	<sup>2</sup> Locatio	on: PL=Pore Lining, M=Matrix.
	I Indicators:							rs for Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Sandy	Gleyed N	Aatrix (S4)		Coas	t Prairie Redox (A16)
	Epipedon (A2)			Redox (S				Surface (S7)
Black H	listic (A3)		Strippe	ed Matrix	(S6)		Iron-	Manganese Masses (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky M	lineral (F1)			Shallow Dark Surface (TF12)
	ed Layers (A5)		Loamy	Gleyed N	Matrix (F2)		Othe	r (Explain in Remarks)
_	luck (A10)							
	ed Below Dark Surfa	ce (A11)		Dark Sur	. ,		31	
	Dark Surface (A12) Mucky Mineral (S1)			Depressi	Surface (F7	)		rs of hydrophytic vegetation and nd hydrology must be present,
	lucky Peat or Peat (S	33)	Kedux	Depressi				ss disturbed or problematic.
_ • • • • •								so alotarboa or problemate.
Restrictive	Laver (if observed)	):						
_	Layer (if observed	):						
Туре:							Hydric So	il Present? Yes <u> </u>
Type:	nches):						Hydric So	il Present? Yes <u> </u>
Type: Depth (ir Remarks:	nches):						Hydric So	il Present? Yes <u>X</u> No
Type: Depth (ir Remarks: YDROLC	nches):						Hydric So	il Present? Yes <u>×</u> No
Type: Depth (ir Remarks: YDROLC	nches): DGY ydrology Indicators		uired: check all that a					
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind	DGY ydrology Indicators icators (minimum of						<u>Second</u>	dary Indicators (minimum of two required
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind	DGY ydrology Indicators licators (minimum of e Water (A1)		Water-St	ained Lea			<u>Secon</u>	dary Indicators (minimum of two required
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface High W	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2)		Water-St Aquatic F	ained Lea auna (B1	3)		<u>Secon</u> Su Dr	dary Indicators (minimum of two required Irface Soil Cracks (B6) ainage Patterns (B10)
Type: Depth (ir Remarks: YDROLO Vetland Hy Primary Ind Surface X High W Saturat	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3)		Water-St Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		<u>Second</u> Su Dr Dr	dary Indicators (minimum of two required Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2)
Type: Depth (ir Remarks: YDROLC YDROLC Vetland Hy Primary Ind Surface X High W Saturat Water I	DGY ydrology Indicators iicators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		Water-St Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant n Sulfide (	3) s (B14) Odor (C1)		<u>Second</u> Su Dr Dr Cr	dary Indicators (minimum of two required Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8)
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface X High W X Saturat Water I Water I Sedime	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-St Aquatic F True Aqu Hydroger X Oxidized	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph	3) s (B14) Odor (C1) ieres on Liv		<u>Secon</u> Su Dr Dr Cr (C3) Sa	dary Indicators (minimum of two required Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) ituration Visible on Aerial Imagery (C9)
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Surface X High W X Saturat Saturat Sedime Sedime Drift De	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-St Aquatic F True Aqu Hydroger X Oxidized Presence	ained Lea auna (B1 atic Plant n Sulfide ( Rhizosph e of Reduc	3) is (B14) Odor (C1) ieres on Liv ced Iron (C	4)	<u>Secon</u> Su Dr Dr Cr (C3) Sa St	dary Indicators (minimum of two required Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4)		Water-St     Aquatic F     True Aqu     Hydroger     X Oxidized     Presence     Recent Ir	ained Lea auna (B1 atic Plant on Sulfide ( Rhizosph of Reduction Reduction	3) s (B14) Odor (C1) neres on Liv ced Iron (C ction in Tille	4)	<u>Secon</u> Su Dr Dr Cr (C3) St 6) X Ge	dary Indicators (minimum of two required Inface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) eomorphic Position (D2)
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Water I Saturat Water I Sedime Drift De Algal M Iron De	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5)	: one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc	ained Lea Fauna (B1 atic Plant n Sulfide ( Rhizosph e of Reduc on Reduc k Surface	3) s (B14) Odor (C1) leres on Liv ced Iron (C ction in Tille e (C7)	4)	<u>Secon</u> Su Dr Dr Cr (C3) St 6) X Ge	dary Indicators (minimum of two required Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundat	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial	: one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc 37) Gauge on	ained Lea Fauna (B1 atic Plant Sulfide ( Rhizosph of Reduct on Reduct on Reduct k Surface r Well Dat	3) is (B14) Odor (C1) ieres on Liv ced Iron (C tion in Tille e (C7) a (D9)	4)	<u>Secon</u> Su Dr Dr Cr (C3) St 6) X Ge	dary Indicators (minimum of two required Inface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) eomorphic Position (D2)
Type: Depth (ir Remarks: YDROLC Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundal Sparse	DGY ydrology Indicators iccators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) tion Visible on Aerial ly Vegetated Concav	: one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc 37) Gauge on	ained Lea Fauna (B1 atic Plant Sulfide ( Rhizosph of Reduct on Reduct on Reduct k Surface r Well Dat	3) is (B14) Odor (C1) ieres on Liv ced Iron (C tion in Tille e (C7) a (D9)	4)	<u>Secon</u> Su Dr Dr Cr (C3) St 6) X Ge	dary Indicators (minimum of two required Inface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) eomorphic Position (D2)
Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundat Sparse Field Obse	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial ly Vegetated Concav rvations:	: one is requ	Water-St     Aquatic F     Aquatic F     True Aqu     Hydrogen     X Oxidized     Presence     Recent In     Thin Muc 37) Gauge on	ained Lea Fauna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc k Surface r Well Dat cplain in R	3) is (B14) Odor (C1) ieres on Liv ced Iron (C tion in Tille e (C7) a (D9)	4)	<u>Secon</u> Su Dr Dr Cr (C3) St 6) X Ge	dary Indicators (minimum of two require Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) eomorphic Position (D2)

Water Table Present? Saturation Present? (includes capillary fringe)	Yes         X         No         Depth (inches):         0           Yes         X         No         Depth (inches):         0	 Wetland Hydrology Present? Yes
Describe Recorded Data (stre	eam gauge, monitoring well, aerial photos, previous insp	pections), if available:
Remarks:		

No \_\_\_\_\_

### WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Seneca Wind Project	City/County: Seneca	Sampling Date: <u>9/20/2018</u>
Applicant/Owner: Seneca Wind	State: OH	Sampling Point: <u>W-A31, W-A32</u> UP
Investigator(s): JMM KMP	_ Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Flat field	Local relief (concave, convex, nor	ne): <u>Convex</u>
	_ Long: <u>-83.138814</u>	Datum: NAD 83
Soil Map Unit Name: Blount silt loam, end moraine, 2 to 4 perc	cent slopes NWI class	sification: <u>N/A</u>
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes 🗶 No (If no, explain i	n Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstance	s" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transed	cts, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area	

Wetland Hydrology Present?	Yes No	within a Wetland?	Yes No
Remarks: Upland sample plot			

### **VEGETATION** – Use scientific names of plants.

	Indicator	Dominance Test worksheet:
<u>% Cover</u> Species?	Status	Number of Dominant Species
		That Are OBL, FACW, or FAC: _0(A)
		Total Number of Dominant
		Species Across All Strata:(B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B
	/er	
		Prevalence Index worksheet:
		Total % Cover of: Multiply by:
		OBL species x 1 =
		FACW species x 2 =
		FAC species x 3 =
		FACU species x 4 =
		UPL species x 5 =
		Column Totals: (A) (B)
100 X	UPL	
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.0 <sup>1</sup>
		4 - Morphological Adaptations <sup>1</sup> (Provide supportin
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
= Total Cov	/er	be present, unless disturbed or problematic.
		Hydrophytic
		Vegetation
	/er	Present? Yes No
sheet.)		1
,		
	= Total Cov	= Total Cover

Depth	Matrix	%	Redox Features	- Tautura Damadra		
<u>(inches)</u> 0-12	Color (moist) 10YR 4/4	100	<u>Color (moist)</u> <u>%</u> <u>Type<sup>1</sup></u> Loc <sup>2</sup>	_ <u>Texture</u> <u>Remarks</u> SIL		
Type: C=C	Concentration, D=Dep	letion, RM=	Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
lydric Soil	Indicators:			Indicators for Problematic Hydric Soils <sup>3</sup> :		
Histoso	l (A1)		Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)		
_ Histic E	pipedon (A2)		Sandy Redox (S5)	Dark Surface (S7)		
_ Black H	listic (A3)		Stripped Matrix (S6)	Iron-Manganese Masses (F12)		
_ Hydroge	en Sulfide (A4)		Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)		
_	d Layers (A5)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)		
_	uck (A10)		Depleted Matrix (F3)			
	ed Below Dark Surfac	e (A11)	Redox Dark Surface (F6)			
_	ark Surface (A12)		Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and		
_ ,	Mucky Mineral (S1)		Redox Depressions (F8)	wetland hydrology must be present,		
	ucky Peat or Peat (S	,		unless disturbed or problematic.		
	Layer (if observed):					
Type:	Automatical and a second s			Hydric Soil Present? Yes No X		
Depth (in	nches):					
Remarks:						
YDROLC						
Vetland Hy	drology Indicators:					
rimary Indi	cators (minimum of o	ne is requir	ed; check all that apply)	Secondary Indicators (minimum of two require		
_ Surface	e Water (A1)		Water-Stained Leaves (B9)	Surface Soil Cracks (B6)		
_ High Wa	ater Table (A2)		Aquatic Fauna (B13)	Drainage Patterns (B10)		
_ Saturati	ion (A3)		True Aquatic Plants (B14)	Dry-Season Water Table (C2)		
_ Water M	/larks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
_ Sedime	ent Deposits (B2)		Oxidized Rhizospheres on Living Root	s (C3) Saturation Visible on Aerial Imagery (C9)		
_ Drift De	posits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
	at or Crust (B4)		Recent Iron Reduction in Tilled Soils (	C6) Geomorphic Position (D2)		

\_\_\_ Geomorphic Position (D2)

\_\_\_ Iron Deposits (B5) \_\_\_\_ Thin Muck Surface (C7) \_\_\_\_ FAC-Neutral Test (D5) \_\_\_\_ Inundation Visible on Aerial Imagery (B7) \_\_\_\_ Gauge or Well Data (D9) \_\_\_\_ Sparsely Vegetated Concave Surface (B8) \_\_\_\_ Other (Explain in Remarks) Field Observations: Surface Water Present? Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_ Water Table Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ Wetland Hydrology Present? Yes \_\_\_\_ No X Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_ Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

## **APPENDIX B: ORAM FORMS**

## **Background Information**

Name:	Z	Dubier
	κ.	Pulver

Date: 09/17/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

## Name of Wetland: W-A1

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.056943, -82.846777	
USGS Quad Name		Centerton
County		Seneca
Township		Venice
Section and Subsection		T1NR17E S12
Hydrologic Unit Code		041000110805
Site Visit		9/17/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A1	
Wetland Size (acres, hectares): 0.19 ac	
Sketch: Include north arrow, relationship with other surface waters, vege	tation zones, etc.
See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 18	Category: 1

## **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

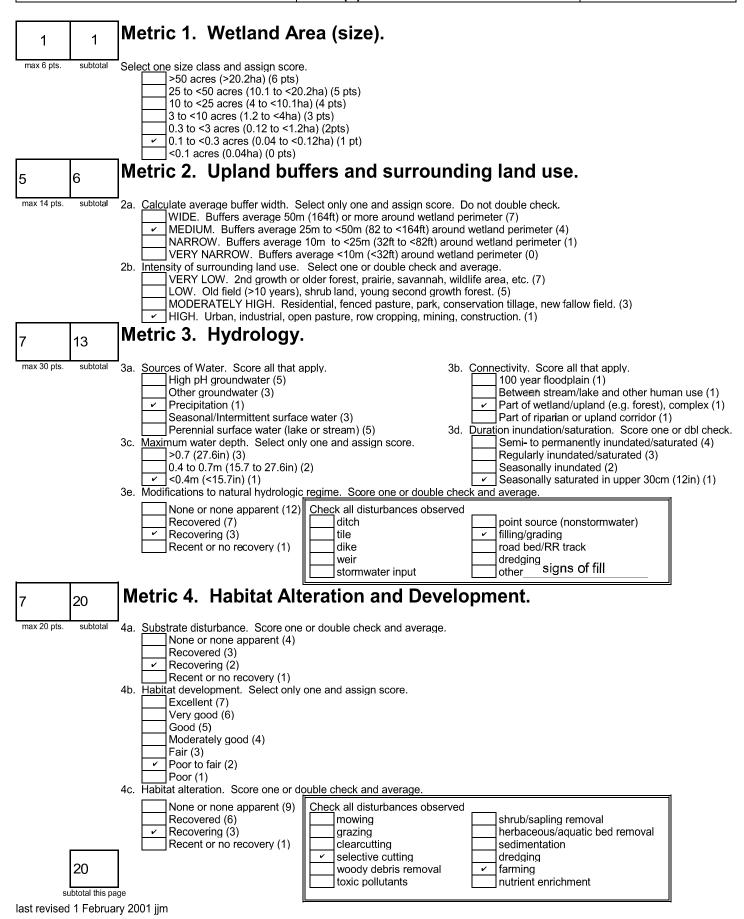
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

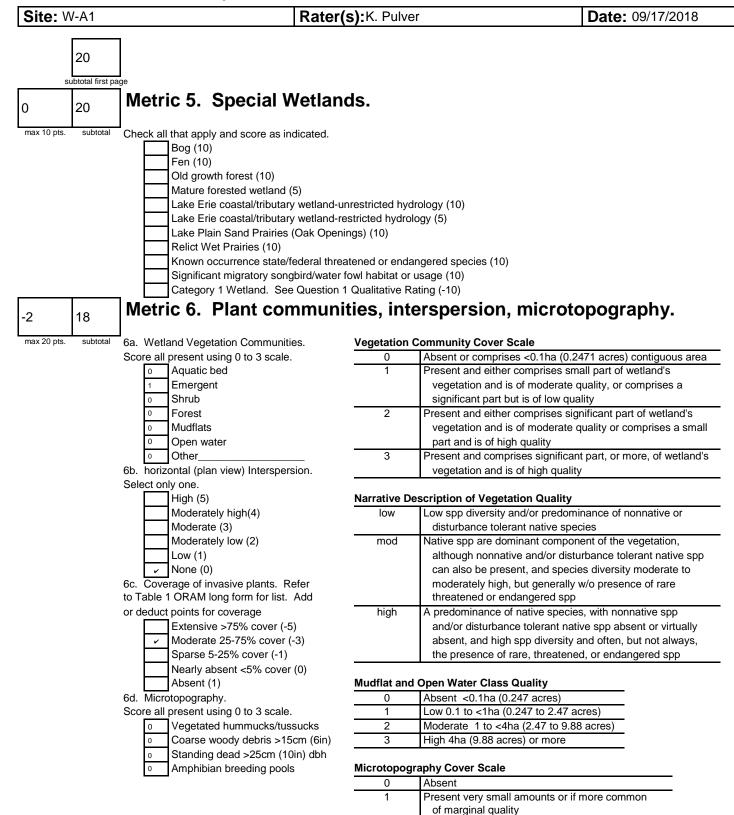
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A1





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

ORAM	<b>Summary Wor</b>	ksheet
------	--------------------	--------

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
5	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE		Category based on scor breakpoints
		18	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name: K. Pulver

Date: 09/19/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

Name of Wetland: W-A4 & W-A5

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.090046, -82.928647	
USGS Quad Name		Attica
County		Seneca
Township		Reed
Section and Subsection		T2NR17E S32
Hydrologic Unit Code		041000110805
Site Visit		9/19/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A4 & W-A5			
Wetland Size (acres, hectares): W-A4 (0.01 ac); W-A5 (0.02 ac)			
Sketch: Include north arrow, relationship with other surface waters,	vegetation zones, etc.		
See Attached.			
Comments Newsting Discussion Instituction of Octonomy Channes			
Comments, Narrative Discussion, Justification of Category Changes			
Final score : 14	Category:	1	

## **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

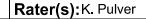
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	<b>Category 1 Wetlands.</b> Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

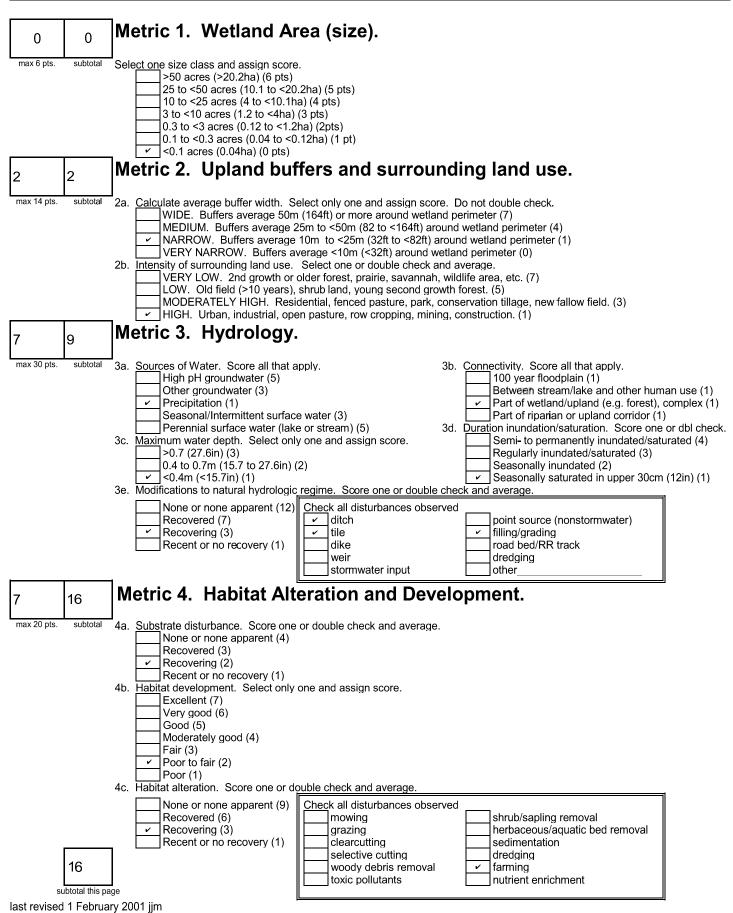
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

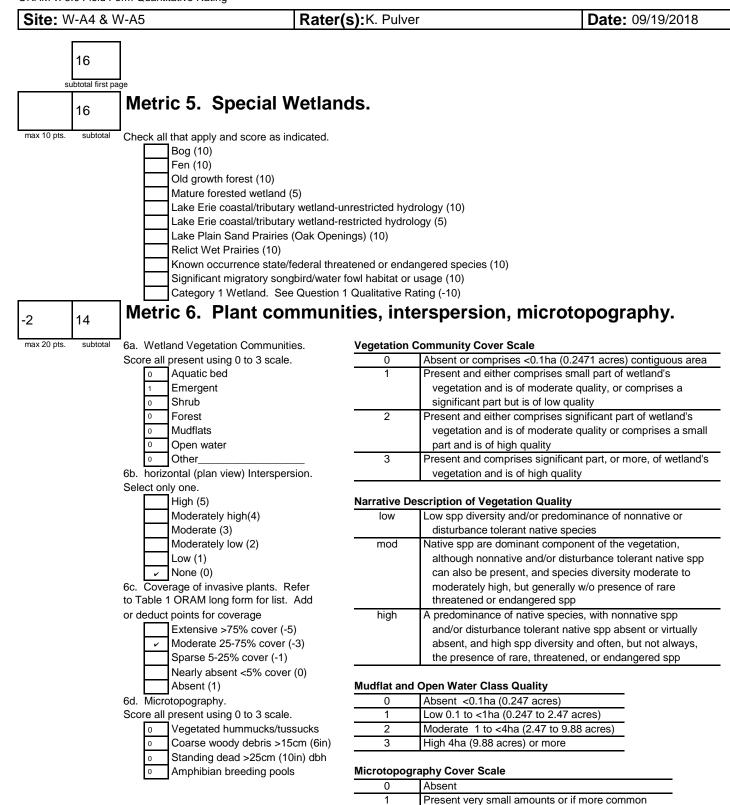
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

**Site:** W-A4 & W-A5







End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

8

14

ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE		Category based on scor breakpoints
		14	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:	v	Dubia
	κ.	Pulver

Date: 09/27/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

## Name of Wetland: W-A36

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.07874, -82.927329	
USGS Quad Name		Attica
County		Seneca
Township		Venice
Section and Subsection		T1NR17E S5
Hydrologic Unit Code		041000110805
Site Visit		9/27/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A36		
Wetland Size (acres, hectares): 0.15 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zor See Attached.	nes, etc.	
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 12	Category:	1

## **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

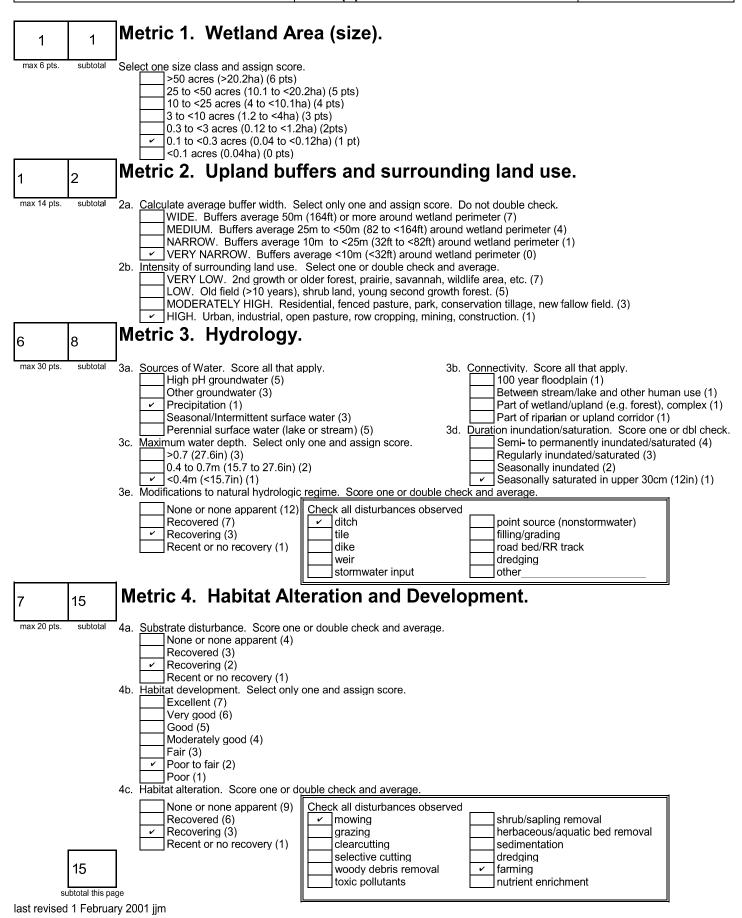
~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	<b>Relict Wet Prairies</b> . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		~
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

