

Photograph 11. Elevated view of existing bermed, maintained Line D000B ROW, bisecting Wetland 1. Photograph taken facing south.



Photograph 12. View of Wetland 2. Photograph taken facing east-northeast.



Photograph 13. View of Wetland 2. Photograph taken facing northeast.



Photograph 14. Hydric soil ped exhibiting redox features from wetland determination SP-17.



Photograph 15. View of the PEM portion of Wetland 2, facing south.



Photograph 16. View of Wetland 3, facing east-northeast.



Photograph 17. View of Wetland 4, facing southeast.



Photograph 18. View of Wetland 4, facing northeast.



Photograph 19. View of Wetland 5, facing east-northeast.



Photograph 20. View of Wetland 6, facing south-southwest.

APPENDIX B

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM	- Eastern Mountains and Piedmont Region
Project/Site: Line DOOB City/C	county: Concernate Hamilton Sampling Date: 5/16/2016
Applicant/Owner: Duke Energy	
Investigator(s): <u>JAV/DMGr (EEC)</u> Section	
Landform (hillslope, terrace, etc.): <u>Flixaplain</u> Local rel	ief (concave, convex, none): <u>Conclave</u> Slope (%): <u>07</u>
Subregion (LRR or MLRA): LRR N Lat: 39.07913	5Long; <u>-84,427622</u> Datum: <u>WQS84</u>
Soil Map Unit Name: Gn - Demosel loam, occoel	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> significantly distur	
Are Vegetation <u>1</u> , Soil <u>1</u> , or Hydrology <u>1</u> , naturally problem	
SUMMARY OF FINDINGS – Attach site map showing san	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗡 No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes <u>×</u> No
Wetland Hydrology Present? Yes <u>X</u> No	
Remarks:	
Fuld confirmed wetland.	
Green Co. from one on concernent,	· .
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (
🔀 High Water Table (A2) 🛛 🔄 Hydrogen Sulfide Od	
	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reductio	
🔀 Drift Deposits (B3) Thin Muck Surface (C	- · · · · · · · · · · · · · · · · · · ·
Algal Mat or Crust (B4) Other (Explain in Rer	1
Iron Deposits (B5)	<u>≺</u> Geomorphic Position (D2)
✓ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	<u> </u>
Aquatic Fauna (B13)	<u> </u>
Field Observations:	/A
Surface Water Present? Yes No Depth (inches):N	<u>//\</u>
Water Table Present? Yes X No Depth (inches): 7	
Saturation Present? Yes <u>×</u> No Depth (inches): <u>炎</u> (includes capillary fringe)	<u>∧∱a∠</u> Q Wetland Hydrology Present? Yes <u>×</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
a put later	tree Trunk Inthesemia
Strong wetland hydrology,	

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point:<u>SP-\</u>____

2010	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30'R</u>)		<u>Species?</u>	Status	Number of Dominant Species	
1. Peantanus occidentalui	<u> 70%</u>		FACW	That Are OBL, FACW, or FAC:	(A)
2. acer saucharinem	35%		FACW	Total Number of Dominant	
3. Populus deltailes	<u>_20%</u>	<u>N</u>	FACIN	Species Across All Strata:	(B)
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 75%	(A/B)
6					
7				Prevalence Index worksheet:	
	125%	= Total Cov	er		
50% of total cover: 62 .	5 20% of	total cover:	25	OBL species x 1 =	_
Sapling/Shrub Stratum (Plot size: 15'?)				FACW species <u>139</u> x 2 = <u>278</u>	_
1. Frakringer Demonstranica	3%	N	FACU	FAC species 4° x 3 = 4°	_
2. Jookoden Iron hadicans			FAC	FACU species <u>20</u> x 4 = <u>80</u>	
	*			UPL species x 5 =	
				Column Totals: <u>208</u> (A) <u>505</u>	(B)
4					_ (-)
5				Prevalence Index = B/A = <u>२ - 4 २</u>	_
6	·			Hydrophytic Vegetation Indicators:	
7	·		,	1 - Rapid Test for Hydrophytic Vegetation	
8	·			∠ 2 - Dominance Test is >50%	
9				×3 - Prevalence Index is ≤3.0 ¹	
	<u> </u>	Total Cov	er	4 - Morphological Adaptations ¹ (Provide sup	norting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: <u>5 K</u>)			war i di		
1. Sounder from roberand	40%		<u>FAC</u>	Problematic Hydrophytic Vegetation ¹ (Explai	un)
2. Untila didla	20%	$ \rightarrow $	FACU		
3. ambrosia tubida	5%	N	FAC	¹ Indicators of hydric soil and wetland hydrology r be present, unless disturbed or problematic.	nust
4. Impotiens deenera	570	N	FACh		
5. Bidens Rindora	3%	N	FACW	⁷ Definitions of Four Vegetation Strata:	
6. hipimachia nummularia		N	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6	
				more in diameter at breast height (DBH), regard	less of
7				height.	
8				Sapling/Shrub – Woody plants, excluding vines	
9				than 3 in. DBH and greater than or equal to 3.28	3 ft (1
10				m) tall.	
11			. <u> </u>	Herb - All herbaceous (non-woody) plants, rega	rdiess
3.0		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: <u>38</u>	20% of	total cover:	10.x	Woody vine – All woody vines greater than 3.28	3 ft in
Woody Vine Stratum (Plot size: <u>30' R</u>)	~~	. 1	~~~~	height.	
1. Torricodendram nadicana	2/0	<u></u>	<u>Fac</u>		
2					
3			,		
4	_			Hydrophytic	
5.				Vegetation	
	2%	= Total Cov	er	Present? Yes <u> </u>	
50% of total cover:	a	total cover:			
Remarks: (Include photo numbers here or on a separate	sheet.)				
and a second sec	·		Ι.	+ lenged ND	1
stinging melle exercic	mg f	NOW~~	aeya	and a some a upland	
Remarks: (Include photo numbers here or on a separate Stinging mettle encound ROW.	\cup \vee		U	'	
and the second					

ч. .

Profile Desc	ription: (Describe t	o the depth	needed to docum	ient the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	Features	s ,		
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-8"	$107R^{3}/2$	95	10VR-56	_5_	<u> </u>	M	Sety day loam
8-14"	10YR4/2	15	IOVR %/6	5	C	M	Sitty lay boam
							0
				·····	•		
·				•		L	
	·,						
		······································				,	
					<u> </u>		
¹ Type: C=Co	ncentration, D=Deple	etion. RM=R	educed Matrix. MS	=Masked	Sand Gra	lins.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil							Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Bel		e (S8) (M	LRA 147,	
Black His			Thin Dark Sur				(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleyed	d Matrix (F	=2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Matr				(MLRA 136, 147)
	ck (A10) (LRR N)		Kedox Dark S				Very Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dark				Other (Explain in Remarks)
	rk Surface (A12)		Redox Depres	-	-		
	ucky Mineral (S1) (Lf	KR N,	Iron-Mangane		es (F12) (L	.RR N,	
	147, 148)		MLRA 136	-	MI DA 194	2 422)	³ indicators of hydrophytic vegetation and
	leyed Matrix (S4) edox (S5)		Piedmont Floo				
	Matrix (S6)		Red Parent M				
	ayer (if observed):						
Type:							
Depth (inc	<i></i>						Hydric Soil Present? Yes 📉 No
Remarks:					Λ		
\sim	ld confin	. 1	Online	200	0		
2,2	LA confin	med	mane				
	V		V				
-				· .		•	
			,				~
1							

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WETLAND DETERMINATION DATA FORM – Eastern I	Nountains and Piedmont Region
Project/Site: <u>Line POOOB</u> City/County: CM	unnati/Hamilter Sampling Date: 5/16/20/6
Applicant/Owner: Duke Energy	State: OH Sampling Point: SP-2
	Range: S23, TIN, R5E
Landform (hillslope, terrace, etc.): Flondalam Local relief (concave, o	convex, none): Concare Slope (%): 07.
	ong: -84, 42763 Datum: W9584
Soil Map Unit Name: GN- Henerel Loam, occasionally,	21 Acded NWI classification; PEM J
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{\prec} O_{ m N}$	(If no, explain in Remarks.)
Are Vegetation, Soil, or HydrologyN significantly disturbed? A	re "Normal Circumstances" present? Yes 🔀 No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic? (i	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Is the Samp within a Wet Hydric Soil Present? Yes X No within a Wet Wetland Hydrology Present? Yes X No within a Wet Remarks: Is the Samp within a Wet Is the Samp within a Wet	
Field confirmed wetland.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	<u>→</u> Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living R	
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soil	
Drift Deposits (B3) Thin Muck Surface (C7)	Sturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5) X Inundation Visible on Aerial Imagery (B7)	Geomorphic Position (D2)
Water-Stained Leaves (B9)	Shallow Aquitard (D3) <u>/</u> -Microtopographic Relief (D4)
	Microtopographic Relier (D4) ∠ FAC-Neutral Test (D5)
Aquatic Fauna (B13) Field Observations:	<u></u>
Surface Water Present? Yes No $\underline{\times}$ Depth (inches): $\underline{N/A}$	
Water Table Present? Yes No \swarrow Depth (inches): $212''$	
	Wetland Hydrology Present? Yes 🔀 No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarks:	
strong wettand hydrology indicators	

VEGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: <u>SP-2</u>
20/0	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'R</u>)		Species?	<u>Status</u>	Number of Dominant Species
1. aler parcharmum	25%	Y	FACU	That Are OBL, FACW, or FAC:
2. Plantanus readentalis	1070		FACU	
				Total Number of Dominant 3 (B)
				Species Across All Strata: (B)
4		·		Percent of Dominant Species
5	•			That Are OBL, FACW, or FAC: ////////////////////////////////////
6				
7	· · · · · · · · · · · · · · · · · · ·			Prevalence Index worksheet:
(1920)	.35%	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: <u>(구.</u>	5 20% of	total cover:	radiant. 7	OBL species x1 =
Sapling/Shrub Stratum (Plot size: 15 R)				FACW species <u>123</u> x2 = <u>246</u>
A				FAC species $31 \times 3 = 93$
1				FACU species x4 =
2				UPL species \bigcirc x 5 = \bigcirc
3				
4				
5				Prevalence Index = B/A = 8
6				Hydrophytic Vegetation Indicators:
7			. <u> </u>	▲ 1 - Rapid Test for Hydrophytic Vegetation
8.				
9.				<u>≯</u> 2 - Dominance Test is >50%
ð,	0%	= Total Cov		<u>⊁</u> 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		total cover:		4 - Morphological Adaptations ¹ (Provide supporting
<i></i>	20% 0	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5'K</u>)	700	\sim	EAN,	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Rysemachia nummulana			<u>rnu</u>	
2. Bechmenia yenduca	15%		HACW	¹ Indicators of hydric soil and wetland hydrology must
3. Vernonia gigantila	8%	2	HAC	be present, unless disturbed or problematic.
4 Billera glabella	5%	N	OBL	Definitions of Four Vegetation Strata:
5. amenoria tribida	5%	P	FAC	Deminions of Pour Vegetation Strata.
6. Caren vulperlordes	5%	N	ARL	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
	5%	Ň	EAC	more in diameter at breast height (DBH), regardless of
		<u> </u>	HA	height.
8. Joncodandian radicons		<u> </u>	TAU	Sapling/Shrub – Woody plants, excluding vines, less
9. Urtrea diolia	5%	. <u>_ P/</u>	HAU	than 3 in. DBH and greater than or equal to 3.28 ft (1
10. Impatrice capenail	3%		FACW	m) tall.
11. amphilinead bractanta	270	<u>p</u> _)	FAC	Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: b6_3	20% d	total cover:	26.2	
Woody Vine Stratum (Plot size: 30 P)	<u></u> 2070 0.			Woody vine – All woody vines greater than 3.28 ft in
1. Joricodendian radicant	1%	A 1	FAC	height.
1. equicalinguar (1. pour ar ve	1/0	12	156	
2				
3		·		
4				Hydrophytic
5.				Vegetation
	10/0	= Total Cov	er	Present? Yes <u>></u> No
50% of total cover:	20% o	f total cover	ij:Man.	
Remarks: (Include photo numbers here or on a separate				I
Dominante hydrophytic,		til	nia,	
0 • 0	O			