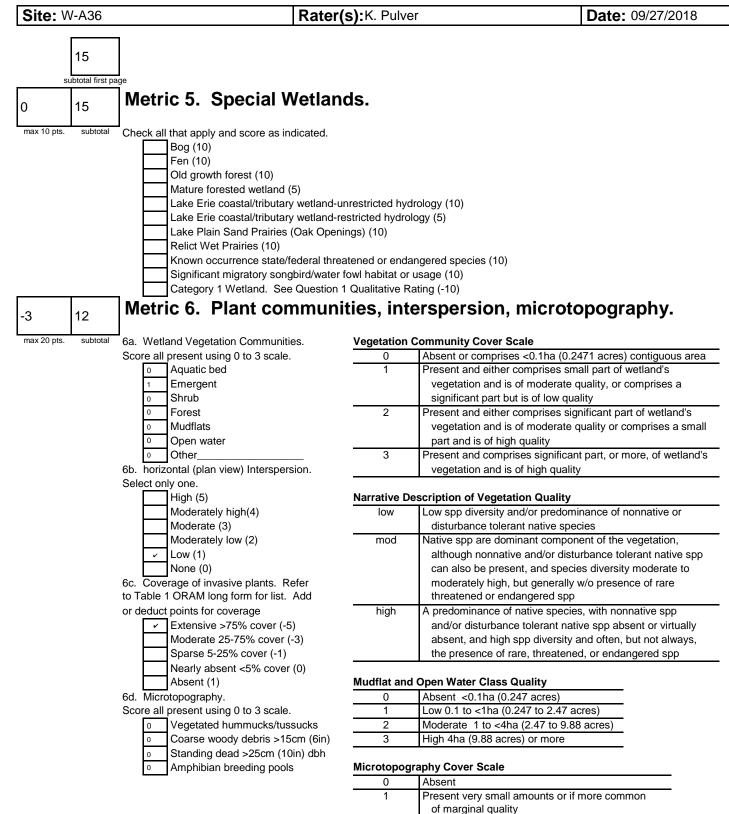
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A36

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

12

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE		Category based on scor breakpoints
		12	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:		
nume.	17	<b>D</b> I
	ĸ	Pulver

Date: 09/27/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A35

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.087879, -82.942253	
USGS Quad Name		Attica
County		Seneca
Township		Reed
Section and Subsection		T2NR17E S31
Hydrologic Unit Code		041000110805
Site Visit		9/27/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A35		
Wetland Size (acres, hectares): 0.21 ac		
Sketch: Include north arrow, relationship with other surface waters, veg	etation zones, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 8	Category:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

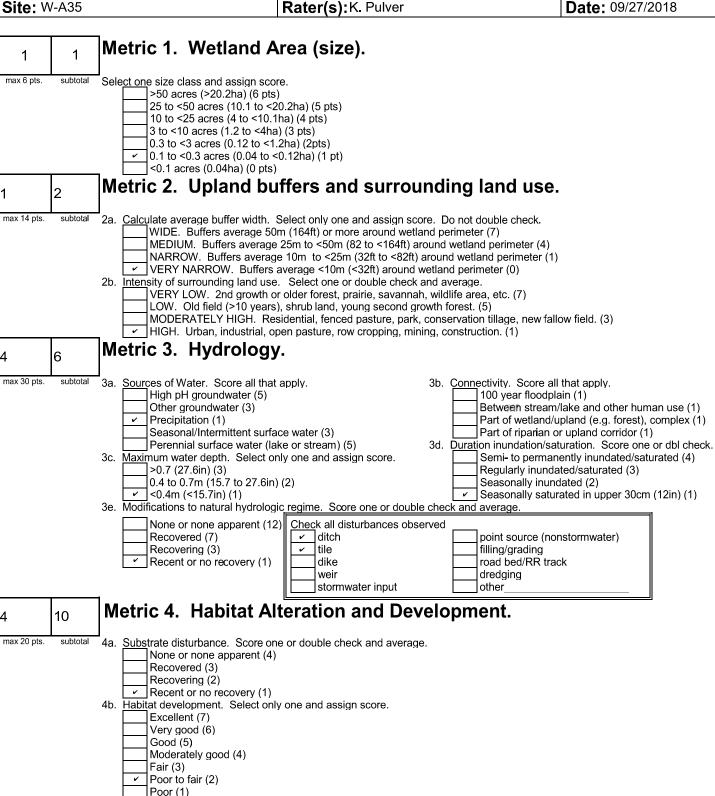
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	<b>Category 1 Wetlands.</b> Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

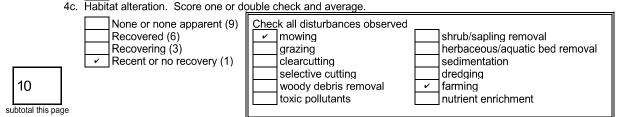
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

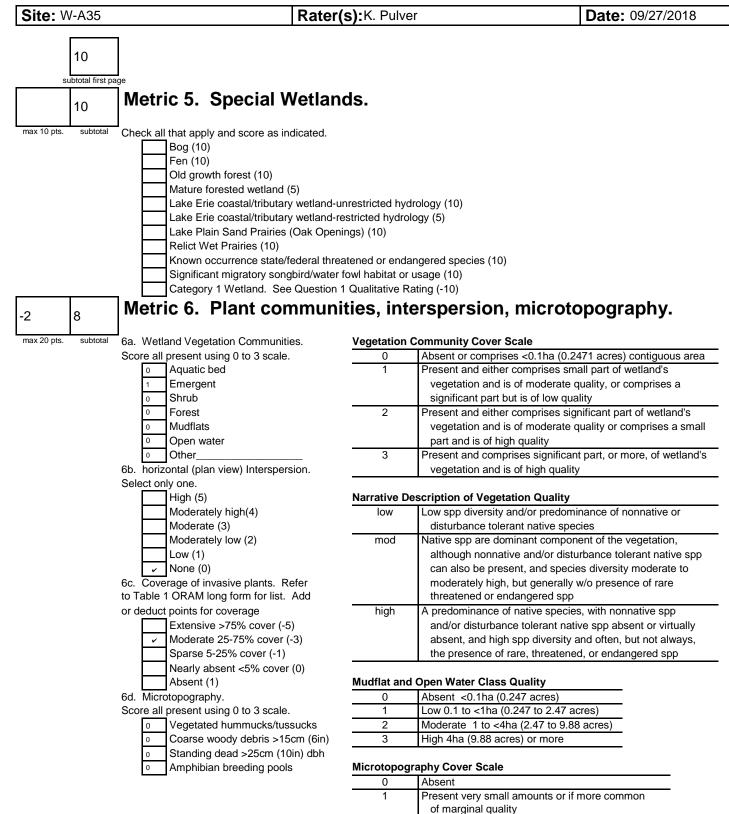
End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A35





last revised 1 February 2001 jjm



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

8

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	4	
	Metric 4. Habitat	4	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE		Category based on sco breakpoints
		8	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:		
nume.		
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Date: 09/18/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A2

Vegetation Communit(ies): PFO

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.10442, -82.897493	
USGS Quad Name		Attica
County		Seneca
Township		Reed
Section and Subsection		T1NR17E S27
Hydrologic Unit Code		041000120502
Site Visit		9/18/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A2		
Wetland Size (acres, hectares): 0.05 ac		
Wetland Size (acres, hectares): 0.05 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, e See Attached.	PtC.	
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 36Call	ategory:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

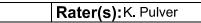
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

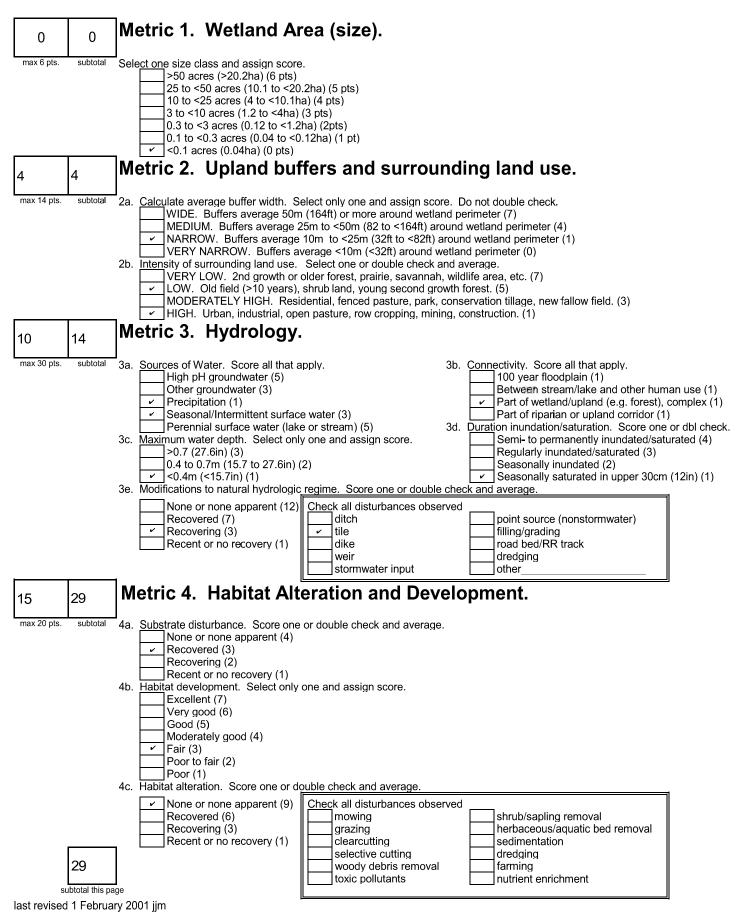
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

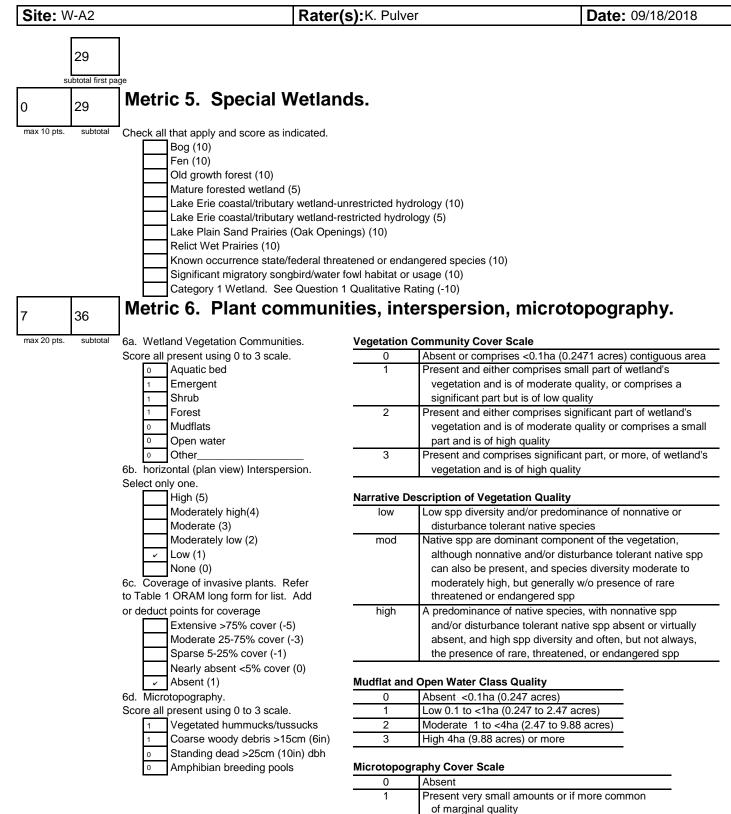
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A2







End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

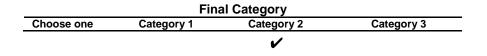
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
2	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	15	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	7	
	TOTAL SCORE		Category based on sco breakpoints
		36	Modified 2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name: CV	
Date: 09/27/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220	
Phone Number: (412) 921-7090	
e-mail address:	
Name of Wetland: W-B14 PFO	
Vegetation Communit(ies): PFO	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Attached.	
Lat/Long or UTM Coordinate         41.101753 -82.881445	
USGS Quad Name	Attica
County	Seneca
Township	Reed
Section and Subsection	T2N R17E S27
Hydrologic Unit Code	04100011
Site Visit	9/27/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map	Attached

Name of Wetland: W-B14 PFO	
Wetland Size (acres, hectares): 0.351 ac	
Wetland Size (acres, hectares): 0.351 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 41Category:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

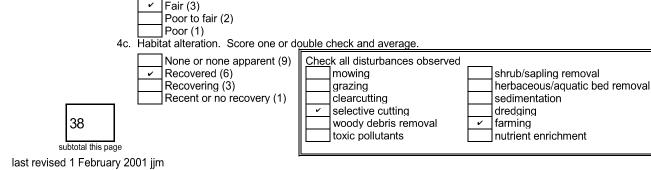
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	<b>Relict Wet Prairies</b> . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		l v
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

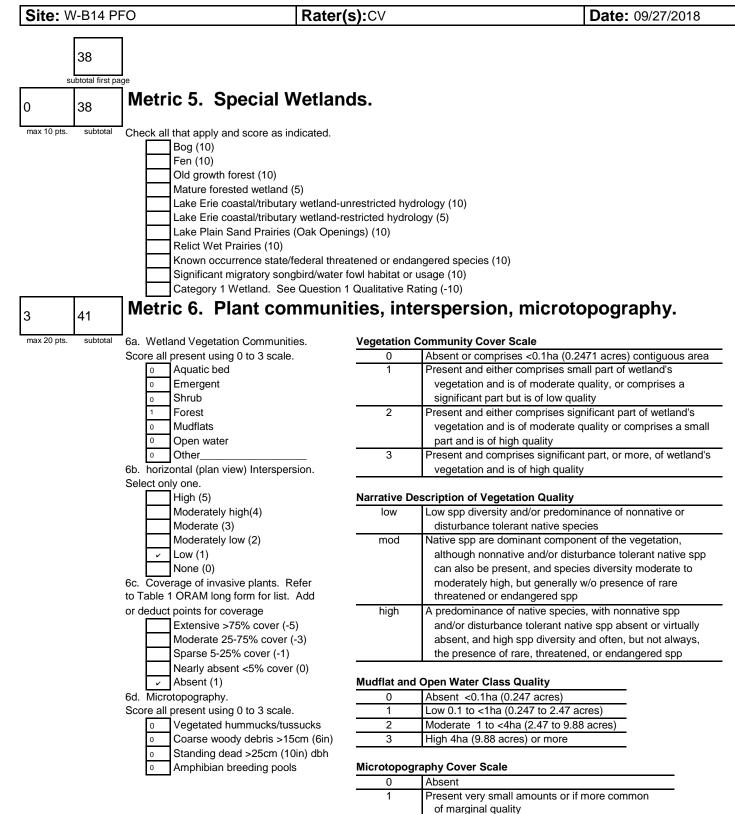
End of Narrative Rating. Begin Quantitative Rating on next page.

ORAM v. 5.0 Field Form Quantitative Rating Site: W-B14 PFO Rater(s):CV Date: 09/27/2018 Metric 1. Wetland Area (size). 2 2 max 6 pts subtotal Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrounding land use. 7 5 max 14 pts. subtota Calculate average buffer width. Select only one and assign score. Do not double check. 2a. WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) Intensity of surrounding land use. Select one or double check and average. 2b. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 25 18 max 30 pts. Sources of Water. Score all that apply. subtotal Connectivity. Score all that apply. 3a. 3b. High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select only one and assign score. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Recovering (3) tile filling/grading Recent or no recovery (1) dike road bed/RR track dredging weir stormwater input other Metric 4. Habitat Alteration and Development. 38 13 max 20 pts. 4a. Substrate disturbance. Score one or double check and average. subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4h Habitat development. Select only one and assign score. Excellent (7)



Very good (6) Good (5)

Moderately good (4)



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

41

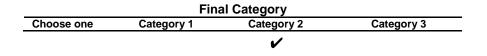
ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
5	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	18	
	Metric 4. Habitat	13	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE		Category based on sco breakpoints
		41	Modified 2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🖌	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: CV	
Date: 09/27/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220	
-	
Phone Number: (412) 921-7090 e-mail address:	
Name of Wetland: W-B12, W-B13-PFO	
Vegetation Communit(ies): PFO PEM	
HGM Class(es): Riverine	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.	
USGS Quad Name	
County	Attica
Township	Seneca
	Reed
Section and Subsection	T2N R17E S26
Hydrologic Unit Code	04100011
Site Visit	9/27/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map	Attached

Name of Wetland: W-B12, W-B13-PFO		
Wetland Size (acres, hectares): 0.1452 ac		
Wetland Size (acres, hectares): 0.1452 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 42Cate	gory:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	~	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	v	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	v	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

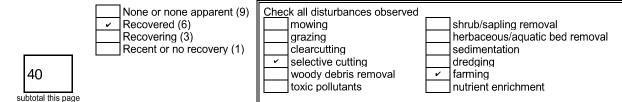
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

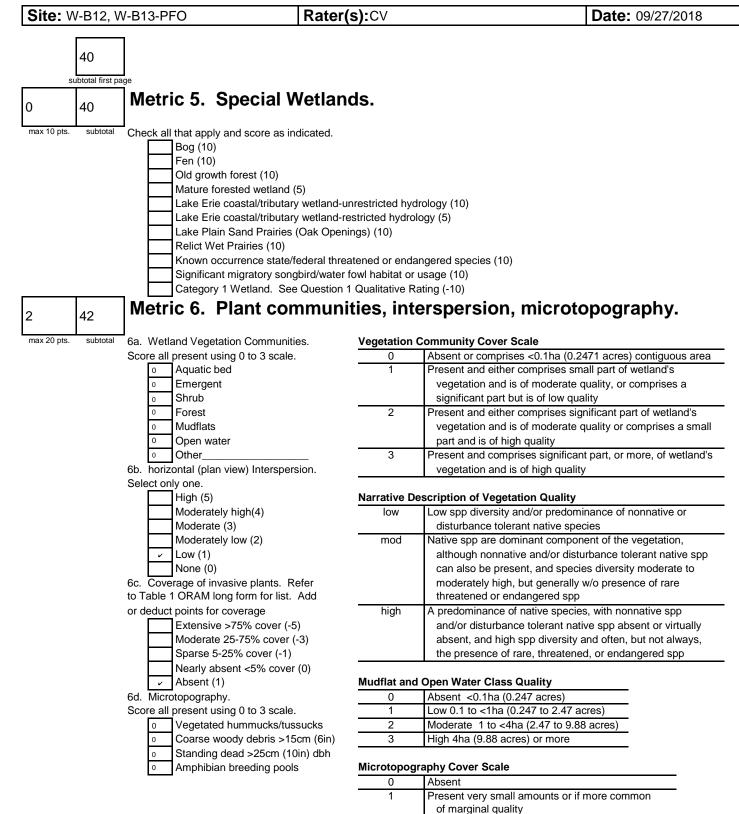
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-B12, W-B13-PFO Rater(s):CV Date: 09/27/2018 Metric 1. Wetland Area (size). 1 1 max 6 pts subtotal Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrounding land use. 6 5 max 14 pts. subtota Calculate average buffer width. Select only one and assign score. Do not double check. 2a. WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) Intensity of surrounding land use. Select one or double check and average. 2b. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 27 21 max 30 pts. Sources of Water. Score all that apply. subtotal Connectivity. Score all that apply. 3a. 3b. High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select only one and assign score. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Recovering (3) tile filling/grading Recent or no recovery (1) dike road bed/RR track dredging weir stormwater input other Metric 4. Habitat Alteration and Development. 13 40 max 20 pts. 4a. Substrate disturbance. Score one or double check and average. subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4h Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed Recovered (6) mowina shrub/sapling removal







End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

42

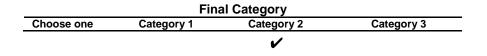
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
5	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	21	
	Metric 4. Habitat	13	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on sco breakpoints
		42	Modified 2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:		
nume.		
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Date: 09/18/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A3

Vegetation Communit(ies): PEM

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.124229, -82.916708	
USGS Quad Name		Attica
County		Seneca
Township		Reed
Section and Subsection		T2NR17E S21
Hydrologic Unit Code		041000111101
Site Visit		9/18/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A3	
Wetland Size (acres, hectares): 0.05 ac	
Wetland Size (acres, hectares): 0.05 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 22 Category:	4

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

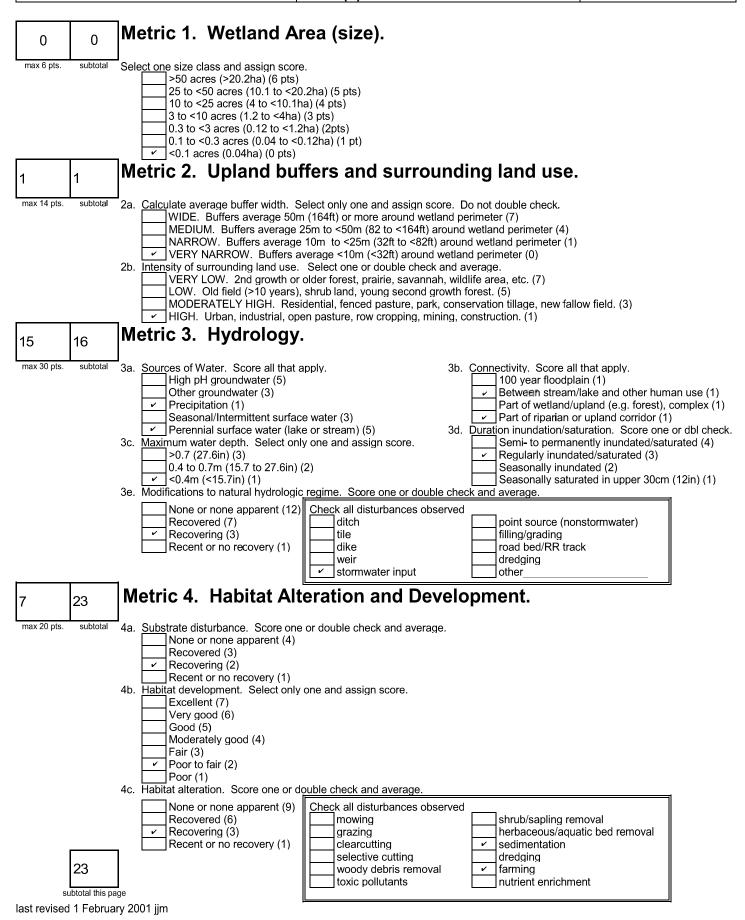
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