Sampling Point: <u>SP-2</u>

Profile Description: (Describe to the dept	h needed to document the indicator or confirm	the absence of Indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-7" 107R 1/2 90%	107Rº/8 10% C M	Silty clay
7-20" 107R4/2 85%	104R1/8 15% C M	S. D. Bus allow
·		<u> </u>
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
		2
¹ Type: C=Concentration, D=Depletion, RM=I	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,	
Black Histic (A3) Hydrogen Sulfide (A4)	Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	(MLRA 147, 148) Biodmont Electricity Spile (E19)
Stratified Layers (A5)	Coarry Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	
Oliniy Macky Millerar (07) (ENK N, MLRA 147, 148)	MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 144	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	
Restrictive Layer (if observed):		
Type: N/A		
	<u> </u>	
Depth (inches):		Hydric Soil Present? Yes <u> </u>
Remarks:	0	
Field confirmed	$\Delta A = 10$	
Field confirmed	mane pore.	
- · · · · · · · · · · · · · · · · · · ·	U	
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WETLAND DETERMINATIO	N DATA FORM	– Eastern Mounta	ins and Piedmont Region	
Project/Site: Line, DOOOB	Citv/C	Sounty: Granna	ti / Home Sampling Date: 5/16/	2016
Applicant/Owner: Dune Emerant			State: OH Sampling Point: SP-	
Investigator(s): JAV/DMG POEC	Section	on, Township, Range:	S23 TIN RSE	12000 W
Landform (hillslope, terrace, etc.): <u>Floodalau</u>		ief (concave, convex, n	one): <u>Concarre</u> Slope (%): (12
	39.08082		34, 427790 Datum: W95	
Soil Map Unit Name: <u>Gran Herro D.C.</u>			NWI classification; PFO	
An alimatic / hudrala alimatic and the site to alimatic for		ROOM		
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation N , Soil N , or Hydrology N			al Circumstances" present? Yes 🗡 No	······
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>		, ,	explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma	ap showing sam	pling point location	ons, transects, important features,	etc.
Hydrophytic Vegetation Present?YesXHydric Soil Present?YesXWetland Hydrology Present?YesX	No No No	Is the Sampled Area within a Wetland?	Yes <u>×</u> No	
Remarks: Freld confirmed vettan	d,			
HYDROLOGY			······	
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two require	<u>ed)</u>
Primary Indicators (minimum of one is required; check	all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1) T	Frue Aquatic Plants (I	B14)	Sparsely Vegetated Concave Surface (B8	3)
High Water Table (A2) H	lydrogen Sulfide Odd	or (C1)	🖄 Drainage Patterns (B10)	
		es on Living Roots (C3)	Moss Trim Lines (B16)	
	Presence of Reduced	Iron (C4)	Dry-Season Water Table (C2)	
	Recent Iron Reduction	· ·	Crayfish Burrows (C8)	
	Thin Muck Surface (C	•	Saturation Visible on Aerial Imagery (C9)	
	Other (Explain in Ren	narks)	Stunted or Stressed Plants (D1)	
Iron Deposits (B5)			<u>≺</u> Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			<u>Microtopographic Relief (D4)</u>	
Aquatic Fauna (B13)			AC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes No <u>×</u>	Death (inclusive D	/Δ		
Surface Water Present? Yes No Water Table Present? Yes No	Depth (inches):			
Saturation Present? Yes No X			-lydrology Present? Yes 🔀 No	
(includes capillary fringe)			· .	[
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, pre	vious inspections), if ava	ailable:	
Remarks:	- 0			
withand hydrology of	bened.			
· ·				

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: <u>SP-3</u>

2.10	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'R</u>) 1. <u>Bler Bacchannium</u>	<u>% Cover Species?</u> <u>Status</u> <u>85%</u> Y FACu	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. acer regundo	<u>5% N</u> FAC	Total Number of Dominant Species Across All Strata:(B)
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6		Prevalence Index worksheet:
7		
	90% = Total Cover 20% of total cover: 18%	Total % Cover of: Multiply by:
50% of total cover: 45	20% of total cover: <u>/8%</u>	OBL species \bigcirc $x1 = \bigcirc$
Sapling/Shrub Stratum (Plot size: 1512)		FACW species 195 x 2 = 390
1		FAC species 5 x 3 = 15
2.		FACU species x 4 =
		UPL species x 5 =
3 4		Column Totals: 200 (A) 405 (B)
5		Prevalence index = $B/A = 2.02$
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		🗡 2 - Dominance Test is >50%
9	~~~~	<u> </u>
	& = Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
	20% of total cover:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5/6)		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Bochonener cylindrica	70% Y FACU	
2. Lehra Manula	<u>20% Y FACW</u>	1 1- directory of budging and motional budgeloan must
3. empatiene capensis	<u>5% N</u> FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Carol Gray	5% N FACW	Definitions of Four Vegetation Strata:
		Deminions of Four Vegetation of atd.
5		
5 6		Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
		Tree Woody plants, excluding vines, 3 in. (7.6 cm) or
6 7		Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
6 7 8		Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6 7 8 9		Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
6 7 8 9 10		 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6 7 8 9 10 11		 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of pize, and woody plants less than 3 28 ft tall.
6 7 8 9 10 11		 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6 7 8 9 10 11		 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of pize, and woody plants less than 3 28 ft tall.
6 7 8 9 10 11 50% of total cover: _55	$\frac{110\%}{20\%} = \text{Total Cover}$	 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine All woody vines greater than 3.28 ft in
6 7 8 9 10 11 50% of total cover: <u>50% of total cover:</u> <u>Woody Vine Stratum</u> (Plot size: <u>30 ^ R</u>)	$\frac{110\%}{20\%} = \text{Total Cover}$	 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine All woody vines greater than 3.28 ft in
6 7 8 9 10 11 50% of total cover: <u>55</u> <u>Woody Vine Stratum</u> (Plot size: <u>30 (2)</u>) 1)	$\frac{110\%}{20\%} = \text{Total Cover}$	 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine All woody vines greater than 3.28 ft in
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6	$\frac{ 0\% }{20\%} = \text{Total Cover}$ $\frac{ 0\% }{20\%} = \text{Total Cover}$ $\frac{ 0\% }{20\%} = \text{Total Cover}$ $\frac{ 0\% }{20\%} = \text{Total Cover}$	 Tree Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
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Sampling Point: $\underline{SP} - \underline{S}$

Depth Matrix Redox Features (inches) Color (moist) % Type¹ Loc² Texture Remarks 0-12'' 10/12 3/2 90 2,5 Y R 4/8 10 C M Sulty clay Remarks	
O-10 ⁻¹¹ IO/R ³ /2 90 2.5YR ⁴ /8 IO C M Sulty clay loam	······
Image: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydr	<u>.</u>
Hydric Soil Indicators: Indicators for Problematic Hydromatic	
Hydric Soil Indicators: Indicators for Problematic Hydrom	
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Hydric Soil Indicators: Indicators for Problematic Hydromatic	
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)	
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)	ric Soils ³ :
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)	ŋ
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F	19)
Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147)	
2 cm Muck (A10) (LRR N) 🚽 Redox Dark Surface (F6) Very Shallow Dark Surface (T	(F12)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)	
Thick Dark Surface (A12) Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148) MLRA 136)	
Sandy Gieyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic veget	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pre	
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problemati	С.
Restrictive Layer (if observed):	
Type: <u>N/A</u>	
Depth (inches): Yes Xes	No
Remarks:	
Fred confirmed hydric soil	
Juld Confurmed Marie Mon	

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region	
Project/Site: <u>Rine DOOB</u> City/County: <u>City/County</u> Sampling Date: 5/16/2	OIL
Applicant/Owner: Dube, Energy State: OH Sampling Point: SP-4	4
Investigator(s): <u>JAV / DM G (CEC)</u> Section, Township, Range: <u>S23</u> , <u>TIN</u> , <u>RSE</u>	
Landform (hillslope, terrace, etc.): <u>Floud plann</u> Local relief (concave, convex, none): <u>Concave</u> Slope (%): 27	76
Subregion (LRR or MLRA): <u>LRR N</u> Lat: <u>39.081939</u> Long: <u>-84.427704</u> Datum: <u>W988</u>	
Soil Map Unit Name: GN - Demesee loan, occasionally flood NWi classification: Upland	<u> </u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes K. No	
Are Vegetation _ N_, Soil _N_, or Hydrology _ N_ naturally problematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, et	: C .
Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? No Hydric Soil Present? Yes No No within a Wetland? Yes No Wetland Hydrology Present? Yes No No No	
Remarks: Apland sampling location with hydrophytic regetation.	
HYDROLOGY	
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)	1
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)	
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)	
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)	
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)	
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)	
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)	
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)	
Iron Deposits (B5) Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4)	
Field Observations:	
Surface Water Present? Yes No X Depth (inches): N/A	
Saturation Present? Yes No X Depth (inches): 713." Wetland Hydrology Present? Yes No X (includes capillary fringe)	-
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
upland hydrology observed.	
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VEGETATION (Four Strata) – Use scientific r	ames of plants.	Sampling Point: <u>SP-4</u>
	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'R</u>)	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Number of Dominant Species
1. aler megundo	<u>40% Y FAC</u>	That Are OBL, FACW, or FAC: (A)
2. Green salpharmin	<u>25% 7 FACU</u>	/ 1 Total Number of Dominant
3. Ropulus deltoided	15% N FAC	Total Number of Dominant (B)
4		
5		Percent of Dominant Species That Are OBL, FACW, or FAC:
6		
		Prevalence Index worksheet:
7	= Total Cover	Total % Cover of:Multiply by:
FOR aftered power 40	$\frac{2000}{2}$ = rotal cover: 16%	OBL species x1 =
S_{0} of total cover. $\underline{\gamma}_{2}$		FACW species 26 x 2 = 52
Sapling/Shrub Stratum (Plot size: $15'R$)		FAC species 115 x 3 = 345
1		FACU species 10 x 4 = 40
2		UPL species 2 $x 5 = 2$
3		
4		···· () ()
5		Prevalence Index = B/A = $2 \cdot 89$
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		
9	<u></u>	∠ 2 - Dominance Test is >50%
ð	= Total Cover	[*] 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		4 - Morphological Adaptations ¹ (Provide supporting
	2070 01 10121 00101	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5 K</u>) 1. VerlNama attendadia	AND V EAC	Problematic Hydrophytic Vegetation ¹ (Explain)
	$-\frac{7070}{167}$ $-\frac{7}{167}$ $-\frac{7}{167}$	
2 amphicanpaga blacterta	$-\frac{10}{100}$ $-\frac{10}{100}$ $-\frac{10}{100}$	¹ Indicators of hydric soil and wetland hydrology must
3. Untica dioiga	10% N FACI	be present, unless disturbed or problematic.
4. ambrosia Tupida	<u>az N FAC</u>	Definitions of Four Vegetation Strata:
5. Thola socorda	270 N FAC	
6.		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		height.
8		
9.		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
		m) tall.
10		
11	12200	Herb – All herbaceous (non-woody) plants, regardless
24	$\frac{69\%}{52} = \text{Total Cover}$	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 21.	20% of total cover: 12 · 9/0	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: <u>30' K</u>)	IO IN TAM.	height.
1. Vitte reparia	1% N THUY	
2. Fronkodendran radians	1% N FAC	-
3		
4		Hydrophytic
5		Vegetation
	_ <u>270</u> = Total Cover	Present? Yes <u>No</u>
50% of total cover:	20% of total cover:	
Remarks: (Include photo numbers here or on a separate		,)
Dominant hydrophy		nic.
	Ũ	
		······