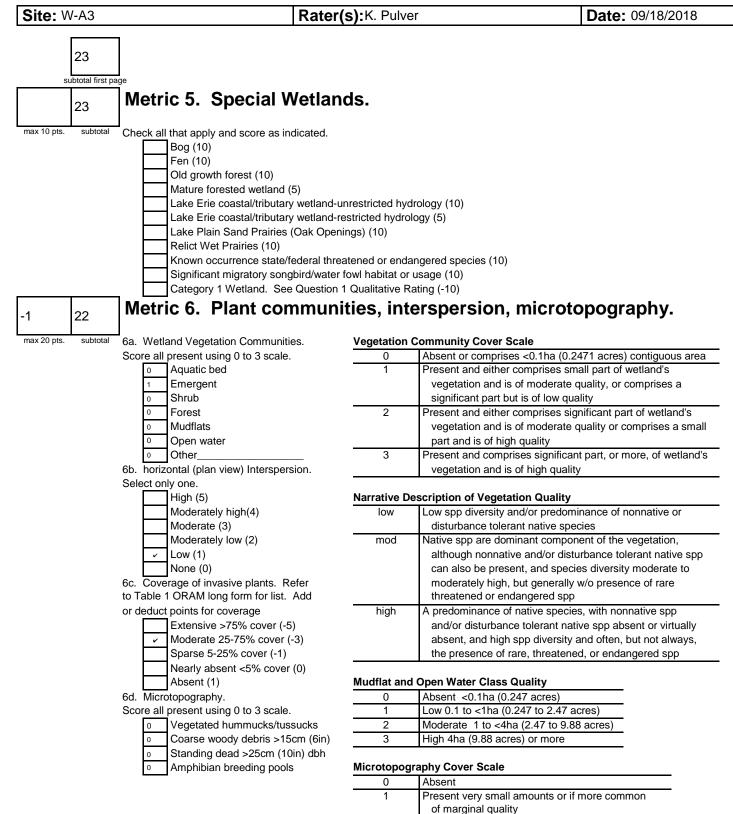
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Contro Ourantian 44	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A3





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
2	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	15	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE		Category based on sco breakpoints
		22	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:	Z	Dubier
	κ.	Pulver

Date: 09/19/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A8

Vegetation Communit(ies): PSS

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.110131, -82.970866	
USGS Quad Name		Attica
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S25
Hydrologic Unit Code		041000111101
Site Visit		9/19/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A8		
Wetland Size (acres, hectares): 0.02 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation ze	ones, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 27	Category:	

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

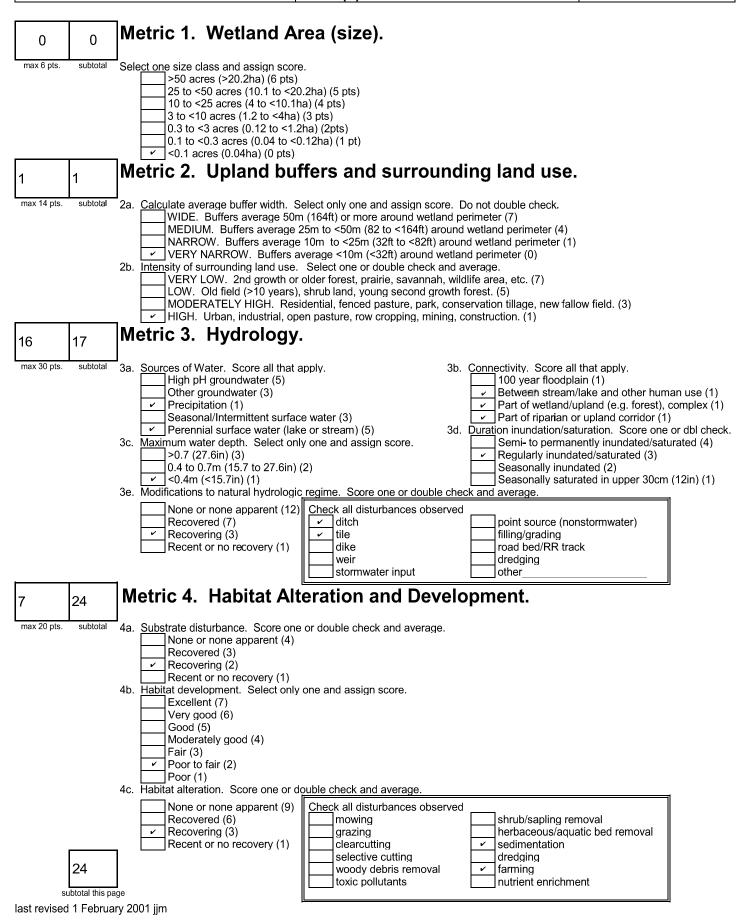
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

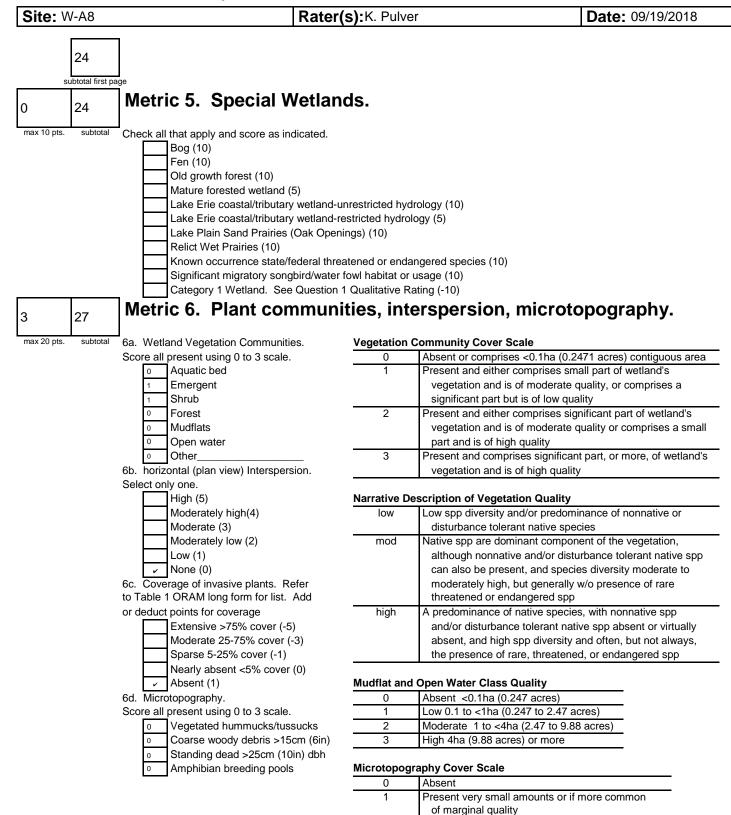
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Contro Ourantian 44	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A8





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

27

ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE		Category based on scor breakpoints
		27	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name: K. Pulver

Date: 09/19/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

Name of Wetland: W-A6 & W-A7

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.113465, -82.967093	
USGS Quad Name		Attica
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S24
Hydrologic Unit Code		041000111101
Site Visit		9/19/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A6 & W-A7	
Wetland Size (acres, hectares): W-A6 (0.02 ac); W-A7 (0.15 ac)	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score :   21   Category:   1	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

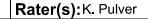
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

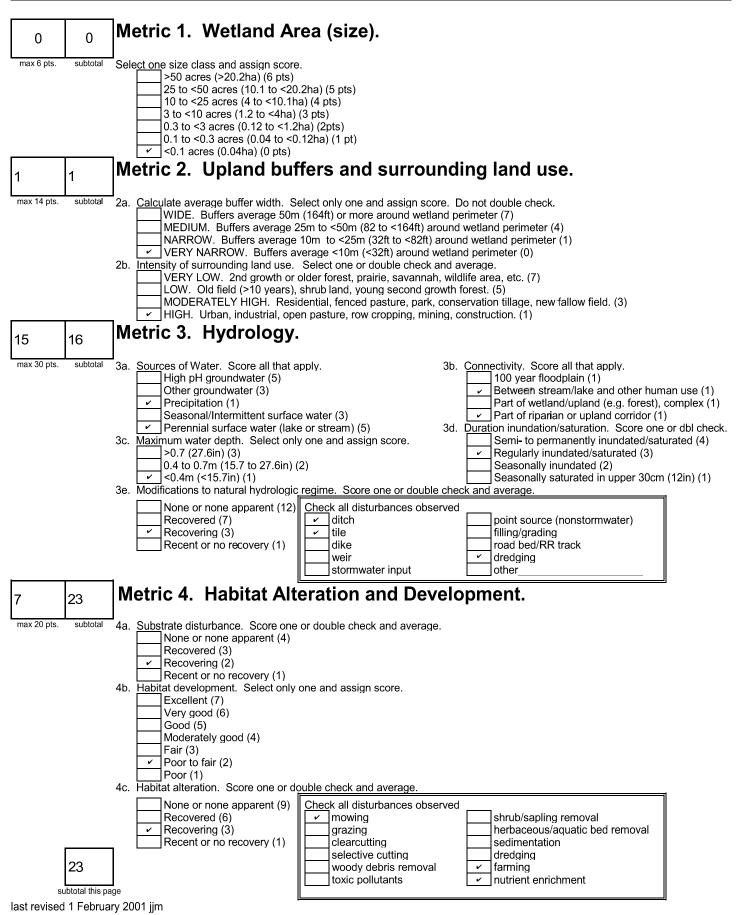
~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		~
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

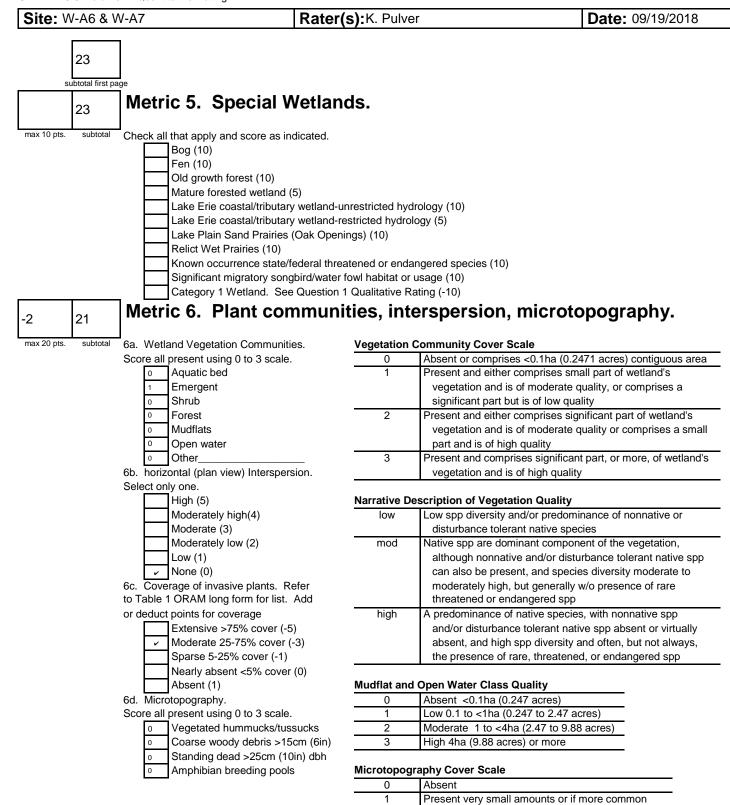
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

**Site:** W-A6 & W-A7







End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

21

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	15	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE		Category based on sco breakpoints
		21	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
nume.		
	ĸ	Pulver
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Date: 09/19/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A9

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.098107, -82.97266	
USGS Quad Name		Attica
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S25
Hydrologic Unit Code		041000111101
Site Visit		9/19/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A9		
Wetland Size (acres, hectares): 0.37 ac		
Sketch: Include north arrow, relationship with other surface waters, vege	tation zones, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 18	Category:	1

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

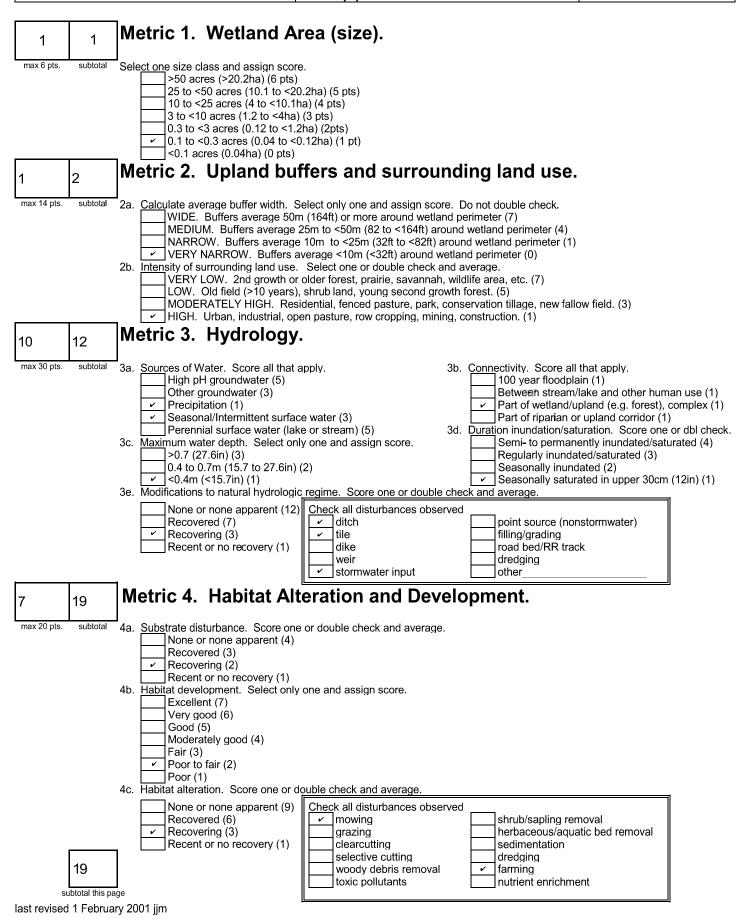
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

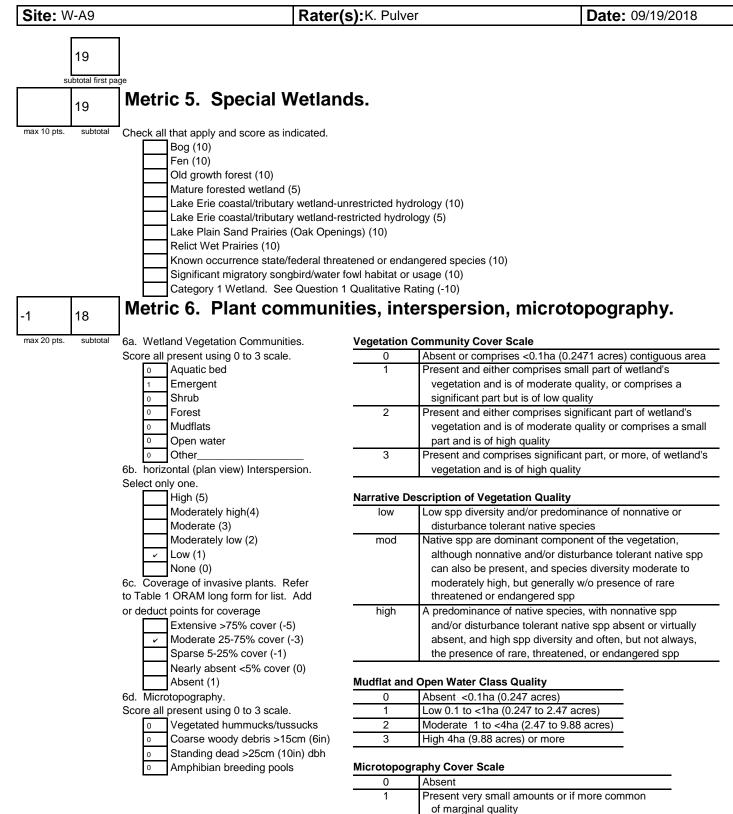
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A9





3 Present in moderate or greater amounts and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

#### End of Quantitative Rating. Complete Categorization Worksheets.

2

18

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE		Category based on scol breakpoints
		18	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:	Z	Dubia
	n.	Pulver

Date: 09/20/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A12

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.088856, -82.97238	
USGS Quad Name		Attica
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S36
Hydrologic Unit Code		041000110805
Site Visit		9/20/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A12		
Wetland Size (acres, hectares): 0.18 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation	n zones, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 19	Category:	1

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

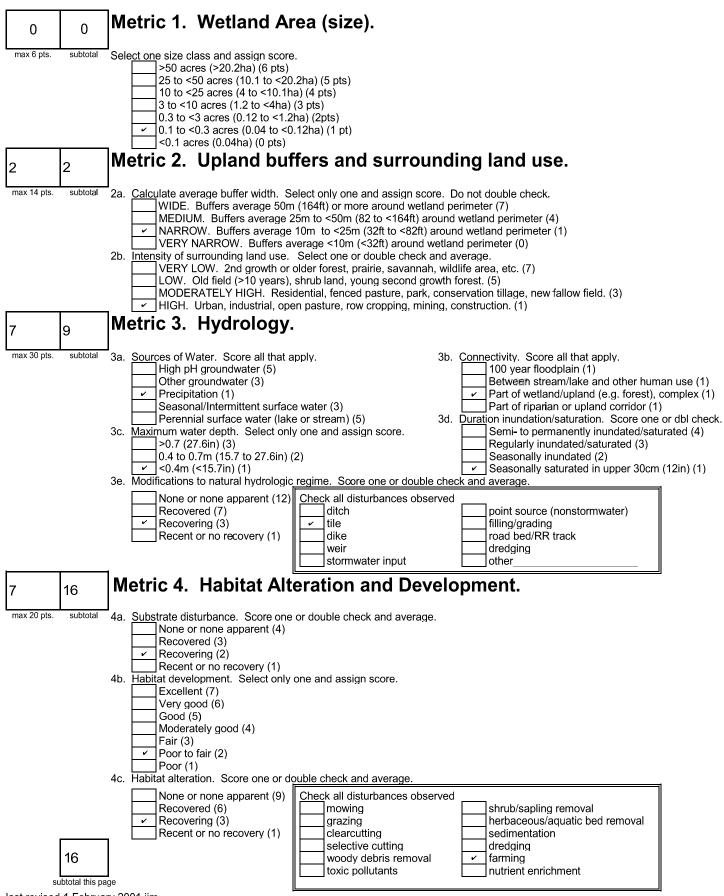
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Contro Ourantian 44	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

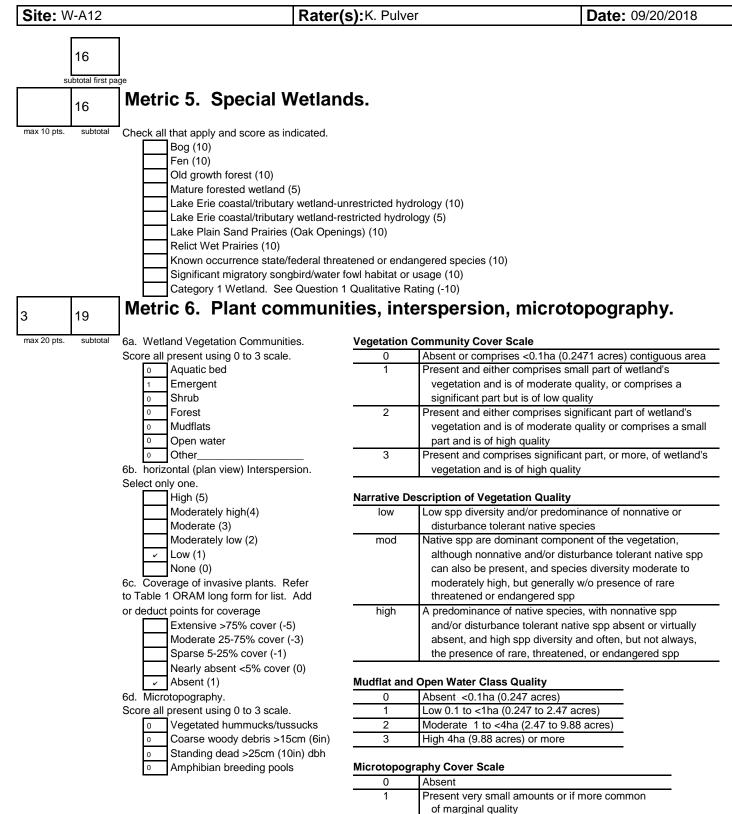
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A12

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

2

3

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE		Category based on scor breakpoints
		19	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
		<b>-</b> -
	ĸ	Pulver
	1.	

Date: 09/20/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A13

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.085698, -82.985555	
USGS Quad Name		Attica
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S35
Hydrologic Unit Code		041000110805
Site Visit		9/20/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A13	
Wetland Size (acres, hectares): 0.43 ac	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 23 Category:	1

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

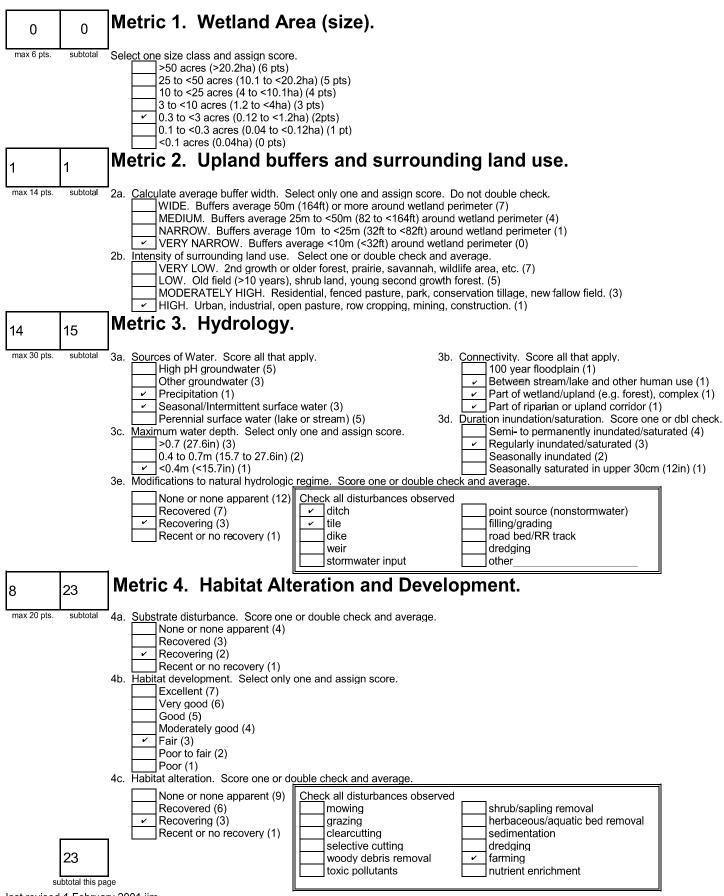
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

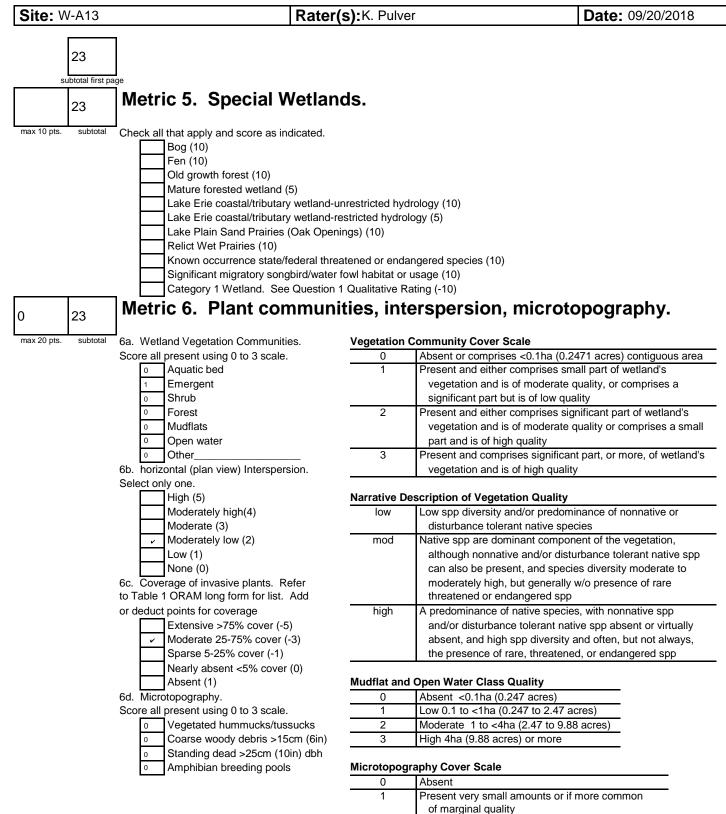
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A13

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

8

23

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
2	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE		Category based on sco breakpoints
		23	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:	Z	Dubier
	κ.	Pulver

Date: 09/20/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A11

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.083814, -82.97432	
USGS Quad Name		Attica
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S36
Hydrologic Unit Code		041000110805
Site Visit		9/20/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A11		
Wetland Size (acres, hectares): 0.01 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zone	s, etc.	
See Attached.		
Commente Newstive Discussion Justification of Category Changes		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 16	Category:	1

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	NO 🖌
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
<u>7</u>	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🗸
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

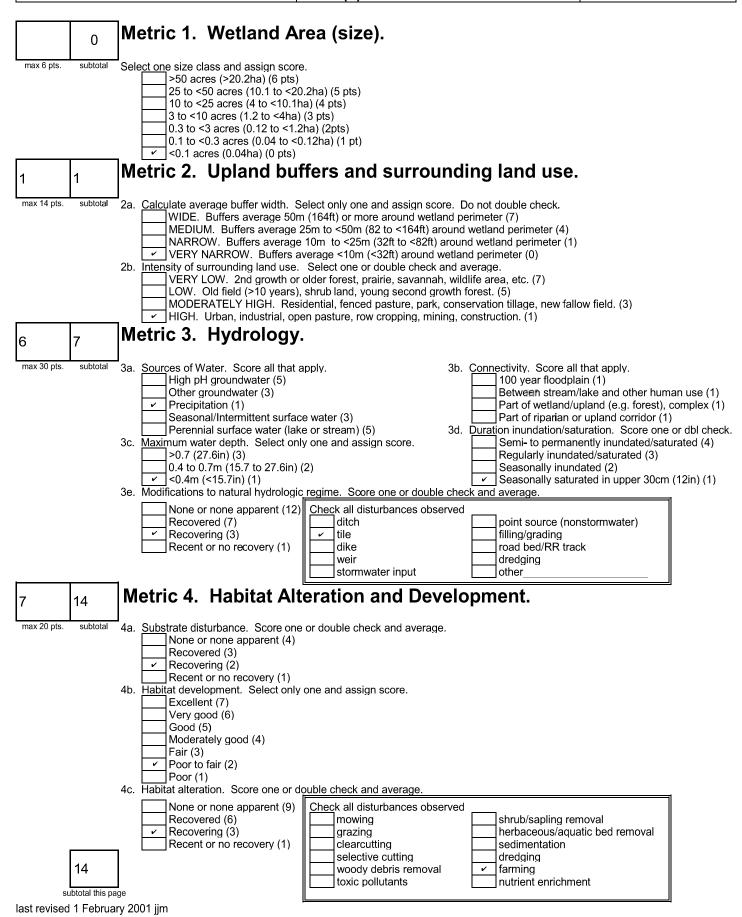
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

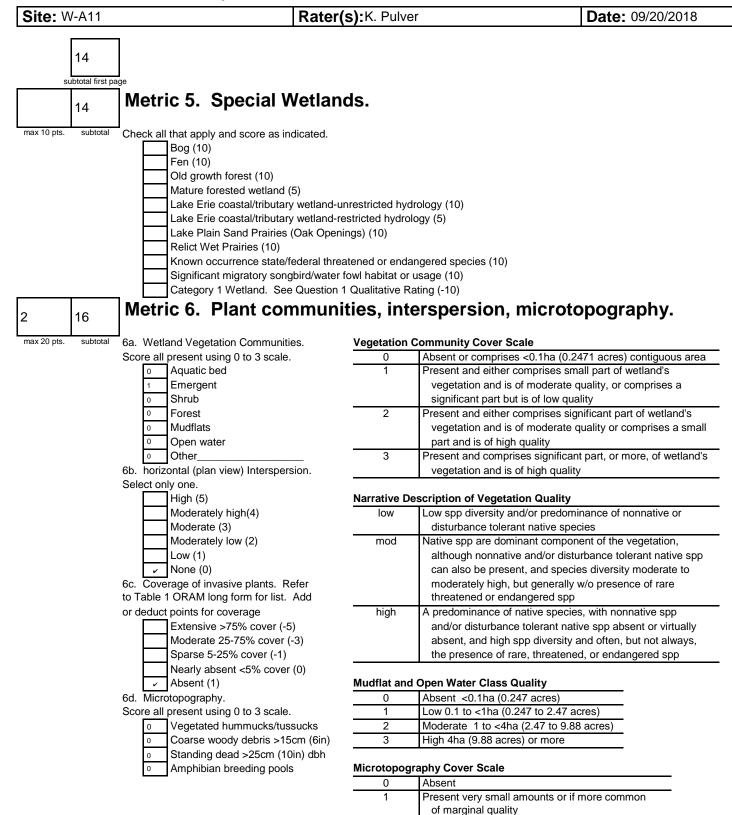
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A11

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

ORAM	<b>Summary Wor</b>	ksheet
------	--------------------	--------

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on scor breakpoints
		16	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

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Phone Number: (412) 921-7090	
e-mail address:	
Name of Wetland: W-A14; W-A15 PEM; W-A15 PFO	
Vegetation Communit(ies): PFO PEM	
HGM Class(es)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Attached.	
Lat/Long or UTM Coordinate 41.090845, -82.994332	
USGS Quad Name	Attica
County	Seneca
Township	Scipio
Section and Subsection	T2NR16E S35
Hydrologic Unit Code	041000110805
Site Visit	9/20/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map Attached	

Name of Wetland: W-A14; W-A15 PEM; W-A15 PFO		
Wetland Size (acres, hectares): W-A14 (0.83 ac); W-A15 PFO (0.13 ac); W-A15 PE	VI (0.12 ac)	
Sketch: Include north arrow, relationship with other surface waters, vegetation zone See Attached.	M (0.12 ac) es, etc.	
Comments, Narrative Discussion, Justification of Category Changes: Modified 2		
Final score : 44	Category:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

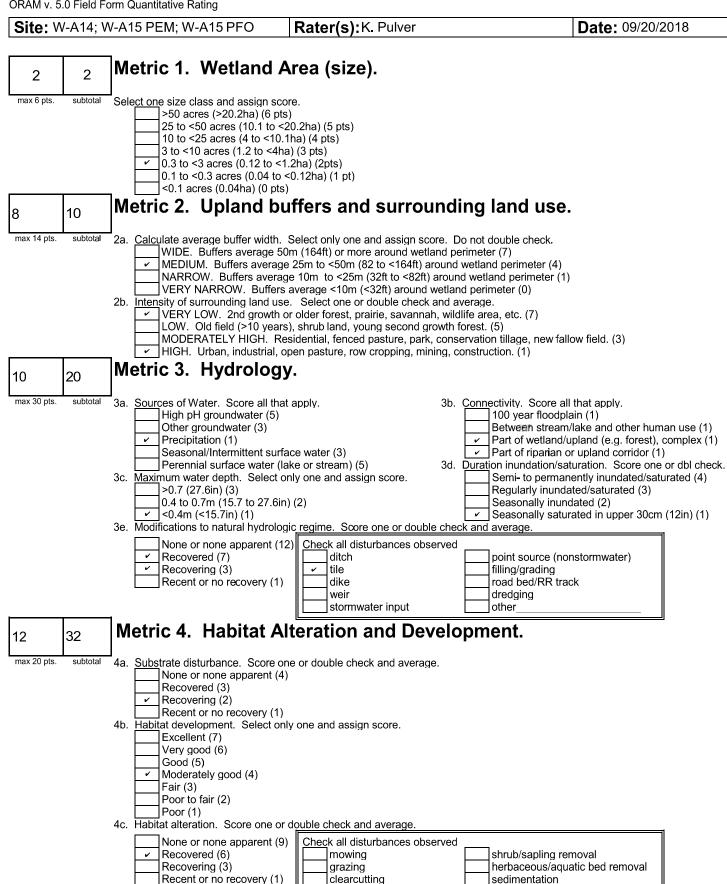
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	<b>Category 1 Wetlands.</b> Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Contro Ourantian 44	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.



selective cuttina

toxic pollutants

woodv debris removal

dredging

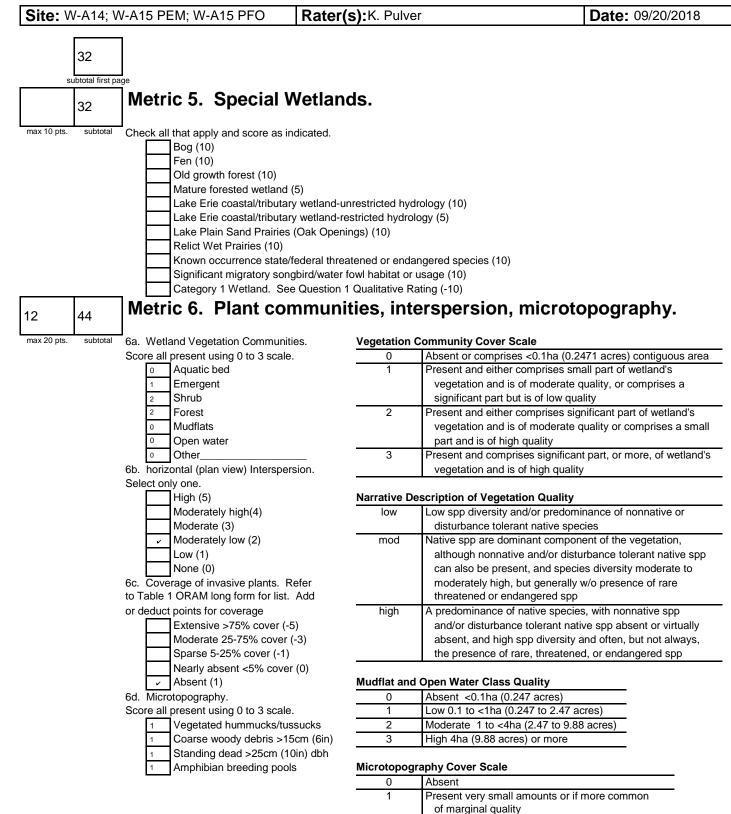
nutrient enrichment

farming

~

subtotal this page last revised 1 February 2001 jjm

32



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

44

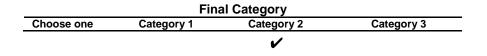
ORAM	<b>Summary Wor</b>	ksheet
------	--------------------	--------

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
-	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	12	
	TOTAL SCORE		Category based on scor breakpoints
		44	Modified 2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: K. Pulver	
Date: 09/20/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220	
Phone Number: (412) 921-7090	
e-mail address:	
Name of Wotland	
Name of Wetland: W-A16 PEM & PFO	
Vegetation Communit(ies): PFO PEM	
HGM Class(es): Slope	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads Attached.	
USGS Quad Name	
	Bloomville
County	Seneca
Township	Scipio
Section and Subsection	T2NR16E S34
Hydrologic Unit Code	041000111101
Site Visit	9/20/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map Attached	

Name of Wetland: W-A16 PEM & PFO		
Wetland Size (acres, hectares): W-A16 PEM (0.17 ac); W-A16 PFO (1.54)		
Sketch: Include north arrow, relationship with other surface waters, vegetation zone	es, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final as an	0-1	
Final score : 40.5	Category:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

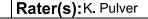
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

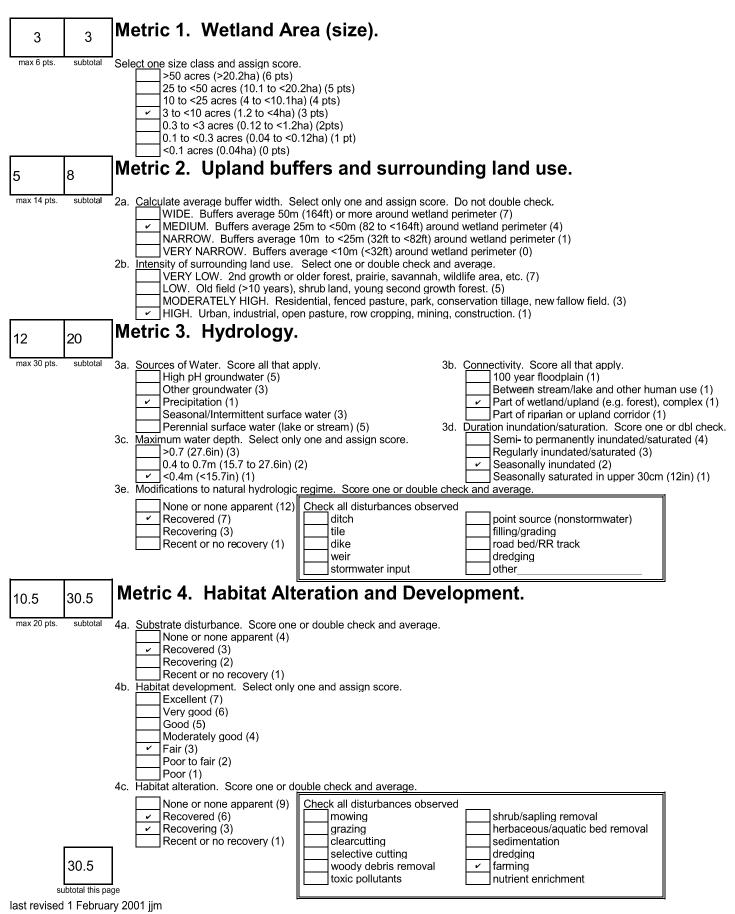
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

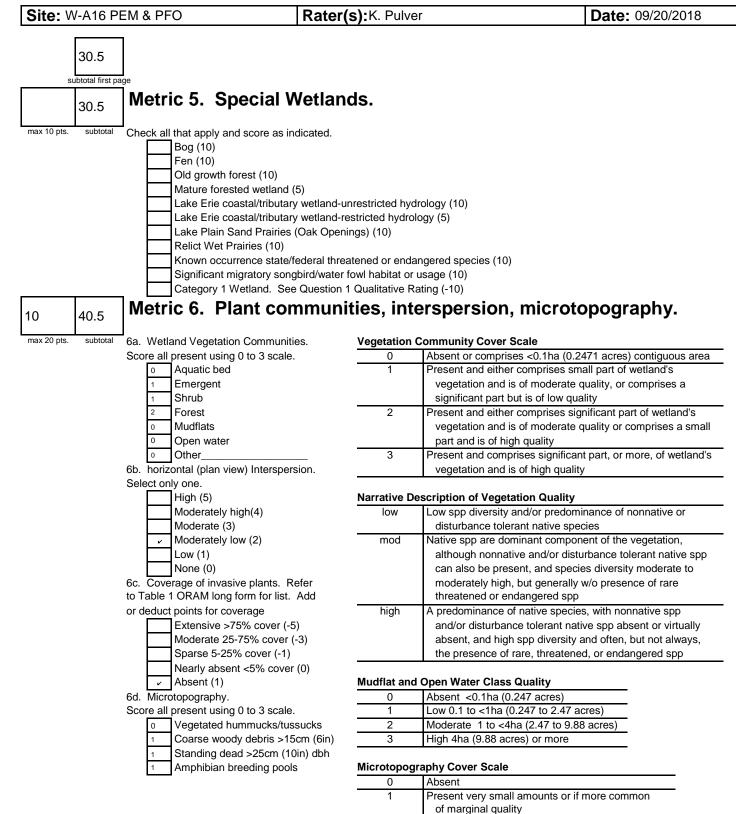
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A16 PEM & PFO







40.5

End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

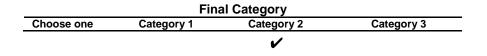
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
-	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	10.5	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	10	
	TOTAL SCORE		Category based on scor breakpoints
		40.5	Modified 2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:	Z	Dubier
	κ.	Pulver

Date: 09/20/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A17

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.092136, -83.011508	
USGS Quad Name		Bloomville
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S34
Hydrologic Unit Code		041000111101
Site Visit		9/20/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A17		
Wetland Size (acres, hectares): 0.03 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 23 Catego	ory:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🗸
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

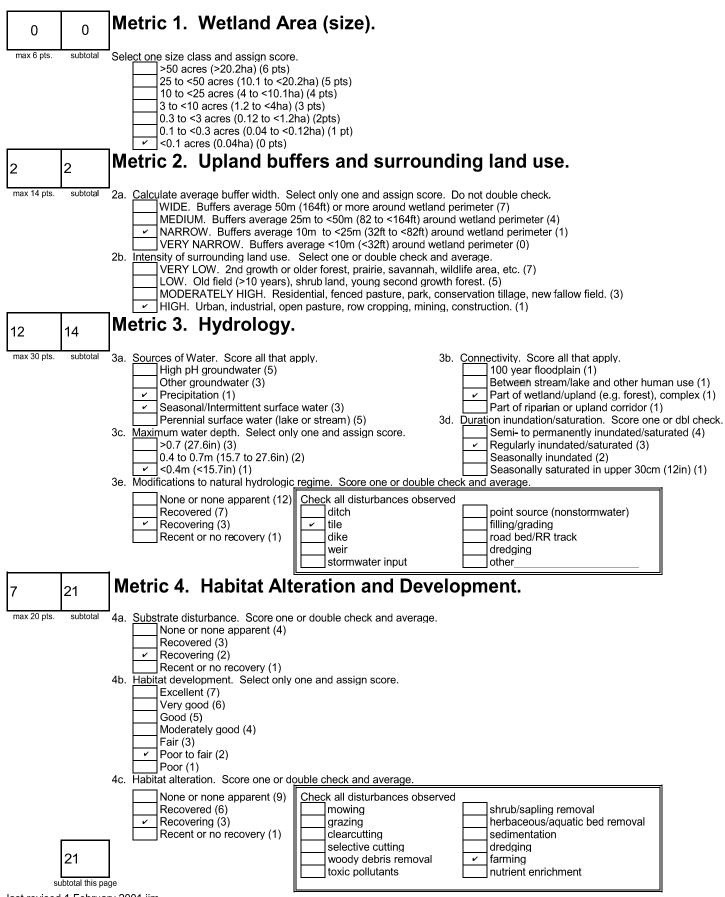
~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	<b>Relict Wet Prairies</b> . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		l v
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

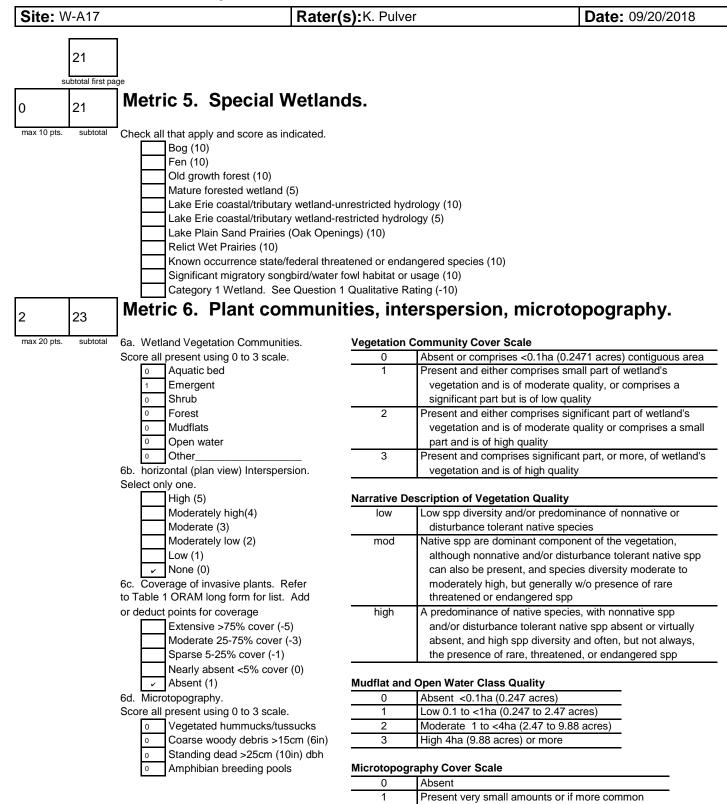
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.



#### Rater(s):K. Pulver





 2
 Present in moderate amounts, but not of highest quality or in small amounts of highest quality

 3
 Present in moderate or greater amounts and of highest quality

of marginal quality

End of Quantitative Rating. Complete Categorization Worksheets.