	in needed to docun	nent the indicator	or confirm	n the absence of Indicators.)
Depth Matrix		x Features	0.00	
(inches) Color (moist) %	Color (moist)	<u>%</u> <u>Type¹</u>	Loc ²	Texture Remarks
0-5" 10YR4/2 100	guene.	All and the second seco		Sety clay loam
5-12" 10YR3/2 95	IND 4/4	57	M	l. Ott. O. Q an an
<u></u>	IUIN IT			SUU and LOUNC
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				P
	4			
······		······································		
		·		
			- <u></u>	
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¹ Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators:	Reduced Matrix, MS	=masked Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface	(97)		E E
Histic Epipedon (A2)	Dark Surface	(S7) low Surface (S8) (I		2 cm Muck (A10) (MLRA 147) 148) Coast Prairie Redox (A16)
Black Histic (A3)		face (S9) (MLRA		(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleye			Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Mat			(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark S			Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dar	k Surface (F7)		Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depres			
Sandy Mucky Mineral (S1) (LRR N,	_	ese Masses (F12) (LRR N,	
MLRA 147, 148)	MLRA 136	-		1
Sandy Gleyed Matrix (S4)		ce (F13) (MLRA 1 3		³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)		odplain Soils (F19) Istorial (E21) (MLE		
Stripped Matrix (S6)		laterial (F21) (MLR		
Stripped Matrix (S6) Restrictive Layer, (if observed):				
Stripped Matrix (S6) Restrictive Layer (if observed): Type:A				7) unless disturbed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:A Depth (inches):				
Stripped Matrix (S6) Restrictive Layer (if observed): Type:A				7) unless disturbed or problematic.
Stripped Matrix (S6) Restrictive Layer, (if observed): Type: Depth (inches): Remarks:	Red Parent M			7) unless disturbed or problematic.
Stripped Matrix (S6) Restrictive Layer, (if observed): Type:A Depth (inches): Remarks:	Red Parent M			7) unless disturbed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:A Depth (inches):	Red Parent M			7) unless disturbed or problematic.
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Stripped Matrix (S6) Restrictive Layer, (if observed): Type:A Depth (inches): Remarks:	Red Parent M			7) unless disturbed or problematic.
Stripped Matrix (S6) Restrictive Layer, (if observed): Type:A Depth (inches): Remarks:	Red Parent M			7) unless disturbed or problematic. Hydric Soil Present? Yes <u>No X</u>
Stripped Matrix (S6) Restrictive Layer, (if observed): Type: Depth (inches): Remarks:	Red Parent M		A 127, 147	7) unless disturbed or problematic. Hydric Soil Present? Yes <u>No X</u>
Stripped Matrix (S6) Restrictive Layer, (if observed): Type: Depth (inches): Remarks:	Red Parent M		A 127, 147	7) unless disturbed or problematic. Hydric Soil Present? Yes <u>No X</u>
Stripped Matrix (S6) Restrictive Layer, (if observed): Type: Depth (inches): Remarks:	Red Parent M		A 127, 147	7) unless disturbed or problematic. Hydric Soil Present? Yes <u>No X</u>
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Stripped Matrix (S6) Restrictive Layer, (if observed): Type: Depth (inches): Remarks:	Red Parent M		A 127, 147	7) unless disturbed or problematic. Hydric Soil Present? Yes <u>No X</u>
Stripped Matrix (S6) Restrictive Layer, (if observed): Type: Depth (inches): Remarks:	Red Parent M		A 127, 147	7) unless disturbed or problematic. Hydric Soil Present? Yes <u>No X</u>

WETLAND DETERMINATION DATA FORM	- Eastern Mountains and Piedmont Region
Project/Site: Line DOOOB City/C	county: ancinnati / Hamut Sampling Date: 5/16/2016
Applicant/Owner: Dure Energy	State: OH Sampling Point: SP-5
	on, Township, Range: SQ3, TIN, R5E
Landform (hillslope, terrace, etc.):Local reli	ef(conceve convex none); CALCOAL Slope (%); OZ
Subregion (LRR or MLRA): <u>LRR N</u> Lat: <u>39.08/6 (</u>	
Soil Map Unit Name: <u>Gn - Henasee loam</u> , occ	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation N, Soil N, or Hydrology N, significantly distur-	
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	is the Sampled Area within a Wetland? Yes <u> </u>
Field confirmed wettand.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (I	S14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odd	or (C1) X Drainage Patterns (B10)
	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reduction	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Rem	
Iron Deposits (B5)	Geomorphic Position (D2)
∠ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	<u>✓</u> Microtopographic Relief (D4)
Aquatic Fauna (B13)	KAC-Neutral Test (D5)
Field Observations:	/A
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes <u>No </u> Depth (inches): <u>></u>	
Saturation Present? Yes No <u>></u> Depth (inches): <u>></u> (includes capillary fringe)	12.4 Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	vious inspections), if available:
Remarks:	
wetland hydrology abserved	ب
· ·	
I	

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: <u>SP-5</u>

2.10	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'R</u>)		Species?		
1. Populue deltoides	25%		LAC	Number of Dominant Species
		·		That Are OBL, FACW, or FAC: (A)
2. Plastanus recidentalio	25%	Y	FACW	
3. acer sacharinum	10%		FACL	Total Number of Dominant
3. CALLE 1200 Car WANNE	- <u>محماع مسالم -</u>		I FIL W	Species Across All Strata: (B)
4				
5				Percent of Dominant Species 75% (A/B)
5		·		That Are OBL, FACW, or FAC: 13/0 (A/B)
6				Prevalence Index worksheet;
7.				
	60%	= Total Cov		Total % Cover of: Multiply by:
3/1	7 2010		പ്പം എ	OBL species x 1 =
50% of total cover: <u>30</u>	<u>∕∧_</u> 20% of	total cover:	10/10	
Sapling/Shrub Stratum (Plot size: $(5^{\prime}R)$)				FACW species x 2 =
,				FAC species 38 x 3 = 114
1				
2				
				UPL species $0 x 5 = 0$
3				Column Totals: 153 (A) 424 (B)
4				
5				
				Prevalence Index = B/A = <u>2.77</u>
6			·	Hydrophytic Vegetation Indicators:
7				
				1 - Rapid Test for Hydrophytic Vegetation
8		<u>.</u>		🗡 2 - Dominance Test is >50%
9				X 3 - Prevalence Index is ≤3.0 ¹
	0%	= Total Cov	er	
FOR(of total action				4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% 0	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5/ R</u>)			Actually .	
1. Brehmerica mendica	40%	4	FACU	/ Problematic Hydrophytic Vegetation ¹ (Explain)
	A 001	· · · · ·	TAAL	9
2. Untréa dioiea	_ <u> 40%</u> _	· <u> </u>	FRE	¹ Indicators of hydric soil and wetland hydrology must
3. Omphicarpaga bracterta	2º/0	N	FAC	be present, unless disturbed or problematic.
4. 1/erbesing atternil alia	5%	<u> </u>	FAC	•
4. Verrenna ano milana	/0		1 2-47	Definitions of Four Vegetation Strata:
5.				
<u> </u>				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub - Woody plants, excluding vines, less
9		•		than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11	029	• <u> </u>		Herb – All herbaceous (non-woody) plants, regardless
N I	13/0	= Total Cov	er o o	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 46.	<u> </u>	f total cover:	18.00	All a thread and a fill war advertising a superior thread 2.20 B in
Woody Vine Stratum (Plot size: 30 / R)				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4.				Hydrophytic
5				Vegetation
	A 17	= Total Cov		Present? Yes X No
50% of total cover:	20% o	f total cover:	·	
Remarks: (Include photo numbers here or on a separate	sheet)			
	-			
	à		- sandharm ?	<i>A</i>
Dominant Dydrophyte	C M	-g_l,l	XA A.M	
		()		•
U · · ·		497		
				1.
				ι.
				ι
				ı

Sampling Point: <u>SP-5</u>

Depth (Inches) Matrix Redox Features O-8" Color (moist) % Type ¹ Loc ² Texture Remarks 0-8" IOYR4/1 95 IOYR4/4 5 C M Sultyclayloam 8-12" IOYR4/3 100
0-8" 10YR4/1 95 10YR4/4 5 C M Sultyclay loam
<u>8-12' 107R7/3 /00 Sarka</u>
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147)
Histopic (A10) (MLRA 147) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)
Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147)
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8)
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N,
MLRA 147, 148) MLRA 136)
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed):
Depth (inches):
Remarks:
Hydric soil having.
Aform was parting.

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: Kine DOODB city/County: Cincinati/Hamilton Sampling Date: 5/16/2016
Applicant/Owner: D., Ne Emerary State: OH Sampling Point: SP-6
Investigator(s): <u>JAV/DMG1(2000)</u> Section, Township, Range: <u>S2,3, TIN, R5E</u>
Landform (hillslope, terrace, etc.): Slope (%): 0%
Subregion (LRR or MLRA): LRR N Lat: 39.082112 Long: -84.427259 Datum: W9584
Soil Map Unit Name: Gn- General Loam, occasionally floon Whilassification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes γ No γ No γ (If no, explain in Remarks.)
Are Vegetation <u>N</u> , soil <u>N</u> , or Hydrology <u>N</u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No within a Wetland? Yes No Wetland Hydrology Present? Yes Yes No No No Remarks: Kernerks: Kernerks Kernerks Kernerks Kernerks Kernerks
Freid confirmed wetland.
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
X Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
🔀 Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
K Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
X Water-Stained Leaves (B9)
Aquatic Fauna (B13) // FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No Depth (inches):/A Water Table Present? Yes No Depth (inches):/ 12 //
Water Table Present? Yes No Depth (inches): / Yes No Depth (inches): / Wetland Hydrology Present? Yes No Saturation Present? Yes No Depth (inches): / Wetland Hydrology Present? Yes No
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Thee trunk but hessing