23

ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
5	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on scol breakpoints
		23	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
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Date: 09/19/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A10

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.10891, -83.028059	
USGS Quad Name		Bloomville
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S28
Hydrologic Unit Code		041000111101
Site Visit		9/19/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A10		
Wetland Size (acres, hectares): 0.19 ac		
Sketch: Include north arrow, relationship with other surface waters, vegeta	tion zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegeta See Attached.	tion zones, etc.	
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 12	Category:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

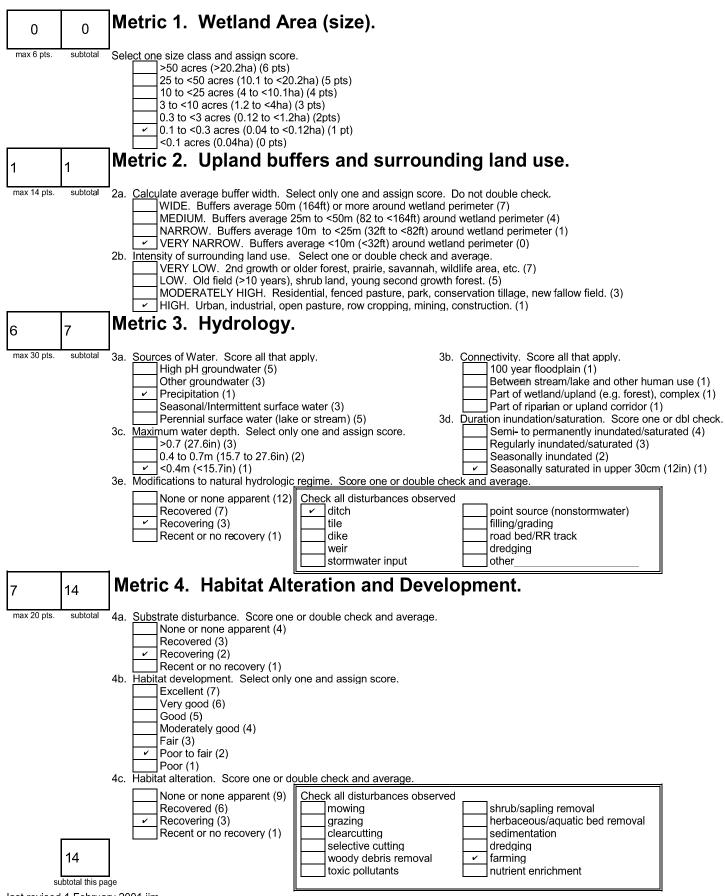
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

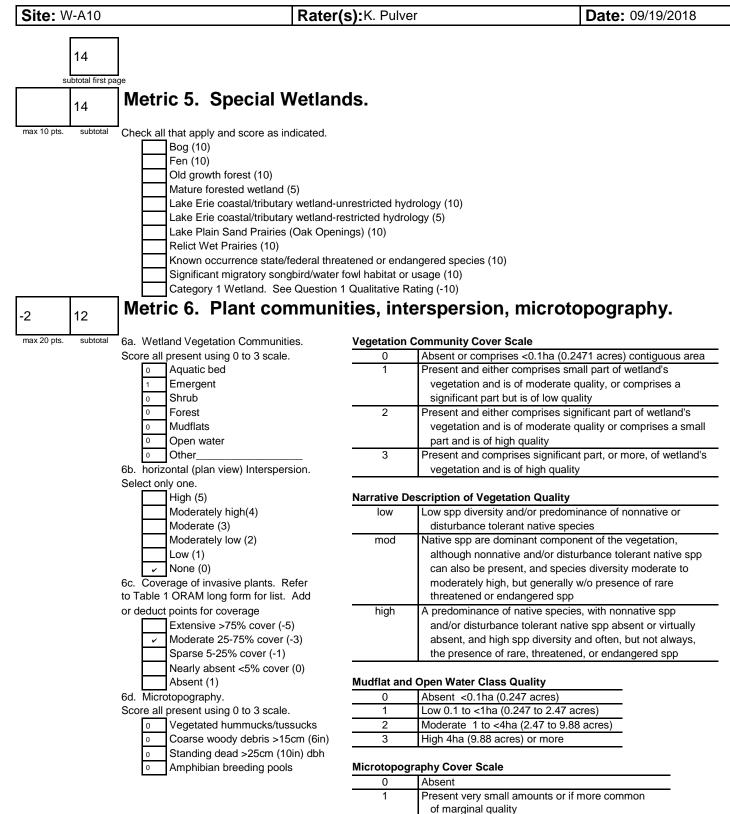
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A10

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

12

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE		Category based on sco breakpoints
		12	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🖌	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🖌	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO 🖌	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
nume.		
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Date: 09/21/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A20

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.08138, -83.034535	
USGS Quad Name		Bloomville
County		Seneca
Township		Scipio
Section and Subsection		T2NR16E S32
Hydrologic Unit Code		041000111101
Site Visit		9/21/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A20	
Wetland Size (acres, hectares): 0.05 ac	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 21 Category	· 1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

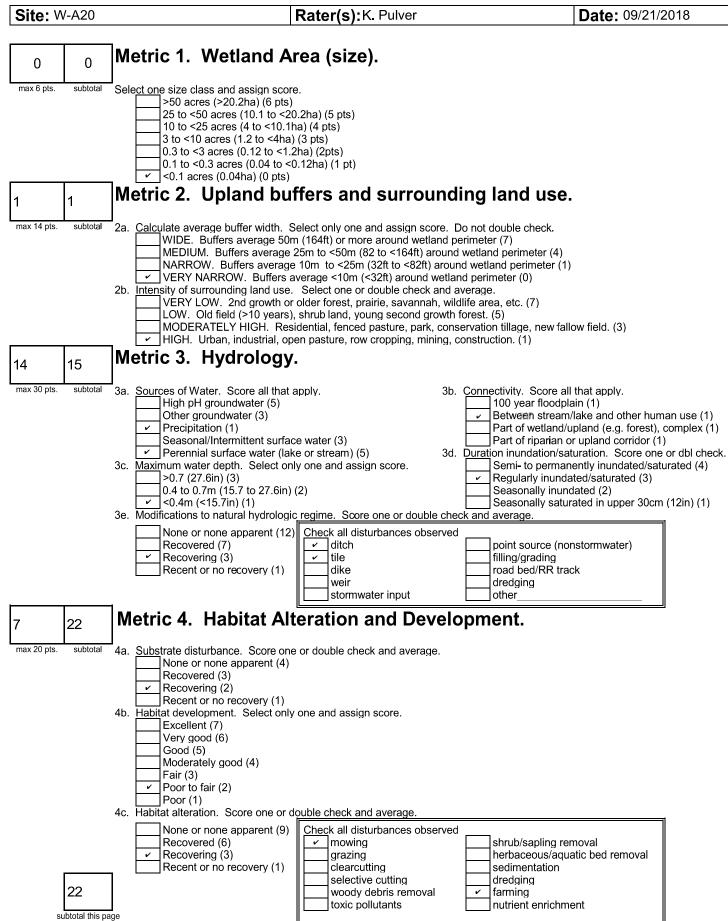
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

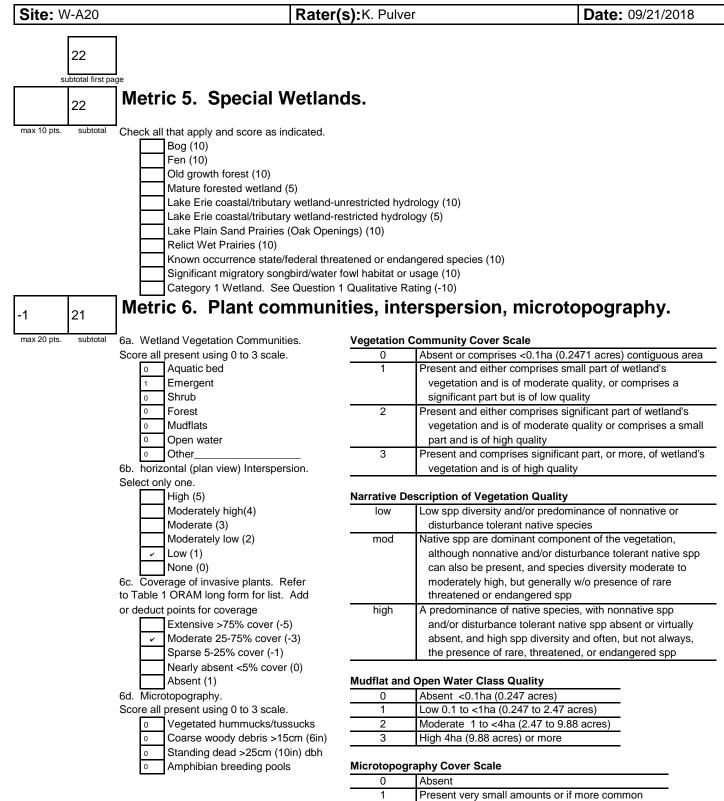
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.







 of marginal quality

 2
 Present in moderate amounts, but not of highest quality or in small amounts of highest quality

 3
 Present in moderate or greater amounts and of highest quality

End of Quantitative Rating. Complete Categorization Worksheets.

21

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE		Category based on sco breakpoints
		21	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
nume.		
	ĸ	Pulver
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Date: 09/24/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

### Name of Wetland: W-A21

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.076208, -83.025845	
USGS Quad Name		Bloomville
County		Seneca
Township		Bloom
Section and Subsection		T1NR16E S4
Hydrologic Unit Code		041000110805
Site Visit		9/24/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A21		
Wetland Size (acres, hectares): 0.02 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc		
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score :11Cat	egory:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

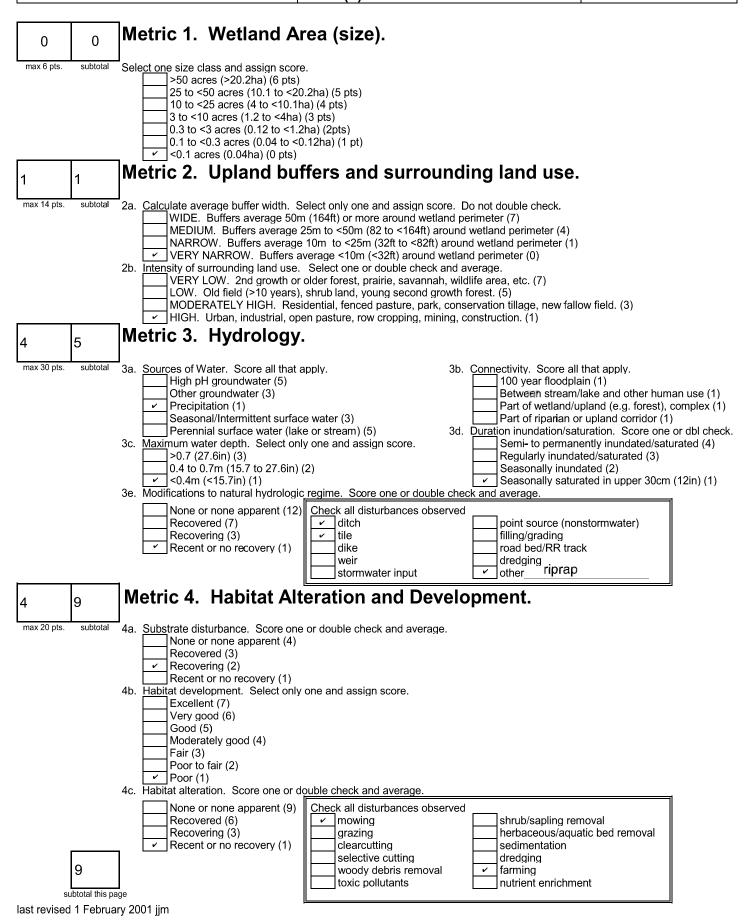
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Contro Ourantian 44	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

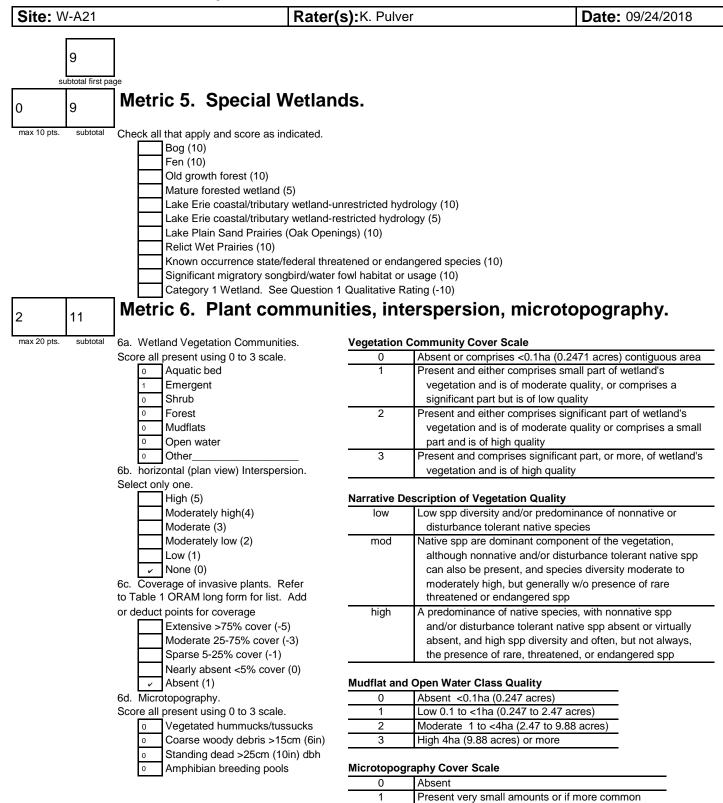
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A21

Rater(s):K. Pulver





 of marginal quality

 2
 Present in moderate amounts, but not of highest quality or in small amounts of highest quality

 3
 Present in moderate or greater amounts and of highest quality

#### End of Quantitative Rating. Complete Categorization Worksheets.

11

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	4	
	Metric 4. Habitat	4	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on sco breakpoints
		11	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: K. Pulver		
Date: 09/24/2018		
Affiliation: Tetra Tech		
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA	15220	
Phone Number: (412) 921-7090		
e-mail address:		
Name of Wetland: W-A23 PFO		
Vegetation Communit(ies): PFO PEM		
HGM Class(es): Depressional		
Location of Wetland: include map, address, north arrow, landmarks, d Attached.	istances, roads, etc.	
Lat/Long or UTM Coordinate 41	.07533, -83.037089	
USGS Quad Name		mville
County	Sene	
Township	Scip	
Section and Subsection		R16E S5
Hydrologic Unit Code		000111101
Site Visit		
National Wetland Inventory Map	Fig. :	3a
Ohio Wetland Inventory Map	Fig. :	
Soil Survey	Fig. :	
Delineation report/map Attached		

Name of Wetland: W-A23 PFO	
Wetland Size (acres, hectares): W-A22 (0.07 ac); W-A23 PEM (0.11 ac); W-A23 PFO (0.15 ac)	
Wetland Size (acres, hectares): W-A22 (0.07 ac); W-A23 PEM (0.11 ac); W-A23 PFO (0.15 ac) Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 30.5   Category:	2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

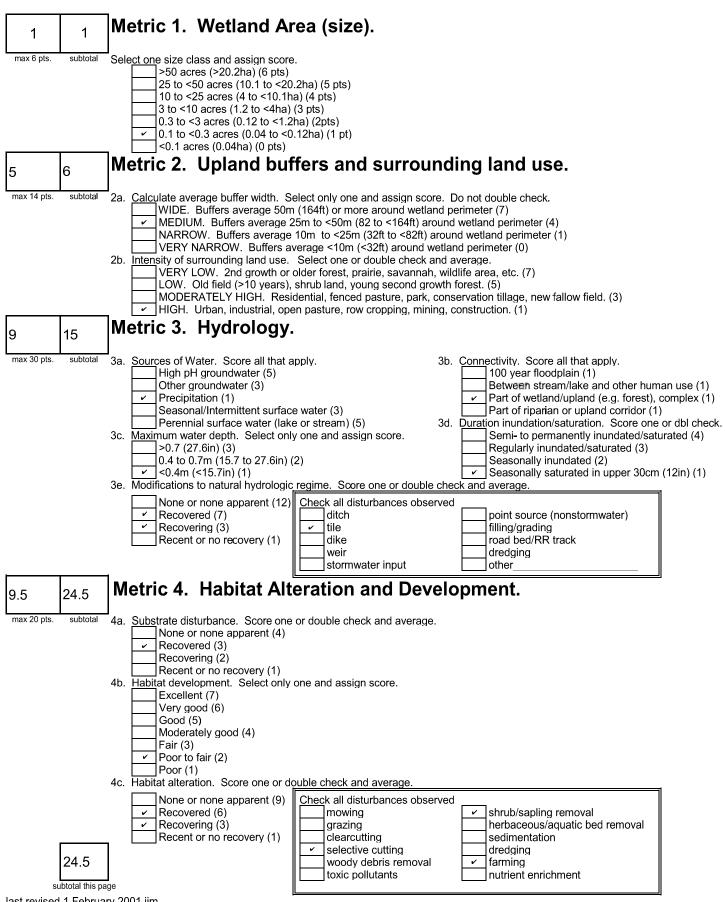
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

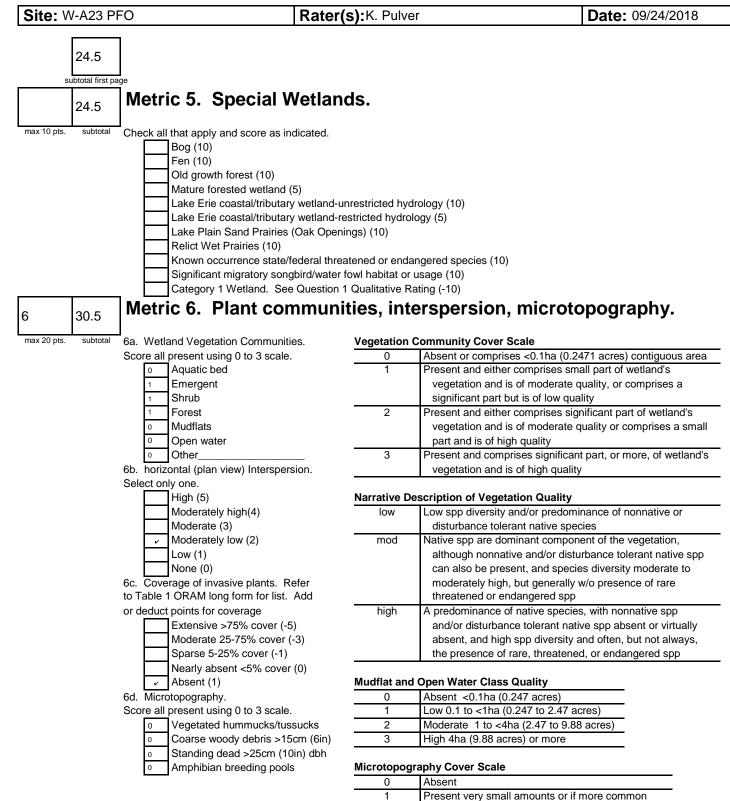
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A23 PFO

Rater(s):K. Pulver





30.5

End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

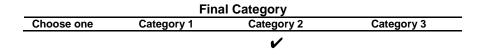
ORAM	<b>Summary Wor</b>	ksheet
------	--------------------	--------

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
U	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	9.5	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	6	
	TOTAL SCORE		Category based on scor breakpoints
		30.5	1 or 2 Gray Zone

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🖌	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:		
nume.	17	<b>D</b> I
	ĸ	Pulver

Date: 09/24/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A24

Vegetation Communit(ies): PEM

HGM Class(es): Slope

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.075183, -83.04415	
USGS Quad Name		Bloomville
County		Seneca
Township		Bloom
Section and Subsection		T1NR16E S5
Hydrologic Unit Code		041000111101
Site Visit		9/24/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A24	
Wetland Size (acres, hectares): 0.04 ac	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 15 Category: 1	

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

0

subtotal

Site: W-A24

0 max 6 pts 

 Rater(s):K. Pulver

 Metric 1. Wetland Area (size).

 Select one size class and assign score.

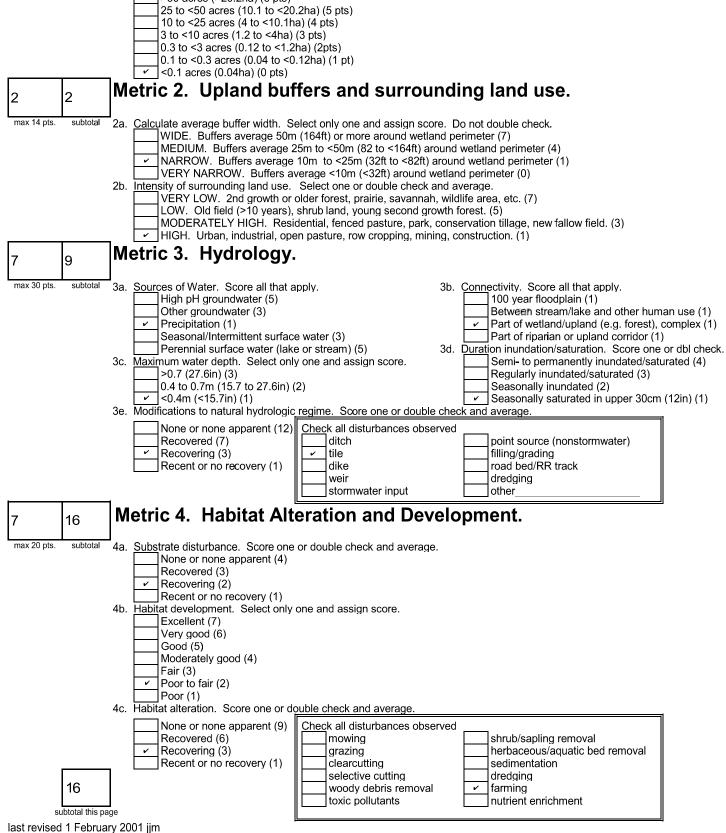
 >50 acres (>20.2ha) (6 pts)

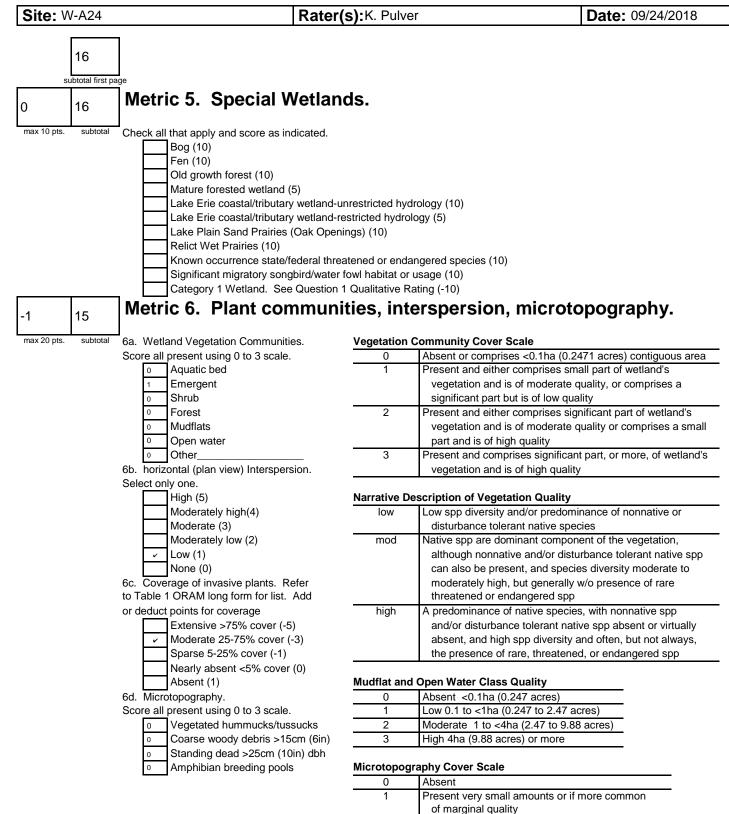
 25 to <50 acres (10.1 to <20.2ha) (5 pts)</td>