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: <u>SP-6</u>

2210			ndicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30'R</u>)	<u>% Cover</u> Spe	<u>ecies?</u>	· · · · ·	/ Number of Dominant Species		
1. aler Baccharimum -	<u> 65% </u>	7	FACU	That Are OBL, FACW, or FAC:	2	(A)
2. Proulue soltoided	_30%	7	FAC	T-t-1 Number of Deminent	~	
3.	<u> </u>			Total Number of Dominant Species Across All Strata:	3	(B)
			· · · · · · · · · · · · · · · · · · ·			()
4				Percent of Dominant Species	119	
5				That Are OBL, FACW, or FAC:	66%	(A/B)
6				Prevalence Index worksheet:		
7						
	<u>95%</u> = Tot	al Cove	r a	Total % Cover of:	Multiply by:	
50% of total cover: <u>47</u> .	5/20% of total	cover:	19%		1=	-
Sapling/Shrub Stratum (Plot size: 15^{\prime} R)					2= <u>130</u>	_
				FAC species <u>34</u> x	3= <u>102</u>	_
1				FACU species X	4=	
2					5 = 🔿	
3				a series and the second se	P. 1990	- (B)
4	. <u> </u>			Column Totals: /05 (A) <u>~~~</u>	_ (0)
5				Prevalence Index = B/A =	2.4.3	
6						-
				Hydrophytic Vegetation Indica		
7				1 - Rapid Test for Hydrophy		
8				2 - Dominance Test is >50%		
9	0 🥠 = Tot	al Cr		<u>≻</u> 3 - Prevalence Index is ≤3.0		
50% of total cover:				4 - Morphological Adaptatio	ns ¹ (Provide sup	porting
	20 % 01 1018	cover		data in Remarks or on a	separate sheet)	
Herb Stratum (Plot size: <u>5'R</u>)	6%	V 1	FALIN	Problematic Hydrophytic Ve	getation ¹ (Expla	in)
1. Untria dioria	$-\frac{90}{23}$	<u>/</u>	<u>Majo</u>			
2. Forricodendian radicant	2 2 10 1	\mathbb{N}_{-}	FAC	¹ Indicators of hydric soil and wel	land hydrology r	nust
3				be present, unless disturbed or	problematic.	
4				Definitions of Four Vegetation	Strata:	
5						
6				Tree - Woody plants, excluding		
				more in diameter at breast heigh height.	nt (DBH), regard	ess or
7				neight.		
8				Sapling/Shrub - Woody plants,	, excluding vines	, less
9				than 3 in. DBH and greater than m) tail.	or equal to 3.28	π(1
10		·····		iny tan.		
11				Herb - All herbaceous (non-woo		rdless
49 cm	<u>710</u> = Tot	tal Cove	r	of size, and woody plants less th	nan 3.28 ft tall.	
50% of total cover: <u>4.5</u>	🏼 🌆 20% of total	cover:		Woody vine – All woody vines g	preater than 3.28	3 ft in
Woody Vine Stratum (Plot size: 30 R)	- 4		<u> </u>	height.		
1. Joncodendian radicans	<u>1/n</u>	$\overline{\boldsymbol{\lambda}}$	FAC			
2						
3						
4.						
				Hydrophytic Vegetation		
5	= To	tal Cov		Present? Yes <u>×</u>	No	
50% of total cover:						
Remarks: (Include photo numbers here or on a separate	aneel.)	anar for a state of the state o	tana a			
Dominant hydrophyte	C NRGS	U.S.	UM	÷		
3.0						

Profile Description: (Describe to the d	epth needed to document the indicator or c	onfirm the absence of indicators.)			
Depth <u>Matrix</u>	trix Redox Features				
(inches) Color (moist) %		oc ² Texture Remarks			
0-12 10/R4/2 95	5YR4/6 5 C	M Silti clay			
		0 J			
		······			
		neren er en			
¹ Type: C=Concentration, D=Depletion, R	M≕Reduced Matrix, MS=Masked Sand Grains	² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators:	······································	Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)			
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLR				
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147,				
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)			
Stratified Layers (A5)	Sepleted Matrix (F3)	(MLRA 136, 147)			
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)			
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)			
Thick Dark Surface (A12)	Redox Depressions (F8)				
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR	ι Ν,			
MLRA 147, 148)	MLRA 136)				
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 1	22) ³ Indicators of hydrophytic vegetation and			
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (ML				
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 12				
Restrictive Layer (if observed):					
туре:N/А					
Depth (inches):		Hydric Soil Present? Yes 🔀 No			
Remarks:	·				
A /					
Hydric soil f	ALIMA				
to the second	en l'				
	V				

WETLAND DETERMINATION DATA FORM -	
Project/Site: Line DOOO B City/C	ounty: Conconnati / Hamilton Sampling Date: 6/18/2016
Applicant/Owner: Duke Energy	State: OH Sampling Point: SP-7
Investigator(s): <u>JAV / DM G. (CEC)</u> Section	on, Township, Range: <u>S23, TIN, RSE</u>
Landform (hillslope, terrace, etc.): Flood plain Local reli	ef (concave, convex, none): <u>ConcanC</u> Slope (%): <u>0%</u>
Subregion (LRR or MLRA): LRR N Lat: 39.081 5	
Soil Map Unit Name: GN- Henesee Loam, occa	
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	
Are Vegetation N, Soil N, or Hydrology N significantly disturb	
Are Vegetation N, Soil N, or Hydrology N naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Remarks: Fulld Confumed wttDamb	Is the Sampled Area within a Wetland? Yes <u>K</u> No
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
L High Water Table (A2) Hydrogen Sulfide Odo	
	es on Living Roots (C3) Moss Trim Lines (B16)
	Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Rem	
Iron Deposits (B5)	Geomorphic Position (D2)
→ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
<u>→</u> Water-Stained Leaves (B9) Aquatic Fauna (B13)	Microtopographic Relief (D4)
Field Observations:	<u></u>
Surface Water Present? Yes No 🔽 Depth (inches): <u>N</u>	
Water Table Present? Yes <u>></u> No Depth (inches): <u>6</u>	
Saturation Present? Yes <u>X</u> No Depth (inches): <u></u>	AAL Wetland Hydrology Present? Yes 🗶 No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	V
Describe Recorded Data (stream gauge, monitoring weil, aena photos, play	
Remarks:	
Remarks: Wetland hydrology observed	<i>)</i> ·

VEGETATION (Four Strata) – Use scientific	names of plants.	Sampling Point: <u>SP-7-</u>
Tree Stratum (Plot size: <u>30'R</u>) 1. acer parchamm	Absolute Dominant Indicator	Dominance Test worksheet: //Number of Dominant Species
2	·····	That Are OBL, FACW, or FAC: (A) Total Number of Dominant
34		_ Species Across Ali Strata: (B)
5		 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6		Prevalence Index worksheet:
	85% = Total Cover	Total % Cover of: Multiply by:
50% of total cover: <u>42</u>	5 20% of total cover: 17	OBL species \bigcirc $x = \bigcirc$
Sapling/Shrub Stratum (Plot size: 15 1 R		FACW species 85 x 2 = 170
1		FAC species $3 \times 3 = 9$ FACU species $3 \times 4 = 12$
2		
3		UPL species \bigcirc $x = \bigcirc$
4 5		Column Totals: (A) (A) (B)
6		Prevalence Index = B/A = 2.09
7		- Hydrophytic Vegetation Indicators:
8		$\sim \frac{1}{1}$ - Rapid Test for Hydrophytic Vegetation
9		$\frac{1}{2} - \text{Dominance Test is } >50\%$
-	= Total Cover	- <u>×</u> 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:	20% of total cover:	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: <u>5′ R</u>)		data in Remarks or on a separate sheet)
1_ Josevandran radicand	<u>3% N</u> FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Utica dioka	37, N FAC	- M
3		 ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		· · · · · · · · · · · · · · · · · · ·
5		-
6		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		height.
8		
9		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11		 Herb – All herbaceous (non-woody) plants, regardless
	<u> </u>	of size, and woody plants less than 3.28 ft tall.
	20% of total cover:	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: <u>30 ' R</u>)		height.
1	······································	-
2		-
3		_
4		Hydrophytic
5		Vegetation
	= Total Cover	Present? Yes <u>No</u>
50% of total cover:	20% of total cover:	~
Remarks: (Include photo numbers here or on a separate Dowinant hydrophy		1.
$l \cdot \cdot$	Train St.	
		· · · · ·

Profile Descr	iption: (Describe t	o the depth	needed to docu	nent the ir	ndicator	or confirm	n the absen	ce of indic	ators.)	
Depth	Matrix			x Features		2	- /			
<u>(inches)</u>	Color (moist)		Color (moist)		_Type ¹		<u>Texture</u>	A	Remarks	
0-20"	10YR3/2	<u> 95% </u>	SYR 4/6	5%	<u> </u>	M	Alti	1 Clay	w.	
							(1 0		
	·					·				
		·			•	·				
		<u></u>								
									I	
¹ Type: C=Cor	ncentration, D=Deple	etion. RM=R	educed Matrix, M	S=Masked	Sand Gr	ains.	² Location:	PL=Pore L	ining, M=Matrix.	
Hydric Soil In			•						Problematic Hy	dric Soils ³ :
Histosol (/			Dark Surface	(S7)				2 cm Mucl	k (A10) (MLRA 1	47)
	pedon (A2)		Polyvalue Be	• •	e (S8) (N	ILRA 147.			irie Redox (A16)	
Black Hist			Thin Dark Su				,		147, 148)	
	Sulfide (A4)		Loamy Gleye						Floodplain Soils	(F19)
-	Layers (A5)		Depleted Ma	•	•				136, 147)	
	k (A10) (LRR N)		Kedox Dark		5)				ow Dark Surface	(TF12)
	Below Dark Surface	(A11)	Depleted Da					-	olain in Remarks)	
	k Surface (A12)		Redox Depre							
-	icky Mineral (S1) (Ll	RR N,	Iron-Mangan	ese Masse	s (F12) (LRR N,				
	147, 148)		MLRA 13							
	eyed Matrix (S4)		Umbric Surfa	ice (F13) (M	VILRA 13	6, 122)	3	ndicators of	f hydrophytic veg	etation and
Sandy Re	dox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	(8)	wetland hyd	drology must be p	present,
	Matrix (S6)		Red Parent I	Material (F2	21) (MLR	A 127, 147	7) (unless distu	irbed or problem	atic.
Restrictive La	ayer (if observed):									
Туре: _ 隆	J/A									
Depth (incl	•						Hydric S	oil Present	? Yes <u>×</u>	No
Remarks:	۰.,	1 0	*							
21.1.	ic soil	KAR	Man.							
Nyan		There								
U		V	\cup							
	*									
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WETLAND DETERMINATION DATA FORM	 Eastern Mountains and Piedmont Region
Project/Site: Line DOOOB City/C	County: Commati / Hamilton Sampling Date: 5/18/2016
Applicant/Owner: Duke Energy	State: OH Sampling Point: SP-8
	on, Township, Range: <u>SZ3, TIN</u> , <u>RSE</u>
Landform (hillslope, terrace, etc.): <u>Floodplaim</u> Local rel	
Subregion (LRR or MLRA): <u>LRR N</u> Lat: <u>39.07959</u>	
Soil Map Unit Name: Gn - Denesel Loom, occ	asienally Alex Wil classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Y	$r es \underline{\checkmark}$ No $\underline{\lor} \underline{\lor}$ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes 📈 No
Are Vegetation N, Soil N, or Hydrology N naturally problems	
SUMMARY OF FINDINGS - Attach site map showing san	ppling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	is the Sampled Area within a Wetland? Yes <u>×</u> No
Remarks:	
Field confirmed wetland	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (
High Water Table (A2) Hydrogen Sulfide Od	
X Saturation (A3) Oxidized Rhizosphere	es on Living Roots (C3) Moss Trim Lines (B16)
∠ Water Marks (B1) Presence of Reduced	d Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Rer	
Iron Deposits (B5)	★ Geomorphic Position (D2)
L Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
★ Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	K FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u>></u> Depth (inches): <u>></u>	
Water Table Present? Yes <u>≺</u> No Depth (inches); <u>−</u>	
Saturation Present? Yes <u></u> No <u>Depth</u> (inches): <u>5</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>×</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
Wetland hychology obse	wed.
Wetland mychology	

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: SP-8

2010	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 'R</u>)	<u>% Cover</u>	Species?		Number of Dominant Species
1. acer saccharinim	80%	Y	FACU	That Are OBL, FACW, or FAC: (A)
2		<u> </u>		Total Number of Dominant
3	- 	·		Species Across All Strata: (B)
4				Demont of Deminent Consist
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
6				
7.				Prevalence Index worksheet:
	80%	= Total Cov	er a	Total % Cover of: Multiply by:
50% of total cover:4C	70 20% of	total cover:	16%	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 2				FACW species 82 x 2 = 164
1. Fratrinua pennayhanica	2%	N	TACW	/ FAC species x 3 =
				FACU species x4 =
	·			UPL species x 5 =
3				Column Totals: <u>134-</u> (A) <u>250</u> (B)
4				
5				Prevalence Index = B/A = <u>/.86</u>
6				Hydrophytic Vegetation Indicators:
7	-			📩 1 - Rapid Test for Hydrophytic Vegetation
8				∠ 2 - Dominance Test is >50%
9				\times 3 - Prevalence Index is $\leq 3.0^{1}$
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	<u>~</u> 20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>S'R</u>)			AD1	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Zammus cernus	35%	<u> </u>	<u>obl</u>	
2. Untria diorca	10%		FACU	
3. Ludwig is paluetric	5%	Ň	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Topicolendian radicans	2%	N	FAC	Definitions of Four Vegetation Strata:
5	•	•		Deminions of Four Vegetation Subla.
6				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of height.
7				neight.
8				Sapling/Shrub Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10	- -			
11	C 101	· · · · · · · · · · · · · · · · · · ·		Herb – All herbaceous (non-woody) plants, regardless
	<u>2010</u>	= Total Cov	er In dør	of size, and woody plants less than 3.28 ft tall.
50% of total cover: $\frac{26}{2}$	20% of	r total cover:	10,1/	Woody vine All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 3012)				height.
1		_ <u>,</u>		
2		<u> </u>		
3		<u> </u>	·	
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes <u>X</u> No
50% of total cover:	20% o	f total cover		
Remarks: (Include photo numbers here or on a separate				
Dominant hydrophytic	1MA	olali	or	
a manan Marchard		1958 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
A. were	10%			
1				

Profile Desc	ription: (Describe t	o the depth n	eeded to docun	nent the ir	ndicator o	or confirm	n the absence of indicators.)	
Depth Matrix Redox Fea								
(inches)	Color (moist)		Color (moist),	%	<u>Type</u> ¹		Texture Remark	(S
0-20	104R4/2	_95	5VR4/6	5	_C_	<u>M</u>	Silts clay	
							Û	
			. <u>.</u>			• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	
		<u> </u>				·		
		•••••••••••••••••••••••••••••••••••••••					•	
					·	L		
¹ Type: C=Co	ncentration, D=Deple	tion, RM=Red	luced Matrix, MS	=Masked :	Sand Gra	ins.	² Location: PL=Pore Lining, M=Matr	ix.
Hydric Soil I				maonoa			Indicators for Problematic	
Histosol			_ Dark Surface	(S7)			2 cm Muck (A10) (MLRA	-
	pedon (A2)	_	Polyvalue Bel		e (S8) (M	LRA 147,		
Black His			Thin Dark Sur				(MLRA 147, 148)	,
Hydroger	a Sulfide (A 4)	-	Loamy Gleyed				Piedmont Floodplain Soi	is (F19)
	Layers (A5)	7	🚣 Depleted Mati				(MLRA 136, 147)	
	k (A10) (LRR N)	-	_ Redox Dark S		•		Very Shallow Dark Surfa	
	Below Dark Surface	(A11) _	_ Depleted Darl				Other (Explain in Remar	ks)
	k Surface (A12)		Redox Depres					
	ucky Mineral (S1) (LF	RR N, _	_ Iron-Mangane		s (F12) (L	RR N,		
	1 47, 148) eyed Matrix (S4)		MLRA 136 Umbric Surfac		AL ID A 496	400	3 dischars of budyout discussion	
Sandy G			Piedmont Floo				 ³Indicators of hydrophytic v wetland hydrology must b 	
-	Matrix (S6)		Red Parent M	-				•
• •	ayer (if observed):	_			., (,		
Type:	17.							
Depth (inc	•						Hydric Soil Present? Yes 🔀	No
	103).	••••						
Remarks:	. 0	Λ						
11.1	riesoil	Var	Ma.					
injer		nex	4					
U U		V	\cup					
]	u.							
1				,				

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WETLAND DETERMINATION DATA FORM	– Eastern Mountains and Piedmont Region
Project/Site: <u>Line DOOOB</u> City/C	County: anermati / Hamilton Sampling Date: 5/18/2016
Applicant/Owner: Dure Energy	State: OH Sampling Point: SP-9
Investigator(s): JAV / DM G (CEC) Section	on, Township, Range: Sa3, TIN, RSE
	ief (concave, convex, none): <u>Cancane</u> Slope (%): <u>27</u>
Subregion (LRR or MLRA): LRR N Lat: 39.07-91	
	capionally floring classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation \underbrace{N}_{1} , Soil \underbrace{N}_{1} , or Hydrology \underbrace{N}_{1} significantly distur	
Are Vegetation N, Soil N, or Hydrology N naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No Hydric Soil Present? Yes _ ✓ No Wetland Hydrology Present? Yes _ ✓ No	Is the Sampled Area within a Wetland? Yes <u>×</u> No
Remarks: Field confirmed wettand.	я
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (J	B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odd	or (C1) K Drainage Patterns (B10)
	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reduction	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Ren	
└── Iron Deposits (B5) └── Inundation Visible on Aerial Imagery (B7)	Geomorphic Position (D2)
Water-Stained Leaves (B9)	Shallow Aquitard (D3) <u> </u>
Aquatic Fauna (B13)	✓ Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)
Field Observations:	
	$\frac{\pi}{14''}$
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	14" Wetland Hydrology Present? Yes <u>> No</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	4
natland hydrology obser	ved
· ·	
1	

VEGETATION (Four Strata) – Use scientific r	names of	plants.		Sampling Point: <u>SP-9</u>
Tree Stratum (Plot size: 30 R_) 1. Platanus occidentalus	Absolute <u>% Cover</u> \0%	Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
3				Total Number of Dominant Species Across All Strata: 3 (B)
4 5 6				Percent of Dominant Species 100% (A/B)
7.			,	Prevalence Index worksheet:
50% of total cover: 5	10% 10 20% of	= Total Cover:	er 2.10	<u>Total % Cover of:</u> <u>Multiply by:</u> OBL species <u>2</u> 7 x 1 = <u>2</u> 구
Sapling/Shrub Stratum (Plot size: 15'R)				FACW species 12 x 2 = 24-
1. acer rulnum	1%	N	FAC	FAC species 26 $x_3 = 78$ FACU species 0 $x_4 = 0$
3			·	UPL species $2 \times 5 = 10$ Column Totals: 67 (A) 139 (B)
4 5				Prevalence Index = B/A = 2.07
6				Hydrophytic Vegetation Indicators:
78				1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
9				4 3 - Prevalence Index is $\leq 3.0^1$
	1%	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:	eant.	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5 🤾</u>)	. en			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Packera gealla	25%	<u> </u>	OBL	
2. Vernonia quantea	20%	<u> </u>	FAC	
3. Rimer Charles	5%	<u>N</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Ludurgia salustria	270	\mathbb{N}	OBL	Definitions of Four Vegetation Strata:
5. Plantago Canceolata	210	N	UPL	_
6. Persicalia maculosa	270	N	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8.				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10 11				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover:		= Total Cov		
Woody Vine Stratum (Plot size: <u>30 R</u>)				Woody vine – All woody vines greater than 3.28 ft in height.
2				
3.				
4.				11
5				Hydrophytic Vegetation
50% of total cover:		= Total Cov f total cover:		Present? Yes <u>k</u> No
Remarks: (Include photo numbers here or on a separate				
PEN community wit		ady	acen	t stilling ROW.
()		Ų		\sim

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features							
(inches) Color (moist) %	Color (moist)%		Texture Remarks				
<u>0-14" 107R4/2 80</u>	_5VR5/8 20	M	Sulty clay w/ sand				
¹ Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators:		Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :				
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) 	 Dark Surface (S7) Polyvalue Below Surface Thin Dark Surface (S9) Loarny Gleyed Matrix (I Depleted Matrix (F3) Redox Dark Surface (Fi Depleted Dark Surface (Fi Redox Depressions (Fi iron-Manganese Masse MLRA 136) 	(MLRA 147, 148) 52) 6) (F7) 3) 55 (F12) (LRR N,	(MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surfece (TF12) Other (Explain in Remarks)				
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type:A Depth (inches):	Umbric Surface (F13) (I Piedmont Floodplain Sc Red Parent Material (F2	oils (F19) (MLRA 14					
Remarks: Hydric soil for	ing.						

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: <u>Line DOOB</u> City/County: <u>City/County: Amontati/Hamoling Date: 5/18/2016</u>
Applicant/Owner: Dune Mengy State: OH Sampling Point: SP-10
Investigator(s): <u>JAN/DMOI (OEC)</u> Section, Township, Range: <u>SQ3</u> , <u>TIN</u> , <u>R5E</u>
Landform (hillslope, terrace, etc.): <u>Floodplan</u> Local relief (concave, convex, none): <u>Non e</u> Slope (%): <u>07</u>
Soil Map Unit Name: Gn - Demesle Loam, occasinaly flood Will classification: upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N, significantly disturbed? Are "Normal Circumstances" present? Yes K. No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? No Ves No Hydric Soil Present? Yes No No No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No No Is the Sampled Area within a Wetland? Yes No
upland sampling location with hydric soil.
upland sampling location with hydric soil,
· · · · · · · · · · · · · · · · · · ·
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No <u>×</u> Depth (inches): N/A
Water Table Present? Yes No <u>×</u> Depth (inches): <u>>12.4</u>
Saturation Present? Yes No <u>/</u> Depth (inches): <u>>12</u> // Wetland Hydrology Present? Yes <u>No X</u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Demostra
Remarks:
None observed.

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Sampling Point: <u>SP-10</u>

DA162	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 (R</u>))	<u>% Cover Species? Status</u>	Number of Dominant Species
1. Bornhus deltrides	15% Y FAC	That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species
5		Percent of Dominant Species That Are OBL, FACW, or FAC:
6		
7		Prevalence Index worksheet:
/ ·	15%	Total % Cover of: Multiply by:
	<u> </u>	OBL species x 1 =
50% of total cover:	20% of total cover:	FACW species \bigcirc $x 2 = \bigcirc$
Sapling/Shrub Stratum (Plot size: 15^{\prime} R)		
1		FAC species $\underline{55}$ x 3 = $\underline{165}$
2		FACU species x4 =
		UPL species x 5 =
3		Column Totals: 114 (A) 399 (B)
4		
5	· ·	Prevalence Index = $B/A = \frac{3}{5}$
6		Hydrophytic Vegetation Indicators:
7		
		1 - Rapid Test for Hydrophytic Vegetation
8	·	2 - Dominance Test is >50%
9	An Cla	3 - Prevalence Index is ≤3.0 ¹
	🔿 🏸 = Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
	20% of total cover:	
Herb Stratum (Plot size: <u>5' R</u>)	1 -	data in Remarks or on a separate sheet)
1. Vernonia gigantia	25% Y FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Urtica diolica	act I FAC	N
	DOM I FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Eugenen anhus	all y FALL	be present, unless disturbed or problematic.
4. Verteema atternifold	<u>5% N FAC</u>	Definitions of Four Vegetation Strata:
5. amphicono a brakteato	4% N FAC	
6. Plantago motor	470 N VPC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Rumer Crispies	4-70 N FAC	more in diameter at breast height (DBH), regardless of
	Ago N EAC	height. ≉
8. Jaliim apaune	The may	Sapling/Shrub – Woody plants, excluding vines, less
9. Opalis sturta	4% N FACY	than 3 in. DBH and greater than or equal to 3.28 ft (1
10. Jorricodenchara radicano	y29n N FAC	m) tall.
11. Padrera glabella	2% N OB	
	<u>99%</u> = Total Cover	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% -51-1-1 49	5 20% of total cover: 9.8	or size, and woody plants less than 5.20 it tail.
		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: <u>30'R</u>)		height.
1	· · · · · · · · · · · · · · · · · · ·	
2		
3		
4		Hydrophytic
5		Vegetation
	= Total Cover	Present? Yes <u>No </u>
50% of total cover:		
Remarks: (Include photo numbers here or on a separate :	sheet.)	
Dominant upland N	o atati M	
Contract N	garant .	