 25 to <50 acres (10.1 to <20.2ha) (5 pts)</td>

 25 to <50 acres (10.1 to <20.2ha) (5 pts)</td>

Date: 09/24/2018





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

15

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE		Category based on sco breakpoints
		15	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: K. Pulver	
Date: 09/21/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 1	5220
Phone Number: (412) 921-7090	
e-mail address:	
Name of Wetland: W-A19 PSS	
Vegetation Communit(ies):	
HGM Class(es):	
Riverine	
Location of Wetland: include map, address, north arrow, landmarks, dis Attached.	stances, roads, etc.
	08016, -83.018848
USGS Quad Name	Bloomville
County	Seneca
Township	Bloom
Section and Subsection	T1NR16E S4
Hydrologic Unit Code	041000110805
Site Visit	9/21/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map Attached	

Name of Wetland: W-A19 PSS	
Wetland Size (acres, hectares): W-A19 PSS (0.10 ac); W-A19 PEM (0.19 ac)	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 25   Category:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

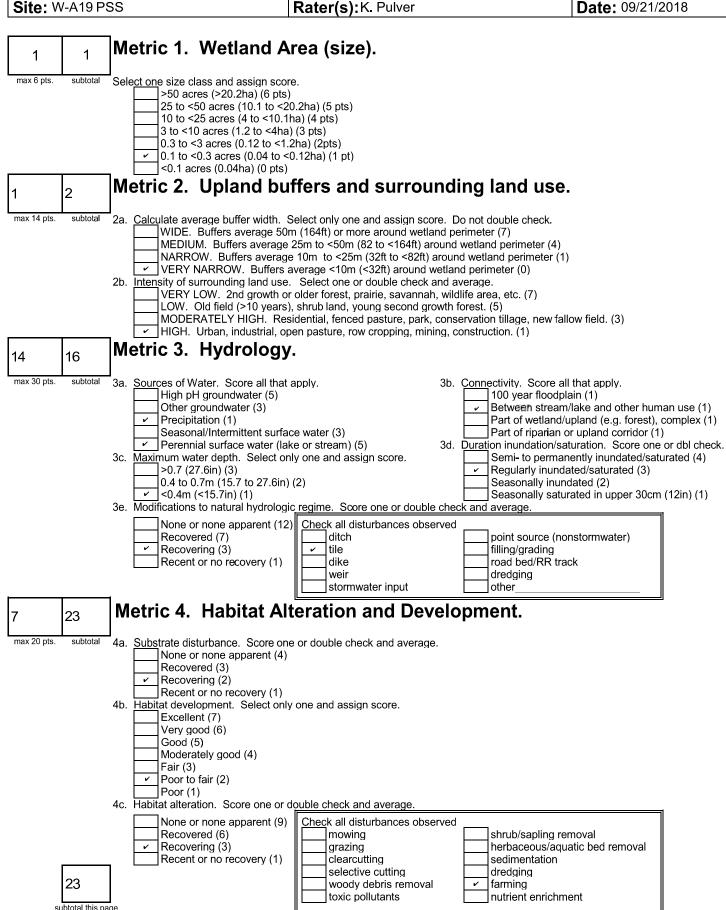
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

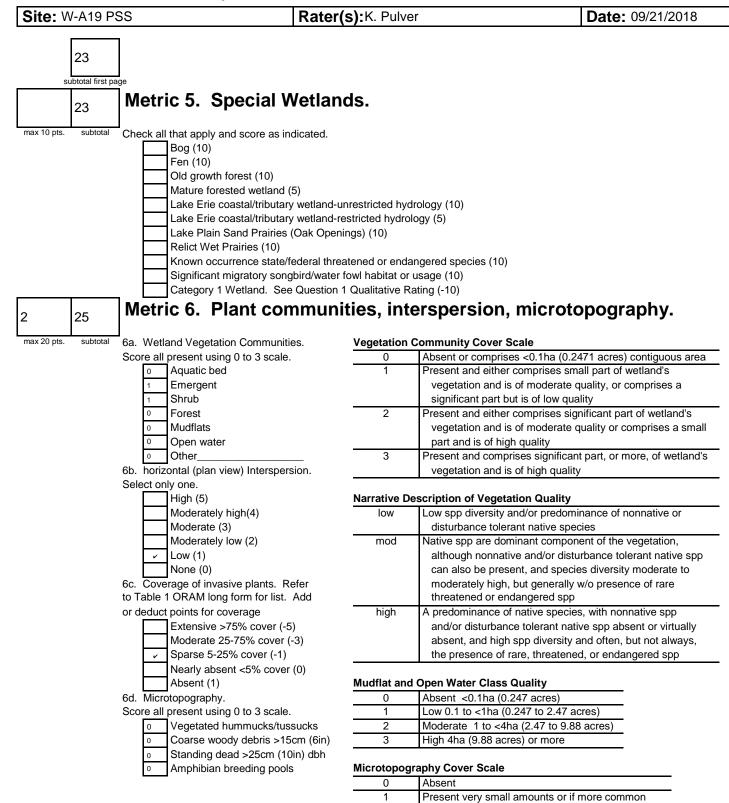
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.



last revised 1 February 2001 jjm



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

25

ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on scor breakpoints
		25	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:		
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Date: 09/21/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A18

Vegetation Communit(ies): PEM

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.076531, -83.019871	
USGS Quad Name		Bloomville
County		Seneca
Township		Bloom
Section and Subsection		T1NR16E S4
Hydrologic Unit Code		041000110805
Site Visit		9/21/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A18		
Wetland Size (acres, hectares): 0.01 ac		
Wetland Size (acres, hectares): 0.01 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 37Catego	ory:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

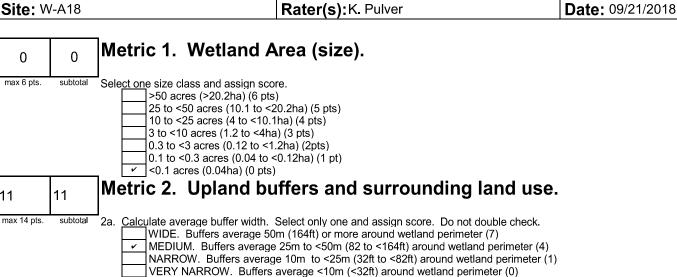
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	<b>Relict Wet Prairies</b> . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		l v
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A18



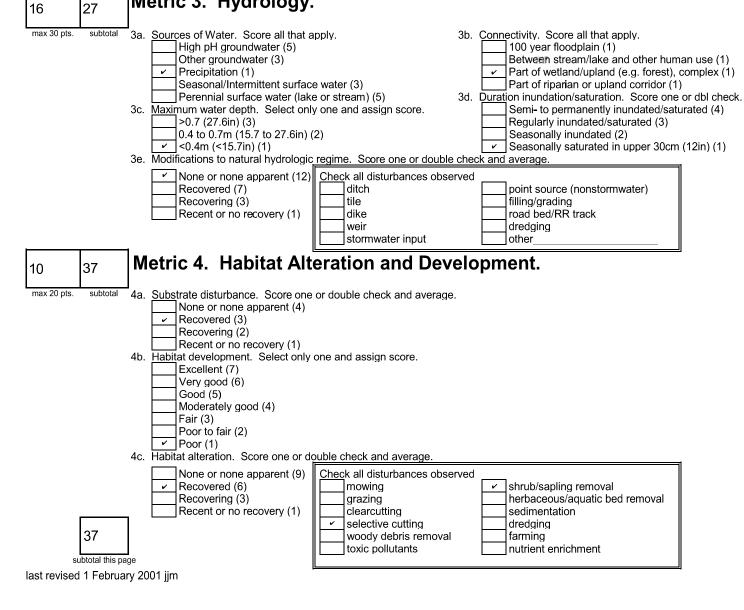
VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5)

HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)

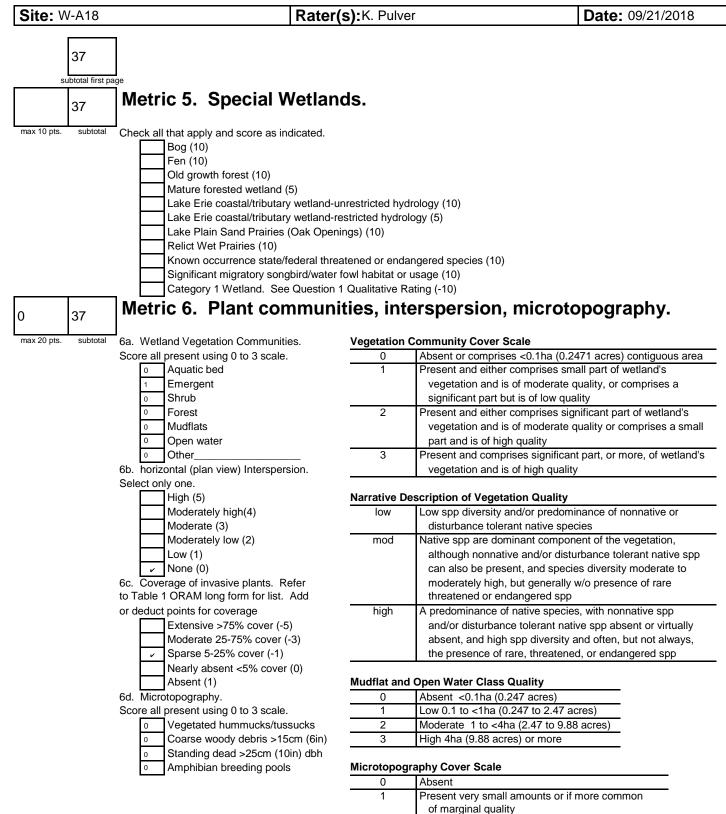
2b. Intensity of surrounding land use. Select one or double check and average.

Metric 3. Hydrology.



0

11



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

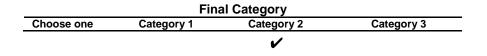
ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
2	Metric 2. Buffers and surrounding land use	11	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	10	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE		Category based on sco breakpoints
		37	Modified 2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🖌	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:		
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Date: 09/25/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A27

Vegetation Communit(ies): PFO

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.054843, -83.065177	
USGS Quad Name		Bloomville
County		Seneca
Township		Bloom
Section and Subsection		T1NR16E S7
Hydrologic Unit Code		041000110806
Site Visit		9/25/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A27	
Wetland Size (acres, hectares): 0.82 ac	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 52   Category:	2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

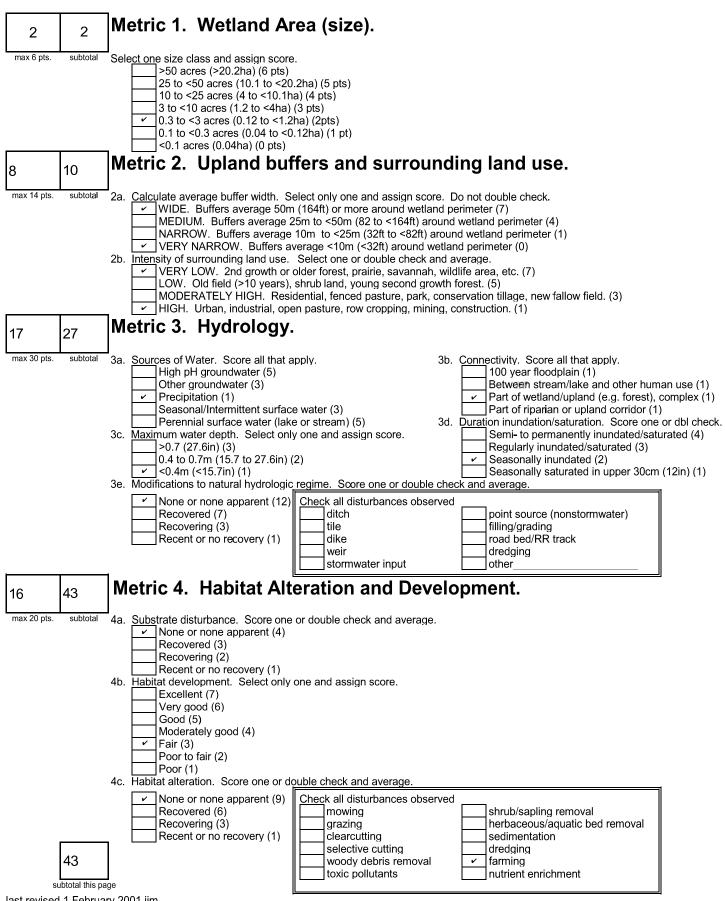
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

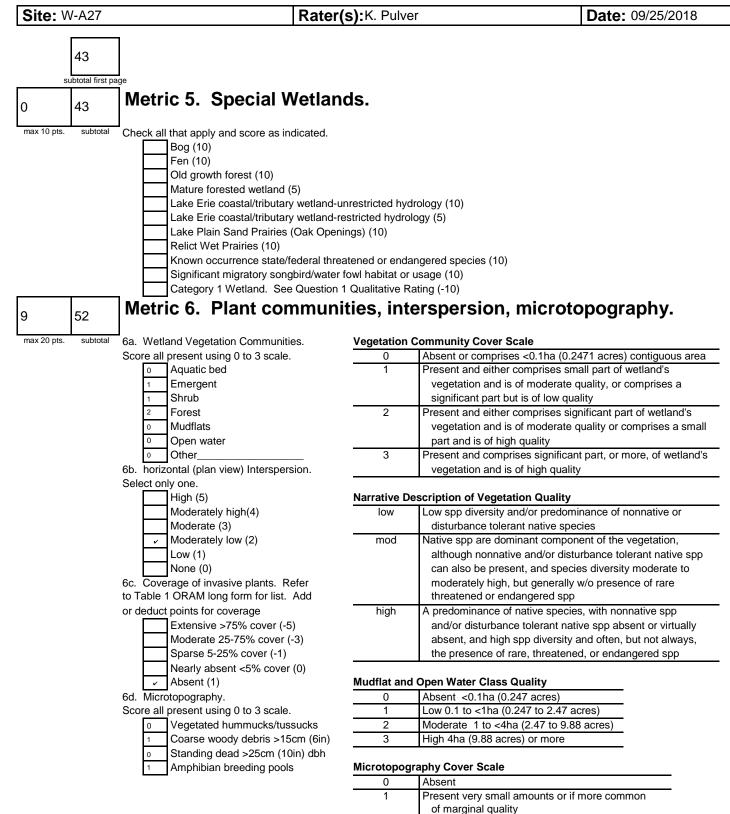
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A27

Rater(s):K. Pulver





Present in moderate amounts, but not of highest quality or in small amounts of highest quality
 Present in moderate or greater amounts and of highest quality

#### End of Quantitative Rating. Complete Categorization Worksheets.

8

52

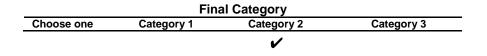
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	17	
	Metric 4. Habitat	16	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	9	
	TOTAL SCORE		Category based on sco breakpoints
		52	2

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
nume.		
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Date: 09/26/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A33

Vegetation Communit(ies): PFO

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.042444, -83.077637	
USGS Quad Name		Bloomville
County		Seneca
Township		Eden
Section and Subsection		T1NR15E S13
Hydrologic Unit Code		041000110806
Site Visit		9/26/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A33		
Wetland Size (acres, hectares): 0.80 ac		
Comments, Narrative Discussion, Justification of Category Changes:		
Comments, Narrauve Discussion, Justification of Category Changes.		
Final score : 49.5   Categories	ory:	2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

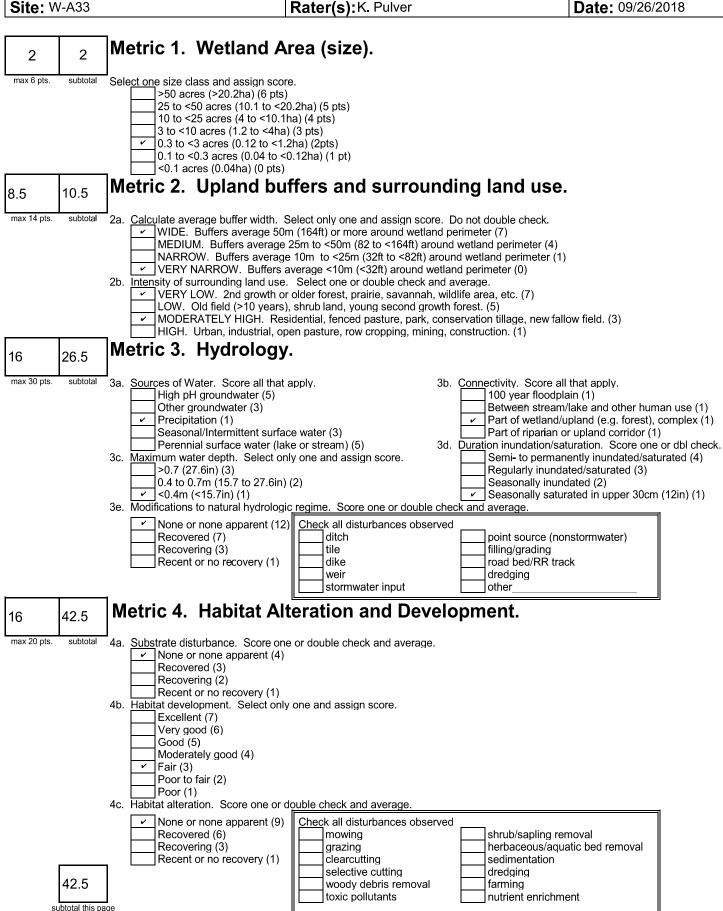
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

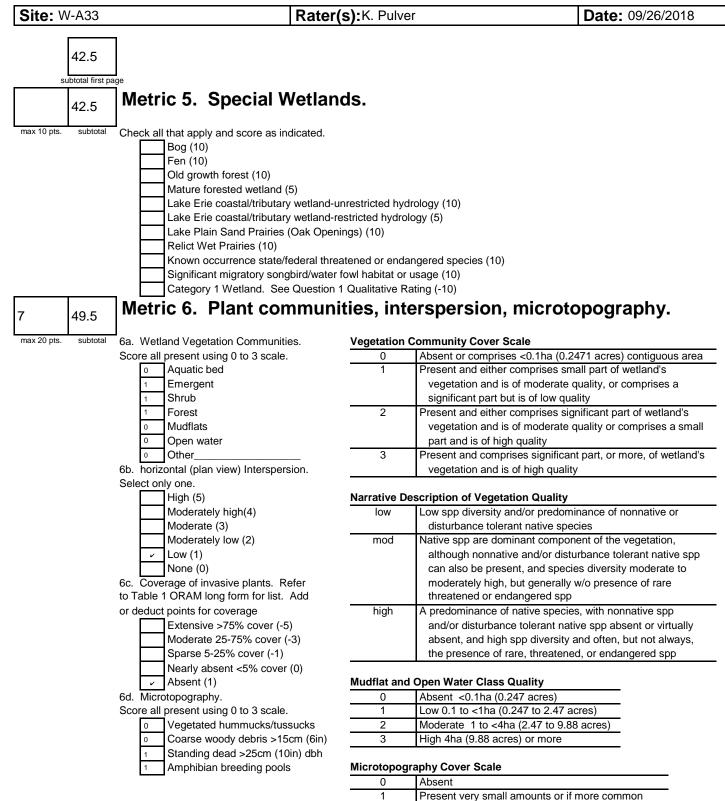
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A33



last revised 1 February 2001 jjm



49.5

#### End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

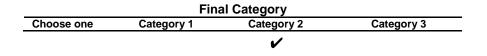
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
-	Metric 2. Buffers and surrounding land use	8.5	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	16	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	7	
	TOTAL SCORE		Category based on scor breakpoints
		49.5	2

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: CV		
Date: 09/26/2018		
Affiliation: Tetra Tech		
Address: 661 Andersen Drive, Fo	ster Plaza 7, Pittsburgh, PA 15220	
Phone Number: (412) 921-7090		
e-mail address:		
Name of Wetland: <sub>W-B6</sub>		
Vegetation Communit(ies):	5514	
HGM Class(es):	PEM	
Depressional	dress, north arrow, landmarks, distances, roads, etc.	
Attached.		
Lat/Long or UTM Coordinate	41.04581, -83.027315	
USGS Quad Name		
County		Bloomville
Township		Seneca
Section and Subsection		Bloom
Hydrologic Unit Code		T1N R16E S16
Site Visit		04100011
National Wetland Inventory Map		9/26/2018
Ohio Wetland Inventory Map		Fig. 3a
Soil Survey		Fig. 3b
		Fig. 2
Delineation report/map		Attached

Name of Wetland: W-B6	
Wetland Size (acres, hectares): 0.120 ac	
Wetland Size (acres, hectares): 0.120 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 37Category	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

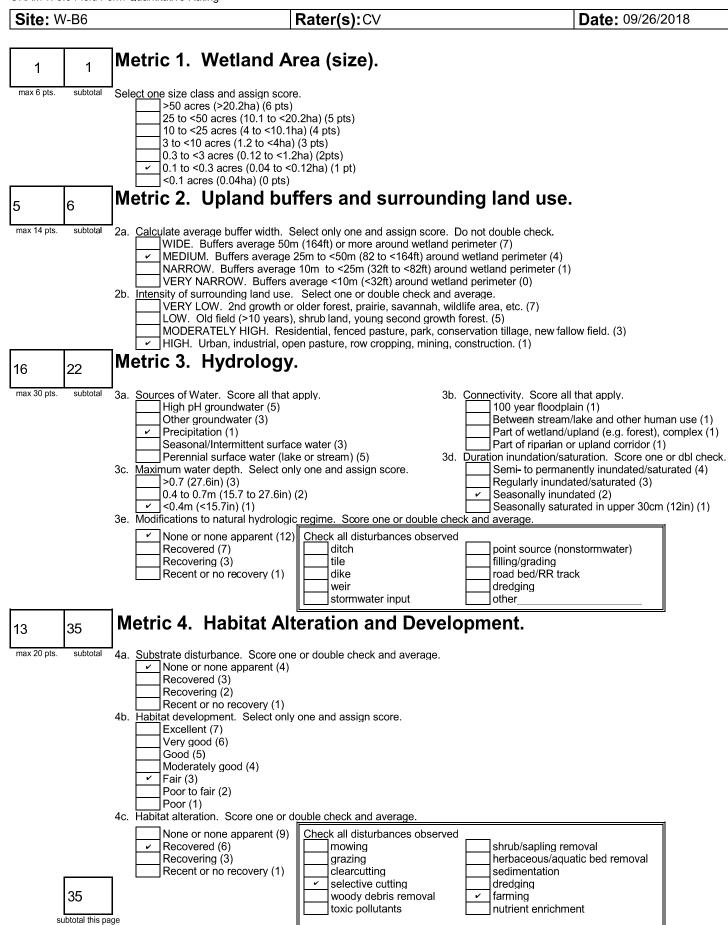
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