Sampling Point: <u>SP-10</u>

	ription: (Describe i	o the depi	in needed to docum	ent the Indica	ator or confirm	m the absence of in	dicators.)	
Depth	Matrix			Features	<u> </u>			
(inches)	Color (moist)		Color (moist)	<u></u>		<u> </u>	Remarks	
0-4"	107K4/2	90%	7.5YR5/6	10% (2 M	Sittyclay	loam	
4-11 "	10VR3/2	90%	7.548516	10%	CM	Solt Only	2 mana	
_ , , , ,	/ <u>~</u>	<u>_{(V)#</u>						
				<u> </u>		·		
	,				· · · · ·	· ····		
						· ·		
			· ·					
						<u></u>		
Hydric Soil II		etion, RM=	Reduced Matrix, MS	=Masked San	Grains.		e Lining, M≍Matrix. for Problematic Hyd	ric Soile ³
-			Deals Deafares ((07)			-	
Histosol (Dark Surface (uck (A10) (MLRA 14	()
	ipedon (A2)		Polyvalue Belo				Prairie Redox (A16)	
Black His	n Sulfide (A4)		Thin Dark Suri		KA 147, 146)		RA 147, 148) ent Floodplain Soils (F	10)
	Layers (A5)	M	Depleted Matri				RA 136, 147)	13)
	ck (A10) (LRR N)		Depleted Math			•	nallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dark	• •			Explain in Remarks)	
	rk Surface (A12)	v ,	Redox Depres				,	
	ucky Mineral (S1) (L	RR N,	Iron-Mangane	, ,	2) (LRR N,			
MLRA	147, 148)		MLRA 136)				
Sandy Gl	eyed Matrix (S4)		Umbric Surfac	e (F13) (MLR.	A 136, 122)		s of hydrophytic vege	
Sandy Re	edox (S5)		Piedmont Floo				hydrology must be pr	esent,
Stripped	Matrix (S6)		Red Parent M	aterial (F21) (ILRA 127, 14	7) unless d	isturbed or problemat	ic.
	ayer (if observed):							
T								
Туре:	NA						,	
Depth (inc						Hydric Soil Pres	ent? Yes <u>×</u>	No
, <u>, , </u>		-	·			Hydric Soil Pres	ent? Yes <u>×</u>	No
Depth (inc Remarks:	hes):	Δ				Hydric Soil Pres	ent? Yes <u>×</u>	No
Depth (inc Remarks:	hes):	ha	ing			Hydric Soil Pres	ent? Yes <u>//</u>	No
Depth (inc Remarks:		ha	ing			Hydric Soil Pres	ent? Yes <u>×</u>	No
Depth (inc Remarks:	hes):	ba	ing			Hydric Soil Pres	ent? Yes <u>×</u>	No
Depth (inc Remarks:	hes):	· · ·	ing			Hydric Soil Pres	ent? Yes <u>×</u>	No
Depth (inc Remarks:	hes):	· · ·	ing			Hydric Soil Pres	ent? Yes <u>//</u>	No
Depth (inc Remarks:	hes):	V	ing			Hydric Soil Pres	ent?Yes <u>K</u>	No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	V	ing			Hydric Soil Pres		No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	V	ing					No
Depth (inc Remarks:	hes):	v	ing					
Depth (inc Remarks:	hes):	v	ing	· · · · · · · · · · · · · · · · · · ·				
Depth (inc Remarks:	hes):	v	ing	· · · · · · · · · · · · · · · · · · ·				
Depth (inc Remarks:	hes):	v	ing					
Depth (inc Remarks:	hes):	v	ing					
Depth (inc Remarks:	hes):	v		· · · · · · · · · · · · · · · · · · ·				
Depth (inc Remarks:	hes):	v						
Depth (inc Remarks:	hes):	v						

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: <u>Rine POOOB</u> city/County: <u>Cuncinnati Hamusampling Date: 5/18/2016</u>
Applicant/Owner: Duke Energy (CEC) State: OH Sampling Point: SP-11
Investigator(s): <u>SAV/DMG</u> 00 Section, Township, Range: <u>S23</u> , <u>TIN</u> , <u>RSE</u>
Landform (hillslope, terrace, etc.): <u>FLOORDAIM</u> Local relief (concave, convex, none): <u>Convex</u> Slope (%): <u>O</u>
Subregion (LRR or MLRA): LRR N Lat: 39.079720 Long: 84.427411 Datum: W9584
Soil Map Unit Name: GN- Hono Doe. Coum, occasionally plood NWI classification: upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Commart of The most - Attach she map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No within a Wetland? Yes No Wetland Hydrology Present? Yes No No Yes No Remarks: Ketland Ketland? Yes No Ketland? Yes No
upland sampling location.
opender ino participation .
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Drimony (indicators (minimum of and is required) shock all that apply) Surface Sail Gradies (BS)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Figh Water Fable (A2) Fight Water Fable (A2)
Oxidized Trinzospheres on Envirg Roots (Co) Moss Trin Eines (D10) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No _ Z Depth (inches): N /A
Water Table Present? Yes No <u><</u> Depth (inches): <u>> 14 "</u>
Saturation Present? Yes No 🔀 Depth (inches): 🔰 1 4 " Wetland Hydrology Present? Yes No 🔀
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
upland hydrology abserved.

Sampling Point: <u>SP-11</u>

2010	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 / R</u>)		<u>Species?</u>	Land A	Number of Dominant Species
1. aler saccharmum	5%	7	FACU	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:
-				
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6		·		Prevalence Index worksheet:
7				
	5%	= Total Cove	er	Total % Cover of: Multiply by:
	20% of	total cover:		OBL species $ 1 = 0 $
Sapling/Shrub Stratum (Plot size: 15 / 😤)				FACW species 2 $x_2 = 42$
1				FAC species 🔼 🔿 🔿
				FACU species x4 =60
2				UPL species x 5 =
3				Column Totals: $/26$ (A) 477 (B)
4				· · · · · · · · · · · · · · · · · · ·
5		<u></u>		Prevalence Index = B/A = <u>3.78</u>
6				
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
9	001	= Total Cove		3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5 R</u>)	709		EAC.1	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Festuca aundinacia	-10/0		<u>AUU</u>	
2. Lamium amplancaule	15%	<u> </u>	<u>UPL</u>	1 adjustors of budging and unitered budgelagy must
3. Cupenus escillantus	10%	<u>_N</u>	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Julipum repark	10%	N	FACU	Definitions of Four Vegetation Strata:
5. Reantago major	Sta Pa	<u></u>	FACU	
6. Lysunderia hummulaua	5%	<u></u>	FACM	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Seum canadence	_570	<u> </u>	EACIN	more in diameter at breast height (DBH), regardless of
7. Allow Cara allow			TAU	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	120%	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>60</u>		total cover:		
Woody Vine Stratum (Plot size: 30 K)	_		•	Woody vine – All woody vines greater than 3.28 ft in theight.
1. Vitra uparia	1%	Ы	FACU	
a				
2				
3	<u></u>			
4		·		Hydrophytic
5				Vegetation
	170	= Total Cov	er	Present? Yes No <u>×</u> _
50% of total cover:	20% of	total cover:		
Remarks: (include photo numbers here or on a separate s	heet.)			
	and and	ï		
Dominant upland reget	ss-cr	,		
L C				

Sampling Point: <u>SP-1</u>

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth <u>Matrix</u> (inches) Color (moist) %	Redox Features		Tartur P 1				
	Color (moist) %	<u>Type¹ Loc²</u>	Texture Remarks				
		·····	fualla set loam				
4-14" 104R3/3 100		(ingular sitt loam w/				
	·		some sand				
	·						
			· · · · · · · · · · · · · · · · · · ·				
· · · · · · · · · · · · · · · · · · ·							
·							
· · · · · · · · · · · · · · · · · · ·							
			· · · · · · · · · · · · · · · · · · ·				
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Masked	Sand Grains.	² Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators:	· · · · · · · ·		Indicators for Problematic Hydric Soils ³ :				
Length Histosol (A1) Length Histic Epipedon (A2)	Dark Surface (S7)	- (20) (31) DA 447 4	2 cm Muck (A10) (MLRA 147)				
Black Histic (A3)	 Polyvalue Below Surfac Thin Dark Surface (S9) 		 48) Coast Prairie Redox (A16) (MLRA 147, 148) 				
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F		Piedmont Floodplain Soils (F19)				
Stratified Layers (A5)	Depleted Matrix (F3)		(MLRA 136, 147)				
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6	•	Very Shallow Dark Surface (TF12)				
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Dark Surface Redox Depressions (F8		Other (Explain in Remarks)				
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masse						
MLRA 147, 148)	MLRA 136)	- (, (,					
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (N		³ Indicators of hydrophytic vegetation and				
Sandy Redox (S5)	Piedmont Floodplain So						
Stripped Matrix (S6) Restrictive Layer (if observed):	Red Parent Material (F2	21) (MLRA 127, 147)	unless disturbed or problematic.				
Type: N/A							
Depth (inches):	_		Hydric Soil Present? Yes No _X				
Remarks:							
upland soil fo	A LINA M						
1 un the	acorg.						
V	V						
			· · · · · · · · · · · · · · · · · · ·				
			· · · ·				

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WETLAND DETERMINATION DATA FORM	– Eastern Mountains and Piedmont Region
	County: Concernate / Harnet Sampling Date: 5/18/20/6
Applicant/Owner: Duke Energy	State: <u>OH</u> Sampling Point: <u>SP-12</u>
Investigator(s): <u>SAU/DMG (QEC)</u> Section	on, Township, Range: <u>S23, TIN, RSE</u>
Landform (hillslope, terrace, etc.): <u>Floodslain</u> Local rel	ief (concave, convex, none): <u>Concave</u> Slope (%): <u>2%</u>
Subregion (LRR or MLRA): <u>LRP N</u> Lat: <u>39.08019</u>	7Long: <u>-84,427264</u> Datum: <u>W9584</u>
Soil Map Unit Name: Gn- Denease Loam, och	adurally flagent classification: 12 pland
Are climatic / hydrologic conditions on the site typical for this time of year? Y	′es <u> </u>
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> significantly distur	bed? Are "Normal Circumstances" present? Yes <u>×</u> No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	is the Sampled Area within a Wetland? Yes No
Remarks: upland sampling location	え.
HYDROLOGY	
Wetłand Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (I	
High Water Table (A2) Hydrogen Sulfide Odd	
	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reduction	
Drift Deposits (B3) Thin Muck Surface (C	
Algai Mat or Crust (B4) Other (Explain in Ren	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No ★ Depth (inches): №//	Δ
Water Table Present? Yes No 🗡 Depth (inclies): 11	211
Saturation Present? Yes No Y Depth (inches): 71	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
	· · · · · · · · · · · · · · · · · · ·

Sampling	Point:_	5	P-	a spinkers	2

- /-	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> [/] R)		<u>Species?</u>	Status	Number of Dominant Species
1. Ulmus americana	15%)	HACW	That Are OBL, FACW, or FAC: (A)
2. acer saccharinum	10%	, 7	FACIA	
		;	<u> </u>	Total Number of Dominant (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5	•			Percent of Dominant Species That Are OBL, FACW, or FAC: 50 % (A/B)
6		,		
7.				Prevalence Index worksheet:
· ·	25%	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 12.5	5 <u>%</u> 20% of	total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15° R)	<u>, , , ,</u> 20,100.			FACW species 3 $x^2 = 62$
				FAC species 25 x3 = 75
1	<u> </u>			
2		,		
3				UPL species $\underline{\bigcirc}$ x 5 = $\underline{\bigcirc}$
4				Column Totals: <u> </u>
5				2 2 7
				Prevalence Index = B/A = 3.32
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				
	0%	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting
	20,00			data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 512)	50%	~	EACIL	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Untica dioica		· <u> </u>	FACU	· · · · · ·
2. Festica anundinacea	20%		FACT	¹ Indicators of hydric soil and wetland hydrology must
3. Viola sororia	15%		FAC	be present, unless disturbed or problematic.
4. amphicarpaea bratenta	10%	\sim	FAC	Definitions of Four Vegetation Strata:
5. compatiens capensis	5%	N	FACI.	permittons of Four vegetation Suata.
6 Saluim sparine.	220	~	EAM	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
		<u> </u>	TACV	nore in diameter at breast height (DBH), regardless of
7. Lyphachia'rummularia	120	<u>N</u>	MCU	height.
8	·			Sapling/Shrub - Woody plants, excluding vines, less
9.				than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11	1022	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tail.
50% of total cover: 51.	$\frac{03/3}{5}$		or CA (of size, and woody plants less than 5.20 it tail.
50% of total cover: $\underline{\sqrt{1}}$	<u> </u>	total cover:	<u>au.o</u>	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ' R)				height.
1			. <u></u>	
2.		-		
3				
4		·	• •	Hydrophytic
5	~ 51		·	Vegetation Present? Yes No X
		= Total Cov	-	
50% of total cover:	20% o	f total cover	:	
Remarks: (Include photo numbers here or on a separate	sheet.)			
	markana	· · ·		
Dominant upland veg	eral	len,		
0		8		

Sampling Point: <u>SP-12</u>

Profile Descri	iption: (Describe t	o the depth n	eeded to docun	nent the ir	ndicator c	or confirn	n the absence of indicators.)
Depth	Matrix			x Features			
(inches)	Color (moist)		Color (moist)	%	<u>Type'</u>	_Loc ²	Texture Remarks
0-5"	10YR3/2	100 _	,				Silty day loam
<u></u>	104R4/3	<u> </u>				**************************************	Luty day loam w/some
						·	
	centration, D≍Deple		iucod Matrix, MS				21 postion: Di ribora Lining MeMatrix
Hydric Soil Ind			incen maulx, MS	-wasked	Janu Gia	n 13.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A Histic Epip Black Histi Hydrogen Stratified L 2 cm Muck Depleted E Thick Dark Sandy Muc MLRA 1 Sandy Gle Sandy Rec Stripped M Restrictive La	1) bedon (A2) Sulfide (A4) .ayers (A5) (A10) (LRR N) Below Dark Surface (Surface (A12) cky Mineral (S1) (LE (47, 148) yed Matrix (S4) dox (S5) hatrix (S6) yer, (if observed):		 Dark Surface Polyvalue Bel Thin Dark Surface Loamy Gleyee Depleted Mat Redox Dark S Depleted Dari Redox Depres Iron-Mangane MLRA 136 Umbric Surfac Piedmont Floo Red Parent M 	ow Surfac face (S9) d Matrix (F rix (F3) Surface (F6 k Surface (Ssions (F8 ese Masse b) ce (F13) (N odplain So	(MLRA 14 2) (F7)) s (F12) (L ALRA 136 ills (F19) (I	RR N, 6, 122) MLRA 14	 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Type: <u></u>							
Depth (inch	es):						Hydric Soil Present? Yes No
Remarks:	nd soi	l fa	ing.				

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: Line DOODB City/County: Curcummate /Hamilton Date: 5/18/20/6
Applicant/Owner: Dinke Grangy State: OH Sampling Point: SP-13
Investigator(s):
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): Convert Slope (%): 0%
Subregion (LRR or MLRA): LRR N Lat: 39.080537 Long: 84.427435 Datum: W9584
Soil Map Unit Name: Con Demeses, loom, occasionally flood Wil classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation N_, Soil N_, or Hydrology N_ significantly disturbed? Are "Normal Circumstances" present? Yes X_ No
Are Vegetation N, Soii N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Commart of Thebridge Attach are map anowing sampling point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No within a Wetland? Yes No Yes Wetland Hydrology Present? Yes No Yes No Yes No Yes Yes No Yes Yes </th
upland sampling location.
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3)Oxidized Rhizospheres on Living Roots (C3)Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No _X Depth (inches):/A Water Table Present? Yes No _X Depth (inches):/2 //
Water Table Present? Yes No _/ Depth (inches): _/ \@ Saturation Present? Yes No _/ Depth (inches): _/ \@
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
upland hydrology observed.

Sampling Point: <u>SP-13</u>

20/0	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Piot size: 30 R)	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species
1. Kopulus dettorals	<u> 15 %</u>	<u> </u>	FAC	That Are OBL, FACW, or FAC: (A)
2. Cottis occidentales	10%	<u> </u>	FACU	Total Number of Dominant
3	v			Total Number of Dominant 3 (B)
4				
				Percent of Dominant Species 33% (A/B)
5				That Are OBL, FACW, or FAC: <u>9070</u> (A/B)
6				Prevalence Index worksheet:
7	0.051		·····	Total % Cover of: Multiply by:
	<u>_2270</u>	= Total Cov	er	
50% of total cover: 🔢	<u>్</u> 20% of	f total cover:		
Sapling/Shrub Stratum (Plot size: 1518)				
1				FAC species 42 x3 = 126
2				FACU species x4 = <u></u>
				UPL species x 5 =
3			·	Column Totals: 139 (A) 510 (B)
4		- <u></u>	·	
5				Prevalence Index = B/A = <u>3.66</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9.				2 - Dominance Test is >50%
9	<u></u>	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% 0	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5'</u> 2)	مترمه سع	1	Chan	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Festuca anundinacea	70%	<u> </u>	THUV	
2. Viola socoria	15%	. <u>N</u>	FAC	
3 Tailoluim repent	10%	N	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. amplicante bratesta	10%	K)	FAC	
	2%	<u> </u>	EAM	Definitions of Four Vegetation Strata:
5. Pentago major	$-\frac{\mathcal{O}}{\mathcal{O}}$		TAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Valresina atternifictia	2%	- <u> </u>	THU	more in diameter at breast height (DBH), regardless of
7. Engeron annula	<u> </u>	N	FAU	height.
8. Lubmachia nummulana	2%	K.	FACU	
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
10				
11				Herb – Ali herbaceous (non-woody) plants, regardless
	, 1197_	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>57</u>	<u> </u>	f total cover	: <u>dd. 5</u>	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: <u>36'R</u>)				height.
		_		
2.				
3				
			•	
4				Hydrophytic
5	F181	= Total Cov		Vegetation Present? Yes No
50% of total cover:	<u> </u>	t total cover	•	
Remarks: (Include photo numbers here or on a separate				
Domenant upland Me		11 in		
Domenant yeard At	All and the	RACE (۴	
1				

Sampling Point:	SP-13	2
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Depth Matrix			n the absence of indicat	
	Redox Feature		— <i>i</i>	
$\frac{(\text{inches})}{0-5''} \frac{\text{Color}(\text{moist})}{10\sqrt{R^3/a}} \frac{\%}{100}$	Color (moist) %	Type ¹ Loc ²		Remarks
	D CNRCh IA		silty clay	\sim
<u>>-13 104893 70</u>	2,57R4/8 10	CM	Sitty day	(loam)
			<u> </u>	
······································				
			<u> </u>	
		<u></u>		
			2r DI	
¹ Type: C=Concentration, D=Depletion, RM≈R Hydric Soil Indicators:	educed Matrix, MS=Masked	Sand Grains.	² Location: PL=Pore Lin	ing, m≕matrix. roblematic Hydric Soils³:
Histosol (A1)	Dark Surface (S7)			A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface	ce (S8) (MLRA 147,		, , ,
Black Histic (A3)	Thin Dark Surface (S9)		(MLRA 14	
Hydrogen Sulfide (A4) Stratified Layers (A5)	Loamy Gleyed Matrix (Depleted Matrix (F3)	F2)		oodplain Soils (F19)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F	6)	(MLRA 1: Very Shallov	v Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface		Other (Expla	
Thick Dark Surface (A12)	Redox Depressions (F8			
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masse	es (F12) (LRR N,		
MLRA 147, 148) Sandy Gleyed Matrix (S4)	MLRA 136) Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of h	ydrophytic vegetation and
Sandy Redox (S5)				
Stripped Matrix (S6)	Piedmont Floodplain So Red Parent Material (F.	oils (F19) (MLRA 1 4	8) wetland hydro	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed):	Piedmont Floodplain S	oils (F19) (MLRA 1 4	8) wetland hydro	ology must be present,
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A	Piedmont Floodplain S	oils (F19) (MLRA 1 4	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:A Depth (inches):	Piedmont Floodplain S	oils (F19) (MLRA 1 4	8) wetland hydro	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	oils (F19) (MLRA 1 4	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	oils (F19) (MLRA 1 4	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	oils (F19) (MLRA 1 4	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:A Depth (inches):	Piedmont Floodplain So Red Parent Material (Fi 	oils (F19) (MLRA 1 4	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	oils (F19) (MLRA 1 4	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks:	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Wpland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.
Stripped Matrix (S6) Restrictive Layer (if observed): Type:/A Depth (inches): Remarks: Upland Soil f	Piedmont Floodplain So Red Parent Material (Fi 	olis (F19) (MLRA 14 21) (MLRA 127, 147	8) wetland hydro) unless disturt	blogy must be present, bed or problematic.

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WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region
Project/Site: <u>Rive DOOB</u> City/County: <u>City/County</u> <u>American Sampling Date: 5/18/2016</u>
Applicant/Owner: Orles Energy, State: OH Sampling Point: SP-14
Investigator(s): <u>JAV/DMG (UBC)</u> Section, Township, Range: <u>S23, TIN, R5E</u>
Landform (hillslope, terrace, etc.): <u>Floodplan</u> Local relief (concave, convex, none): <u>Convex</u> Slope (%): <u>0</u>
Subregion (LRR or MLRA): LRR N Lat: 39.080941 Long: -84.427346 Datum: Was84
Soil Map Unit Name: Gn - Deneal loam, occasionally flooded NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No
Are Vegetation N, soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? YesNo No Is the Sampled Area within a Wetland? YesNo Hydric Soil Present? YesNo No Wetland Hydrology Present? YesNo Wetland Hydrology Present? YesNo No No Remarks: Upland Romplung Location with Rydrophytic woody
vegetation.
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1)True Aquatic Plants (B14)Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No _X_ Depth (inches): N/A
Water Table Present? Yes No $\underline{\checkmark}$ Depth (inches): $\underline{>} \underline{>} \underline{?}$
Saturation Present? Yes No Comparison Ves No Xes No
Describe Recorded Data (stream gauge, monitoring weil, aenai photos, previous inspections), il available.
Remarks:
upland hydrology observed
upland vyaca / see

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Sampling Point: <u>SP-14</u>