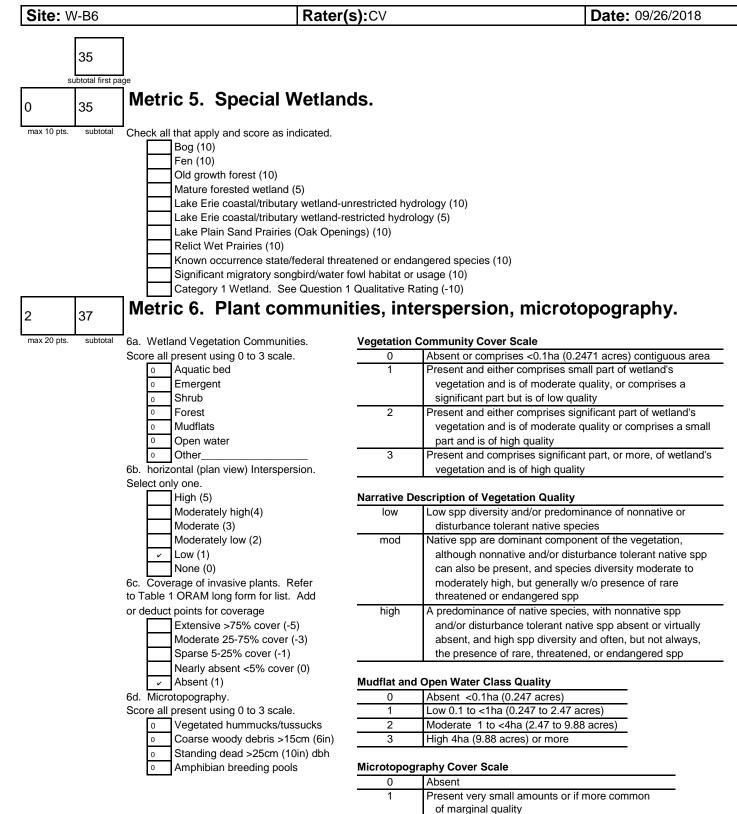
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.



last revised 1 February 2001 jjm



Present in moderate amounts, but not of highest quality or in small amounts of highest quality
 Present in moderate or greater amounts and of highest quality

#### End of Quantitative Rating. Complete Categorization Worksheets.

37

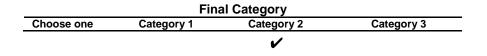
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
U U	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	13	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on scor breakpoints
		37	Modified 2

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🖌	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: CV	
Date: 09/26/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220	
Phone Number: (412) 921-7090	
e-mail address:	
Name of Wetland: W-B5 & W-B7	
PFO PEM	
HGM Class(es): Riverine	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.	
Lat/Long or UTM Coordinate PEM1: 41.033016, -83.060169; PEM2: 41.033555, -83.058283;	
PFO: 41.033075 -83.05993 USGS Quad Name	Bloomville
County	Seneca
Township	Bloom
Section and Subsection	
Hydrologic Unit Code	T1N R16E S19
Site Visit	04100011
	9/25/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map	Attached

Name of Wetland: W-B5 & W-B7		
Wetland Size (acres, hectares): 0.303 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 46 Cat	egory:	2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	~	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	v	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	v	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

## **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		l v
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

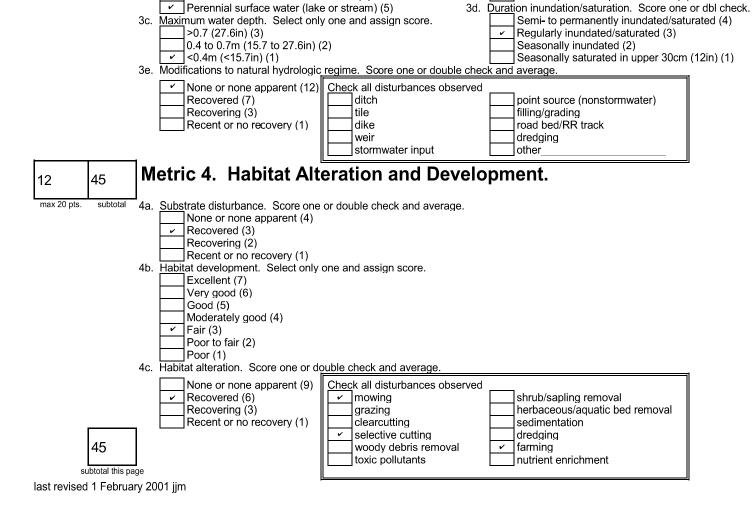
Precipitation (1)

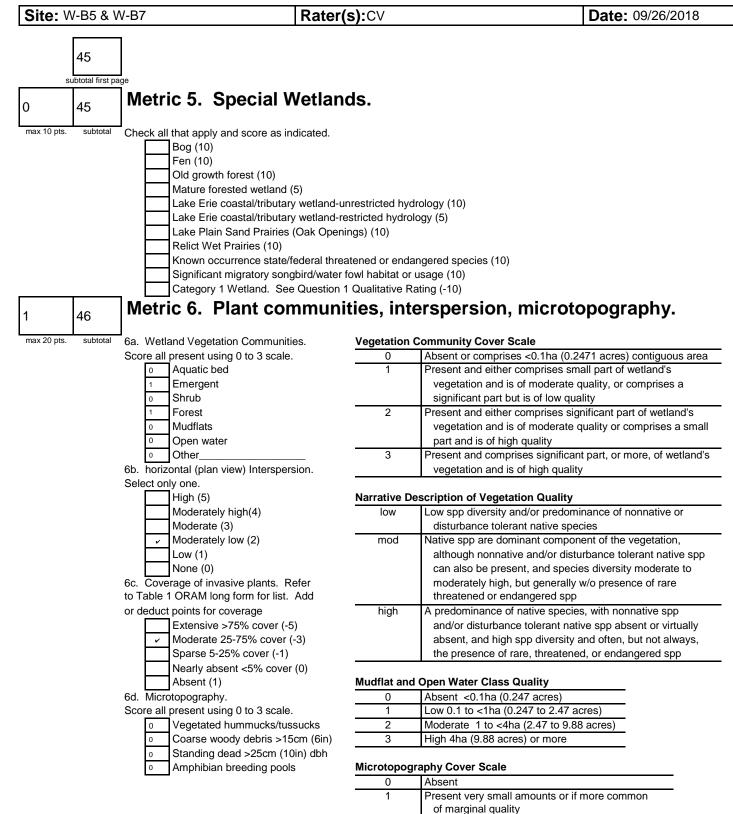
Seasonal/Intermittent surface water (3)

Site: W-B5 & W-B7 Rater(s):CV Date: 09/26/2018 Metric 1. Wetland Area (size). 2 2 max 6 pts subtotal Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrounding land use. 4 2 max 14 pts. subtota Calculate average buffer width. Select only one and assign score. Do not double check. 2a. WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) Intensity of surrounding land use. Select one or double check and average. 2b. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 33 29 max 30 pts Sources of Water. Score all that apply. subtotal Connectivity. Score all that apply. 3a. 3b. High pH groundwater (5) ✓ 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1)

Part of wetland/upland (e.g. forest), complex (1)

Part of riparian or upland corridor (1)





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

46

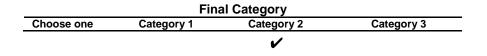
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
U U	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	29	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE		Category based on scor breakpoints
		46	2

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name: Jen Bittner

Date: 09/26/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address: jen.bittner@tetratech.com

Name of Wetland: W-B4

Vegetation Communit(ies): PEM

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Latil and an LTM Occuritation	44.000000.00.000504	
Lat/Long or UTM Coordinate	41.032896, -83.063504	
USGS Quad Name		Bloomville
County		Seneca
Township		Bloom
Section and Subsection		T1N R16E S19
Hydrologic Unit Code		04100011
Site Visit		9/25/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map		Attached

Name of Wetland: W-B4	
Wetland Size (acres, hectares): 0.0530 ac	
Wetland Size (acres, hectares): 0.0530 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 17   Category:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

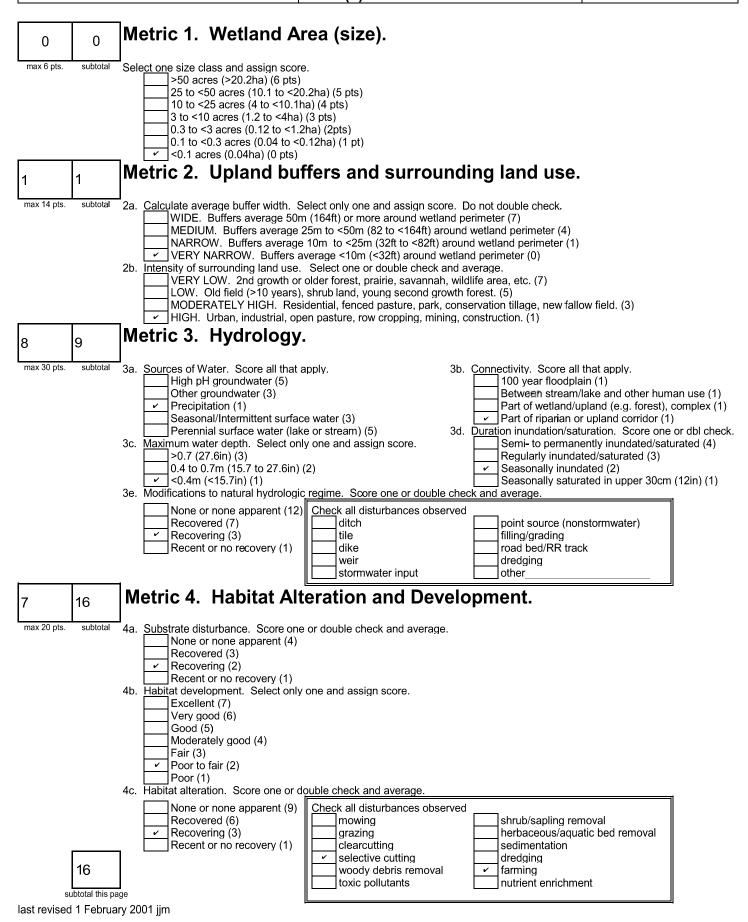
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

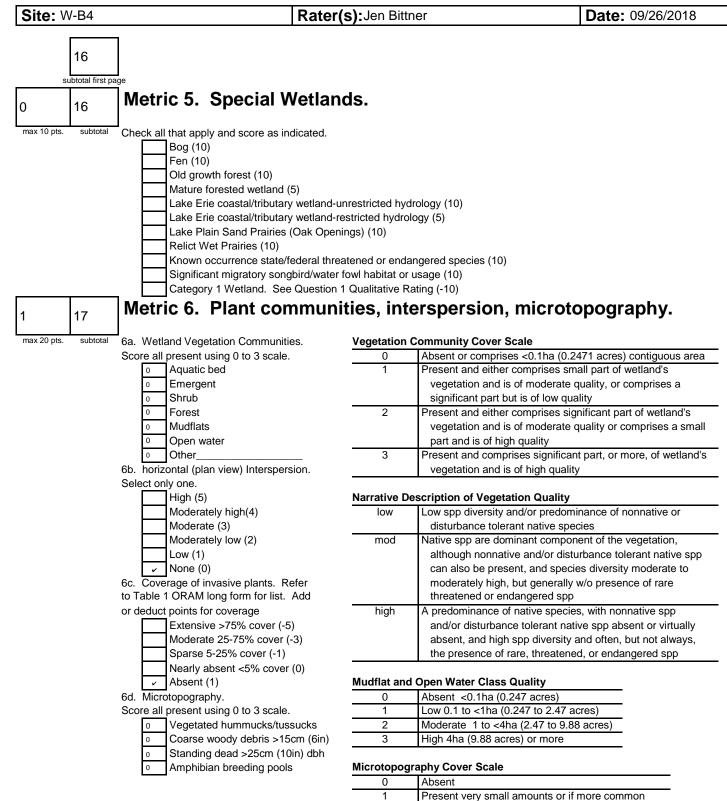
End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-B4

#### Rater(s): Jen Bittner

Date: 09/26/2018





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

17

ORAM	<b>Summary Wor</b>	ksheet
------	--------------------	--------

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE		Category based on scor breakpoints
		17	1

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name: CV		
Date: 09/24/2018		
Affiliation: Tetra Tech		
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburg	gh, PA 15220	
Phone Number: (412) 921-7090		
e-mail address:		
Name of Wetland: <sub>W-B2</sub>		
Vegetation Communit(ies):		
HGM Class(es):		
Riverine		
Location of Wetland: include map, address, north arrow, landn Attached.	narks, distances, roads, etc.	
Lat/Long or UTM Coordinate	41.033596, -83.078721	
USGS Quad Name		Bloomville
County		Seneca
Township		Eden
Section and Subsection		T1N R15E S24
Hydrologic Unit Code		04100011
Site Visit		09/24/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map		Attached

Name of Wetland: W-B2		
Wetland Size (acres, hectares): 0.14 ac.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones	s, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
	Cotocone	
Final score : 37	Category:	Modified 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

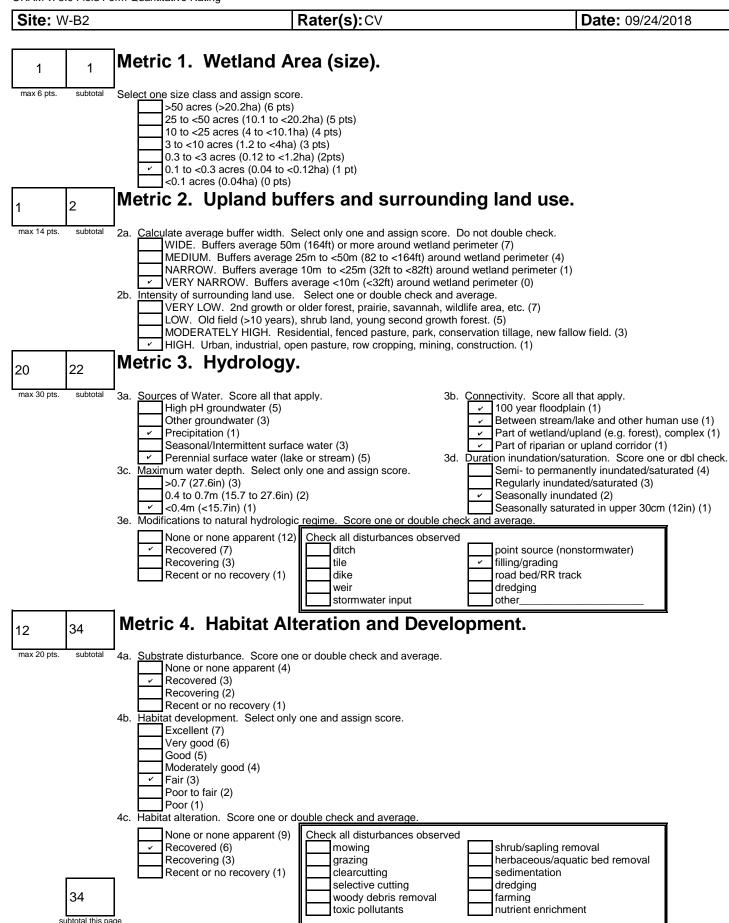
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

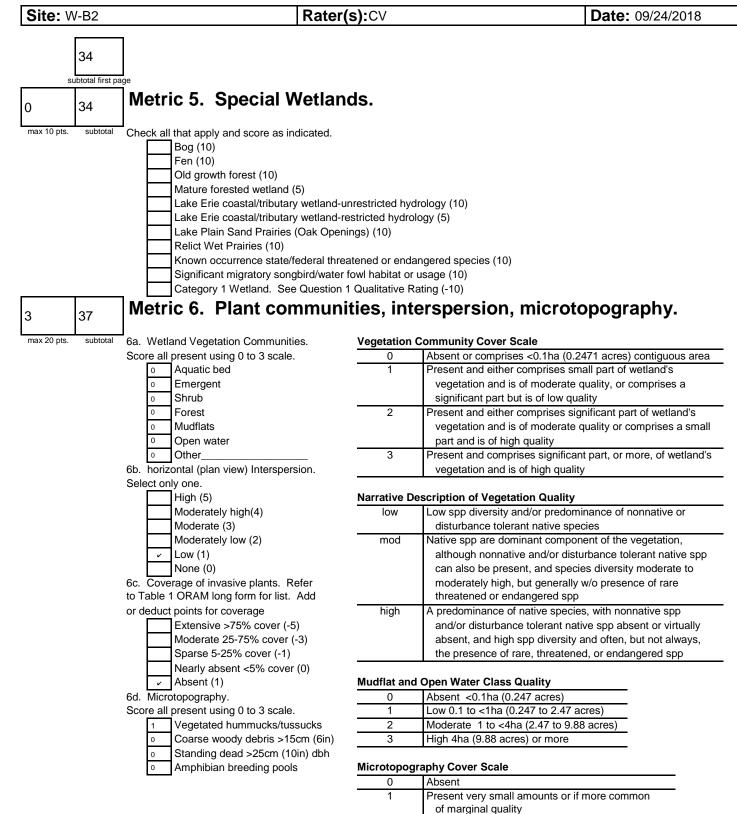
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.







Present in moderate amounts, but not of highest quality or in small amounts of highest quality
 Present in moderate or greater amounts and of highest quality

#### End of Quantitative Rating. Complete Categorization Worksheets.

8

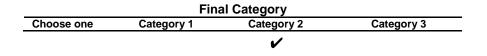
37

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
-	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	20	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE		Category based on scor breakpoints
		37	Modified 2

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
nume.		
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Date: 09/26/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A34

Vegetation Communit(ies): PFO

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.032205, -83.080361	
USGS Quad Name		Bloomville
County		Seneca
Township		Eden
Section and Subsection		T1NR15E S24
Hydrologic Unit Code		041000110806
Site Visit		9/26/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A34		
Wetland Size (acres, hectares): 0.47 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, e	etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 49Ca	ategory:	2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

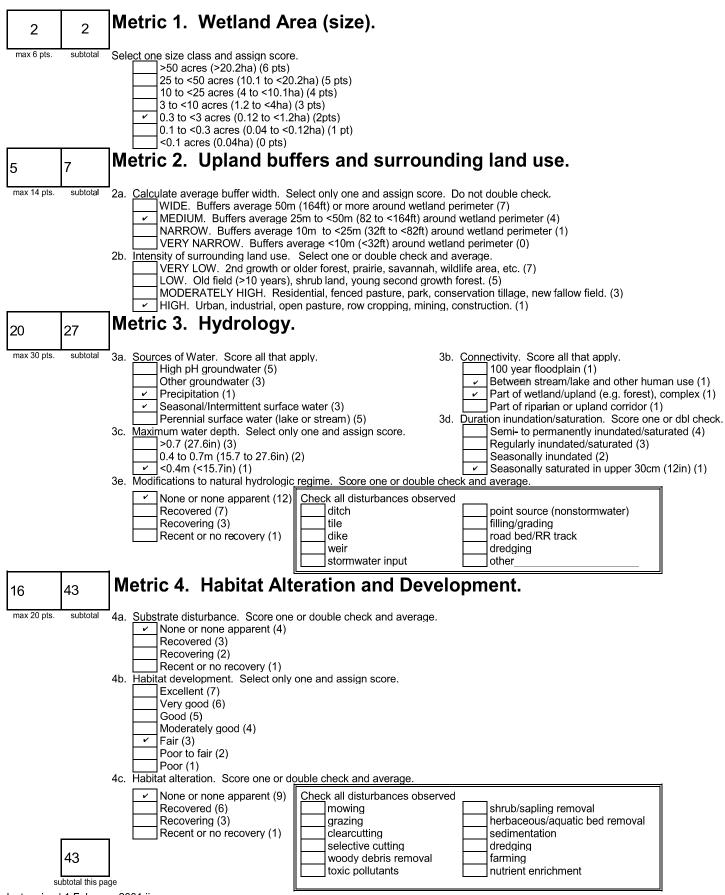
~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	<b>Relict Wet Prairies</b> . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		l v
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

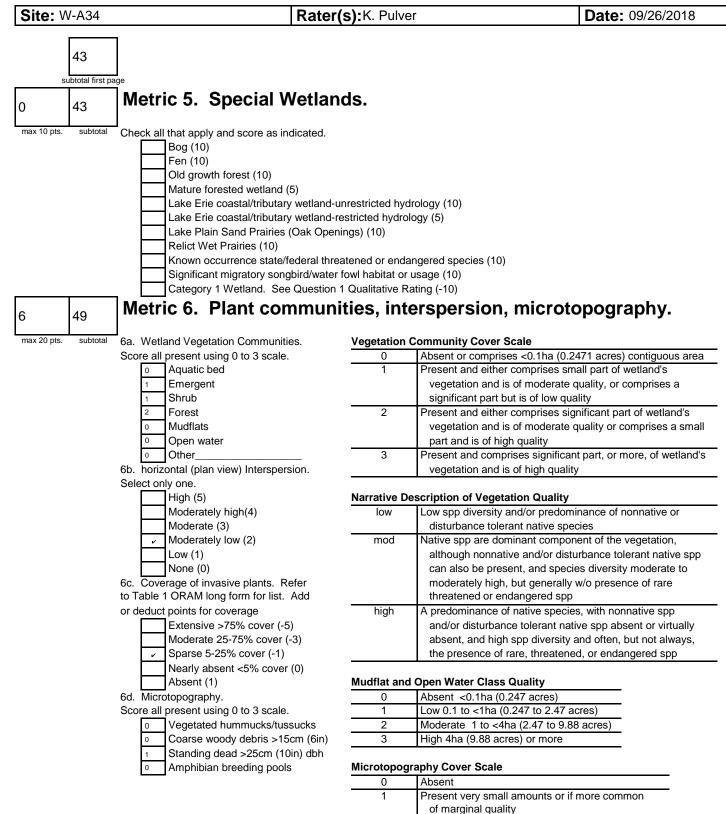
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A34

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

49

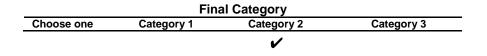
ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
U	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	20	
	Metric 4. Habitat	16	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	6	
	TOTAL SCORE		Category based on scor breakpoints
		49	2

Complete Wetland Categorization Worksheet.

# Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🖌	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: CV	
Date: 09/24/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220	
Phone Number: (412) 921-7090	
e-mail address:	
Name of Wotland.	
Name of Wetland: <sub>W-B1</sub>	
Vegetation Communit(ies): PEM PFO	
HGM Class(es): Riverine	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.	
Lat/Long or UTM Coordinate 41.030759, -83.080429; 41.030787, -83.080914; 41.031301, -83.080186	
USGS Quad Name	Bloomville
County	Seneca
Township	Eden
Section and Subsection	T1N R15E S24
Hydrologic Unit Code	04100011
Site Visit	09/24/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map	Attached

Name of Wetland: W-B1		
Wetland Size (acres, hectares): 1.18 ac.		
Sketch: Include north arrow, relationship with other surface waters, vegetati	on zones, etc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 45	Category:	2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	~	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	v	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	v	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

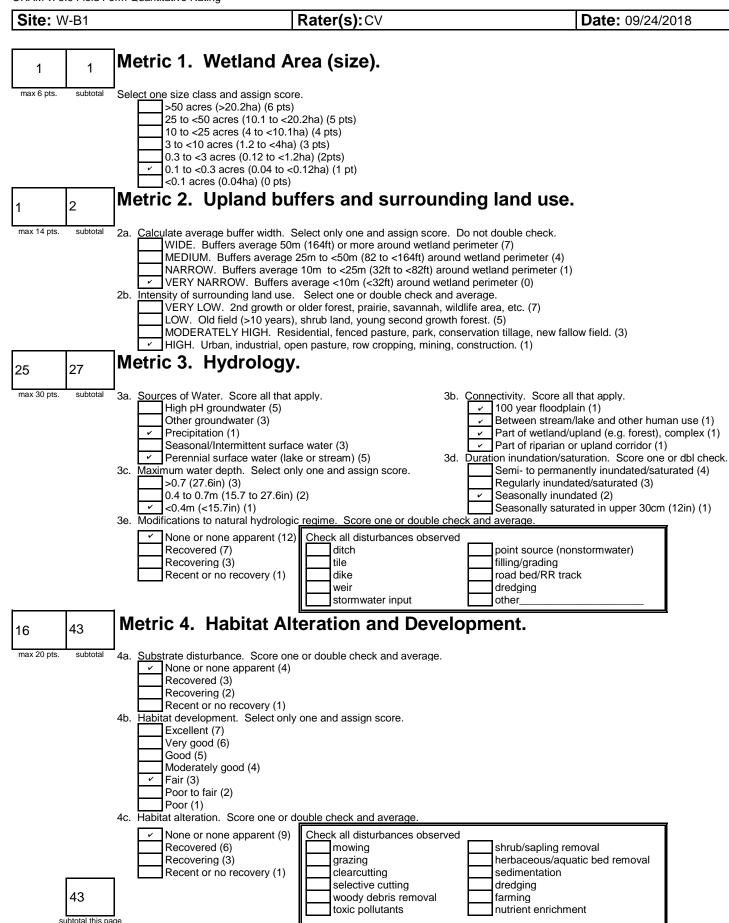
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

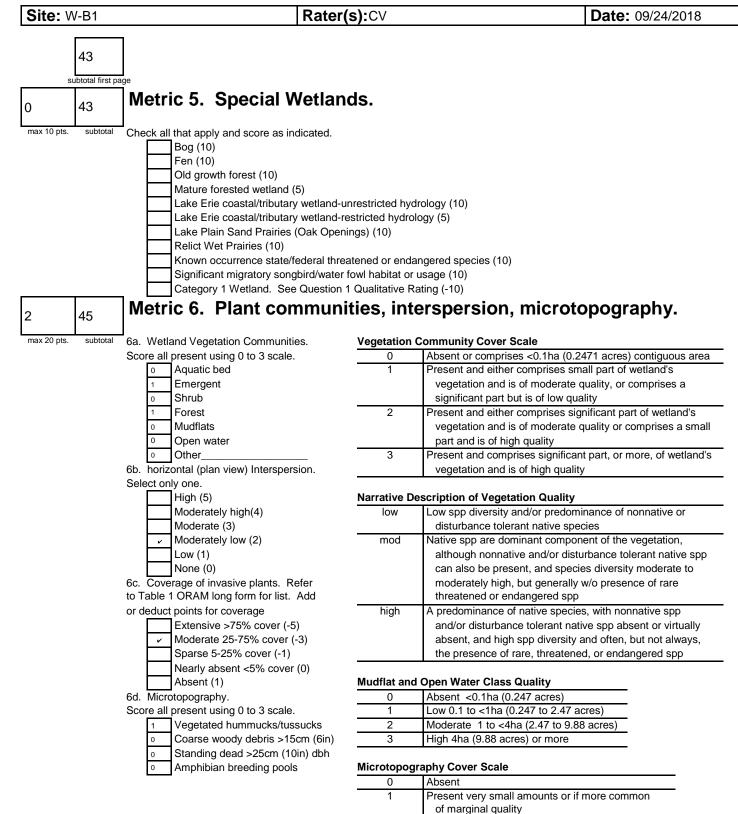
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.



last revised 1 February 2001 jjm



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

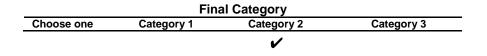
ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	1	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	25	
	Metric 4. Habitat	16	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE		Category based on sco breakpoints
		45	2

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



## End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: K. Pulver	
Date: 09/26/2018	
Affiliation: Tetra Tech	
Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220	
Phone Number: (412) 921-7090	
e-mail address:	
Name of Wetland: W Acc. W Acc. DEM. W Acc. DOC. A.W. Acc.	
Name of Wetland: W-A28, W-A29 PEM, W-A29 PSS & W-A37	
PEM PSS	
HGM Class(es): Riverine	
Location of Wetland: include map, address, north arrow, landmarks, distance Attached.	s, roads, etc.
Lat/Long or UTM Coordinate 41.04744	9, -83.108844
USGS Quad Name	Bloomville
County	Seneca
Township	Eden
Section and Subsection	T1NR16E S14,S15
Hydrologic Unit Code	041000110806
Site Visit	9/26/2018
National Wetland Inventory Map	Fig. 3a
Ohio Wetland Inventory Map	Fig. 3b
Soil Survey	Fig. 2
Delineation report/map Attached	

Name of Wetland: W-A28, W-A29 PEM, W-A29 PSS & W-A37	
Wetland Size (acres, hectares): W-A28 (1.03 ac); W-A29 PEM (0.42 ac); W-A29 PSS (0.08); W-A37 (0.60 ac)	
Wetland Size (acres, hectares): W-A28 (1.03 ac); W-A29 PEM (0.42 ac); W-A29 PSS (0.08); W-A37 (0.60 ac) Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 21 Category: 1	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

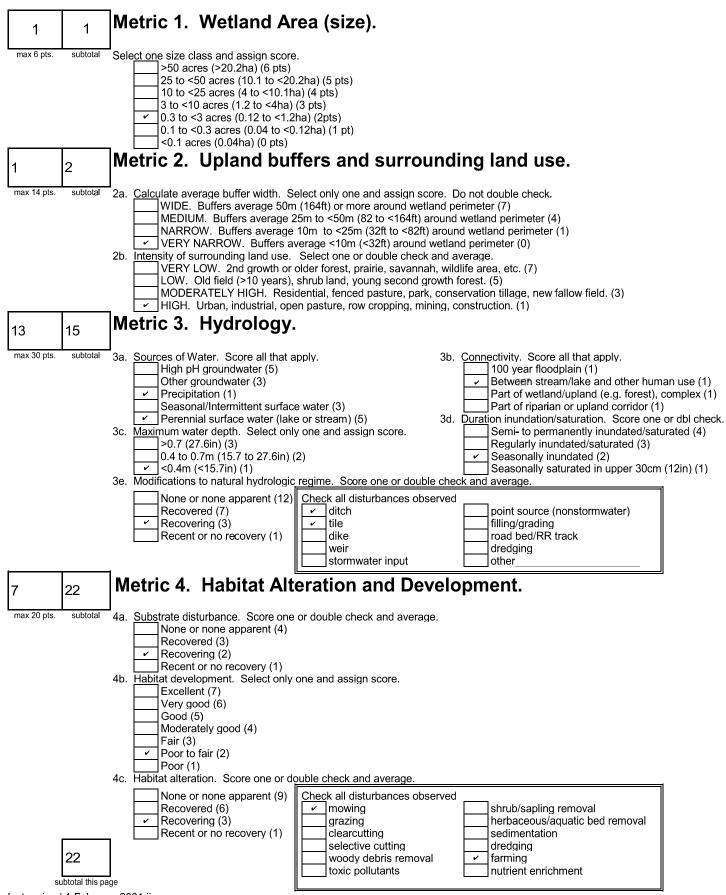
#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Cata Outstien 11	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

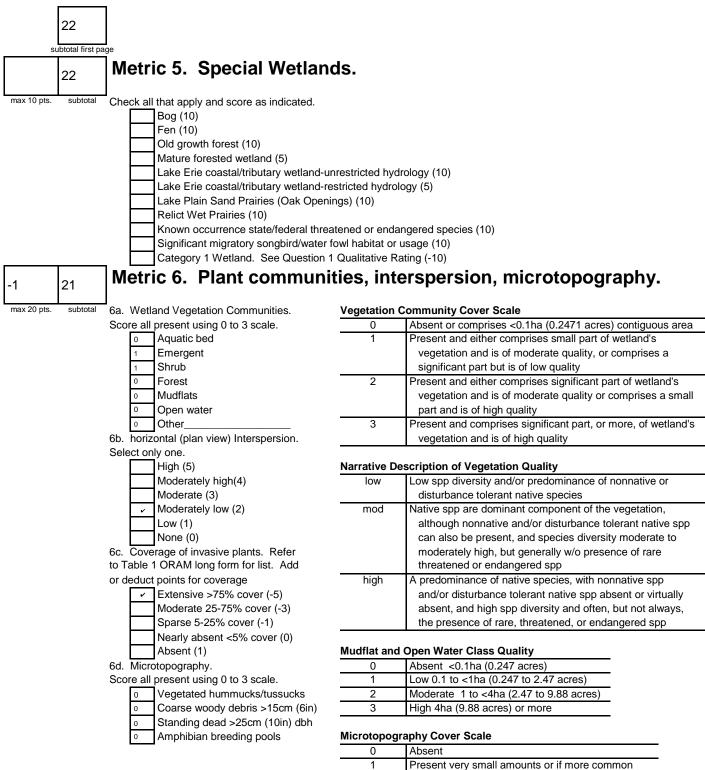
#### Site: W-A28, W-A29 PEM, W-A29 PSS & W- Rater(s):K. Pulver



Date: 09/26/2018



#### Site: W-A28, W-A29 PEM, W-A29 PSS & W Rater(s):K. Pulver



 of marginal quality

 2
 Present in moderate amounts, but not of highest quality or in small amounts of highest quality

 3
 Present in moderate or greater amounts and of highest quality

Date: 09/26/2018

#### End of Quantitative Rating. Complete Categorization Worksheets.

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ORAM	<b>Summary Wor</b>	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
, kating	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	13	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE		Category based on scol breakpoints
		21	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name:	Z	Dubier
	κ.	Pulver

Date: 09/25/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

#### Name of Wetland: W-A27

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.040695, -83.125575	
	41.040093, -03.123373	
USGS Quad Name		Bloomville
County		Seneca
Township		Bloom
Section and Subsection		T1NR16E S15
Hydrologic Unit Code		041000110806
Site Visit		9/25/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A27		
Wetland Size (acres, hectares): 0.04 ac		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, e	tc.	
See Attached.		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score :22Ca	ategory:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO 🖌
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO 🖌
	in size and <b>hydrologically isolated</b> and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO 🖌
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO 🖌
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human actuation of the part 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

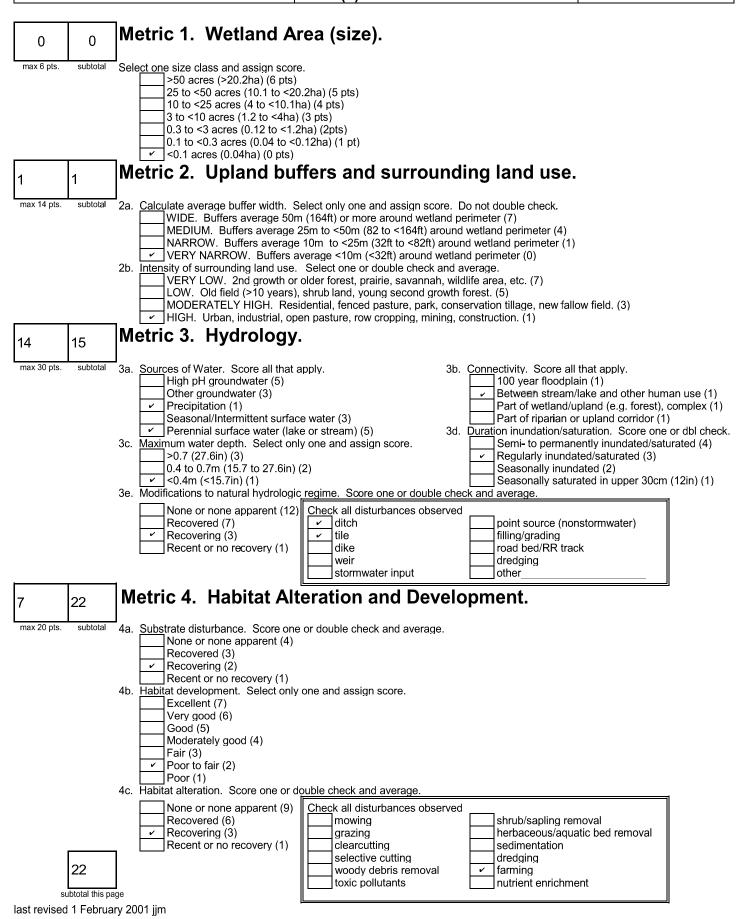
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to Question 9d	Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO 🖌
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	123	NU 🗸
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the	Contro Ourantian 44	
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO 🖌
	dominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

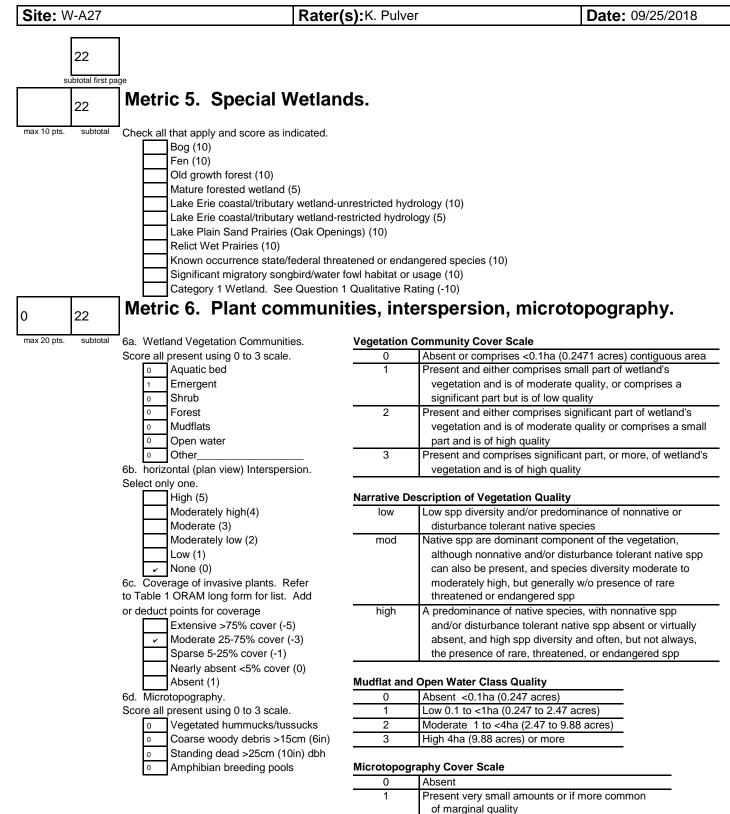
invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W-A27

Rater(s):K. Pulver





End of Quantitative Rating. Complete Categorization Worksheets.

2

3

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

22

ORAM	<b>Summary Wor</b>	ksheet
------	--------------------	--------

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
5	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities		
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE		Category based on scol breakpoints
		22	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

### **Background Information**

Name: K. Pulver

Date: 09/26/2018

Affiliation: Tetra Tech

Address: 661 Andersen Drive, Foster Plaza 7, Pittsburgh, PA 15220

Phone Number: (412) 921-7090

e-mail address:

Name of Wetland: W-A31 & W-A32

Vegetation Communit(ies): PEM

HGM Class(es): Riverine

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Attached.

Lat/Long or UTM Coordinate	41.036796, -83.138705	
USGS Quad Name		Tiffin South
County		Seneca
Township		Eden
Section and Subsection		T1NR15E S16,S21
Hydrologic Unit Code		041000110806
Site Visit		9/26/2018
National Wetland Inventory Map		Fig. 3a
Ohio Wetland Inventory Map		Fig. 3b
Soil Survey		Fig. 2
Delineation report/map Attached		

Name of Wetland: W-A31 & W-A32	
Wetland Size (acres, hectares): W-A31 (0.02 ac); W-A32 (0.03 ac)	
Wetland Size (acres, hectares): W-A31 (0.02 ac); W-A32 (0.03 ac) Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Attached.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 21Category:	1

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	~	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	~	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	v	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	~	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		~
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	~	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

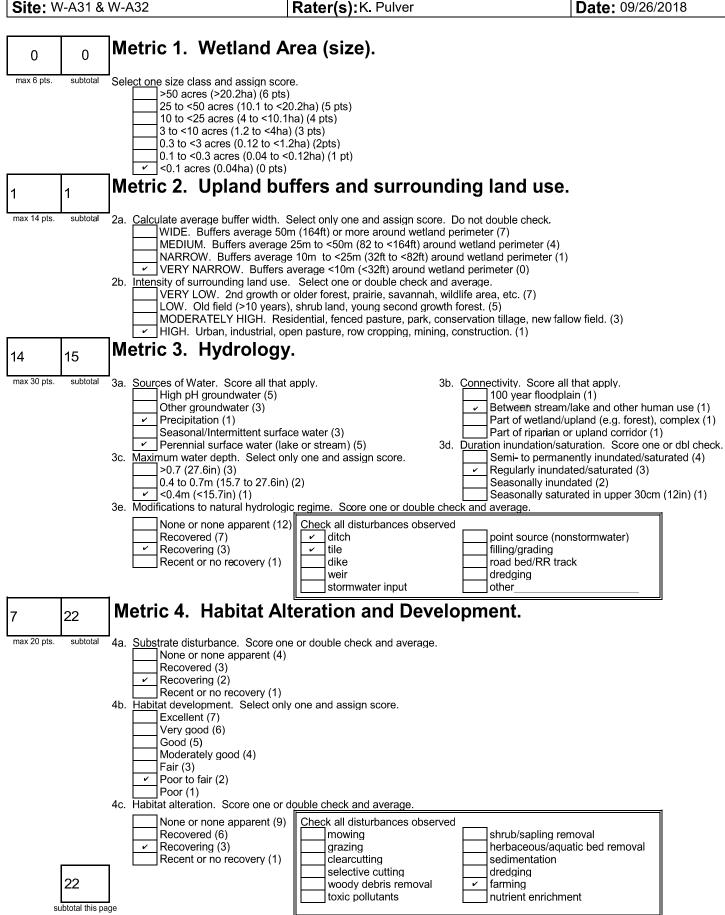
INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	<b>Critical Habitat.</b> Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	NO 🖌
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO 🖌
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO 🖌
	Natarai Fientage Database as a fiigh quality wetland:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding	YES	NO 🖌
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO 🖌
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no	YES	NO 🖌
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
7_	<b>Fens.</b> Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO 🖌
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
Ba	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO 🖌
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8b
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

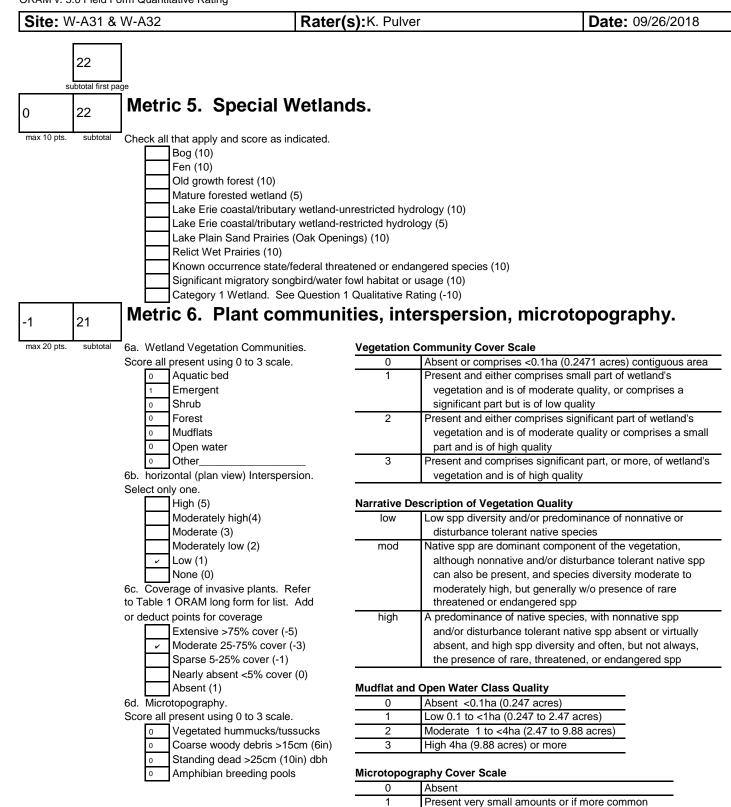
~			
8b	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO 🖌
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	<b>.</b> ,	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO 🖌
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 🖌
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant		V
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be evaluated for possible	Go to Question 10
		Category 3 status	
		outogoly o olutio	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	NO 🖌
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	<b>Relict Wet Prairies</b> . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		l v
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
		Complete Quantitative	
	Montgomery, Van Wert etc.).		

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.



last revised 1 February 2001 jjm



End of Quantitative Rating. Complete Categorization Worksheets.

2

3

of marginal quality

and of highest quality

Present in moderate amounts, but not of highest quality or in small amounts of highest quality

Present in moderate or greater amounts

21

ORAM	Summary Wor	ksheet
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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bog <del>s</del>	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
-	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
U	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE		Category based on sco breakpoints
		21	1

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 🗸	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO 🗸	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO 🗸	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO 🖌	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.



# End of Ohio Rapid Assessment Method for Wetlands.

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in

Case No(s). 18-0488-EL-BGN

Summary: Correspondence of Seneca Wind, LLC Submitting Aquatic Resource Report, Part 10 of 12 electronically filed by Teresa Orahood on behalf of Dylan F. Borchers