0.10	Absolute Domina	ant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 / R</u>)	% Cover Specie		Number of Demissory Operation
1. Roquelus doltaides	15% 7	FAC	That Are OBL, FACW, or FAC: (A)
	10% 7	TAAL	
2. aver sacchannum	-1010 -7	_FACW	Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species / / 0/
5			That Are OBL, FACW, or FAC: 00 /0 (A/B)
6.			
7.			Prevalence Index worksheet:
	25% = Total 0		Total % Cover of: Multiply by:
	$\frac{d}{d} \frac{d}{d} \frac{d}{d} \frac{d}{d} \frac{d}{d} = 1$ otal (Jover	OBL species x 1 =
50% of total cover:	20% of total co	ver:	
Sapling/Shrub Stratum (Plot size: 15' R)			
1			FAC species x 3 =
			FACU species <u>85</u> x 4 = <u>34-0</u>
2			
3			
4.			Column Totals: 132 (A) 471 (B)
			221
5			Prevalence Index = $B/A = 3.56$
6			Hydrophytic Vegetation Indicators:
7			
			1 - Rapid Test for Hydrophytic Vegetation
8			🔀 2 - Dominance Test is >50%
9	. <u> </u>		3 - Prevalence Index is ≤3.0 ¹
	= Total (Cover	
50% of total cover:	20% of total co	ver:	4 - Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5 K</u>)	Q CO N	EAC	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Urtica diorca	<u>85% Y</u>	<u> </u>	
2. amplicarpage brateata	10% N	_ FAC	
3 Viola Soloua	10% N		¹ Indicators of hydric soil and wetland hydrology must
3. VXXXXX / ARE LES LAR			be present, unless disturbed or problematic.
4	. <u></u>		Definitions of Four Vegetation Strata:
5			
R			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6			more in diameter at breast height (DBH), regardless of
6 7			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7			more in diameter at breast height (DBH), regardless of height.
7			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
7 8 9			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
7			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
7 8 9			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
7			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
7	105%= Total		 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
7	105%= Total		 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
7	105% = Total 5% 20% of total co	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
7	105% = Total 5% 20% of total co	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
7	$\frac{105\%}{5\%20\%} = Total for the second seco$	Cover ver:	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
7	$\frac{105\%}{5\%20\%} = Total for a constraint of total constraints of total $	Cover ver:	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
7	$\frac{105\%}{5\%20\%} = Total \frac{5\%20\%}{5\%20\%} of total co L 2\% N$	Cover ver:	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
7	$\frac{105\%}{5\%20\%} = Total \frac{5\%20\%}{5\%20\%} of total co L 2\% N$	Cover ver:	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
7	$\frac{105\%}{5\%} = Total 5\%20\% of total co 1 2 \% N$	Cover ver:	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
7	$\frac{105\%}{5\%} = Total 5\%20\% of total co 1 2 \% N$	Cover ver:	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
7	$\frac{105\%}{5\%20\%} = Total for the second seco$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total \frac{5\%}{20\%} of total co \frac{2\%}{20\%} = Total $	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total for a constraint of the second seco$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total for a constraint of the second seco$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total for a constraint of the second seco$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total for a constraint of the second seco$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total for the second second$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
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7	$\frac{105\%}{20\%} = Total for the second second$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
7	$\frac{105\%}{20\%} = Total for the second second$	Cover	 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation

Profile Description: (Describe to the depth	needed to document the indicator or confirm	n the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-4" 16YR3/2 98	104R4/6 2 C M	Silty clay boam
4-14" 10 VR4/3 100	antanan	Selty clay loam
		- A - A - A - A - A - A - A - A - A - A
		······
· · ·	····	
·····		
I		•
		· · · ·
¹ Type: C=Concentration, D=Depletion, RM=Re	aduced Matrix MS=Marked Sand Grains	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	succeu mainx, mo-maskeu Sanu Grans.	Indicators for Problematic Hydric Soils ³ :
-		_
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, This Dark Surface (S9) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Thick Dark Surface (A12)	Depleted Dark Surface (F7) Redox Depressions (F8)	Other (Explain in Remarks)
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148)	MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147	
Restrictive Layer (if observed):		
Type: <u>N/A</u>	-	
Depth (inches):	**	Hydric Soil Present? Yes No <u>×</u>
Remarks:		
upland soil fo	una	
	0	
· · · · · ·	-1640 1	

WETLAND DETERMINATION DATA FORM -	Eastern Mountains and Piedmont Region
Project/Site: Line DOODB City/Cou	unty: Cincinnati / Harnita Sampling Date: 5/18/2016
Applicant/Owner: Dure Engrav	State:Sampling Point:5
	, Township, Range: S23, TIN, R5E
Landform (hillslope, terrace, etc.):	(concave, convex, none): Concave, Slope (%): 9/0
Subregion (LRR or MLRA): LRRN Lat:	Long: Datum: <u></u> Datum: <u></u>
Soil Map Unit Name: GM- Henesse Joom, occash	mallet 12 made de la classification 1 2 lamo
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	
Are vegetation $\underline{N}_{\underline{N}}$, Soil $\underline{N}_{\underline{N}}$, or Hydrology \underline{N} significantly disturbe	
Are Vegetation N, Soil N, or Hydrology N naturally problemation	
SUMMARY OF FINDINGS – Attach site map showing samp	ling point locations, transects, important features, etc.
Hydric Soil Present? Yes No v Wetland Hydrology Present? Yes No v	s the Sampled Area vithin a Wetland? Yes No
Remarks:	the I marine ant i realist
upland sampling location in	An oremanic coord
Remarks: Upland sampling location wi hydrophytic vegetation.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B1	4) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor	(C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres	on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced in	ron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction i	n Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Rema	rks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u>×</u> Depth (inches):	
Water Table Present? Yes No $\underline{\prec}$ Depth (inches): $\geq \sqrt{2}$	2 "
Saturation Present? Yes No Yes Depth (inches): 212	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo	
Remarks:	
upland hydrology	

Sampling Point: <u>SP-15</u>

20/0	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30'R</u>) 1. UMUS, omoriland	<u>% Cover</u> 35%	<u>Species?</u>	<u>Status</u> FA(W	Number of Dominant Species	(A)
2. acer sacchancours	25%	$\overline{}$	FACW		
3		·		Total Number of Dominant 3 Species Across All Strata: 3	(B)
4					
5	_			Percent of Dominant Species That Are OBL, FACW, or FAC: 66%	(A/B)
6		·		Prevalence Index worksheet:	
7					
50% of total cover: 3	<u> 60% </u>	= Total Cov	er, _		
50% of total cover:	20% of	total cover:	12	OBL species $-\frac{0}{7}$ x 1 = $-\frac{0}{150}$	_
Sapling/Shrub Stratum (Plot size: 1512)				FACW species $\underline{+6}$ x 2 = $\underline{152}$	_
1				FAC species 10 x 3 = 30	_
2				FACU species 78 x4 = 312	_
				UPL species x 5 =	
3				Column Totals: 164 (A) 494	– _ (B)
5				Prevalence Index = B/A = 3.01	_
6				Hydrophytic Vegetation Indicators:	· · ·
7				1 - Rapid Test for Hydrophytic Vegetation	
8				🖌 2 - Dominance Test is >50%	
9	~ ~ 4			3 - Prevalence Index is ≤3.0 ¹	
50% of total cover:		= Total Cove		4 - Morphological Adaptations ¹ (Provide sup	porting
	20% 0	iotal cover.		data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: 5/K)	65%	~	EAA:	Problematic Hydrophytic Vegetation ¹ (Explai	in)
1. Festura arundinarea			TYC.		,
2. Corring maculatur	15%	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology n	nuet
3. He choma gederacea	570	<u>N</u>	FACU	be present, unless disturbed or problematic.	nuat
4. Eugeron annulus	5%	$\underline{\nu}$	FACU	Definitions of Four Vegetation Strata:	
5. Viola sorora	5%	4	FAC		
6. Planlago major	3%	N	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6	
7. Vorbesund attarnitiflia	3%	N	FAC	more in diameter at breast height (DBH), regardle height.	ess of
8 amphilaspace Darteat	$n \neg \eta_{n}$		ENT	neight.	
	$\frac{\alpha}{\alpha}$		FAC.	Sapling/Shrub - Woody plants, excluding vines,	
9. Rypimachia nummular 10.	<u>La 170</u>		<u>*/-%_</u> /	than 3 in. DBH and greater than or equal to 3.28 m) tall.	ft (1
11				Herb – All herbaceous (non-woody) plants, rega	rdless
	104	= Total Cov	er o	of size, and woody plants less than 3.28 ft tall.	1000
50% of total cover: 50	<u>2</u> 20% of	total cover:	<u>20.8</u>	Woody vine - All woody vines greater than 3.28	ffin
Woody Vine Stratum (Plot size: <u>30' R</u>)				height.	
1		<u></u>			
2.				i i i i i i i i i i i i i i i i i i i	
3.					
4.					
5		·		Hydrophytic	
5, <u> </u>	01	= Total Cov		Vegetation Present? Yes 🗡 No	
50% of total cover:					
Remarks: (Include photo numbers here or on a separate		- · ·		<u> </u>	
Dominant hydrophyte		getat	jón.		

Sampling Point: <u>SP-15</u>

	ription: (Describe	to the depth				or confirm	m the absence of indicators.)
Depth (inches)	<u>Matrix</u> Color (moist)		Redo Color (moist)	ox Features %	Type ¹	Loc ²	Taviura
O - 12''	$107R^{3}/2$			70		LOG	Texture Remarks
0-12	1015-12	100			,		Sety day loam
	· · · · · · · · · · · · · · · · · · ·						<u> </u>
····			· · · · · · · · · · · · · · · · · · ·	·			
		<u> </u>					
	•				•		· · · ·
<u> </u>					·		
	· · · · ·						
	ncentration, D=Depl		educed Matrix M	S-Maskad	Sand Gr		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Ir			educed matrix, m	S-Maskeu	Sanu Gra	1115.	Indicators for Problematic Hydric Soils ³ :
Histosol (Dark Surface	e (S7)			2 cm Muck (A10) (MLRA 147)
	pedon (A2)		Polyvalue Be		e (S8) (M	LRA 147.	
Black His			Thin Dark Su				(MLRA 147, 148)
	ı Sulfide (A4)		Loamy Gleye	-	2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma				(MLRA 136, 147)
	k (A10) (LRR N) Below Dark Surface	(614)	Redox Dark	•	•		Very Shallow Dark Surface (TF12)
	k Surface (A12)	(ATT)	Depleted Date				Other (Explain in Remarks)
	icky Mineral (S1) (L i	RR N,	Iron-Mangan			.RR N,	
	147, 148)	·	MLRA 13		, ,,		
	eyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
Sandy Re			Piedmont Flo			-	
	Matrix (S6)		Red Parent N	Material (F2	1) (MLR/	A 127, 147	7) unless disturbed or problematic.
	ayer (if observed): リノA						
· · ·	(•		_				
Depth (incl	ies):						Hydric Soil Present? Yes No
Remarks:	Į . () _	٩				
(1 pla	nd poil	ha	ind.				
09-		1	٠ گ				
		v					

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			ns and Piedmont Region
Project/Site: <u>RML DODO</u>	B City/	County: <u>CMCMMA</u>	ti/Hamping Date: 5/18/2
Applicant/Owner: Duke EM	eray.		_ State: <u>OH</u> Sampling Point: <u>SP-</u>
Investigator(s): <u>JAV/DMG</u>	s (CEC) Sect	ion, Township, Range:	SQ3, TIN, REE
			ne): <u>Concare</u> Slope (%): C
Subregion (LRR or MLRA): <u>LRR</u>	1 1		4.427.429 Datum: W951
Sall Map Unit Name: $60 = 100$			flenwiclassification: upland
Are climatic / hydrologic conditions on the	<u>sour count or</u>		Carrier in Banarda)
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hy			l Circumstances" present? Yes <u>×</u> No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hy	/drology <u>N</u> naturally problem	natic? (If needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS - Att	ach site map showing sar	npling point locatio	ons, transects, important features, e
Hydrophytic Vegetation Present?	Yes No <u> </u>	is the Sampled Area	
Hydric Soil Present?	Yes No	within a Wetland?	Yes No 🗡
Wetland Hydrology Present?	Yes No		
Remarks: Upland pampa	my location		
	0.		
HYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is re	quired; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants	(B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns (B10)
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduce	d Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	on in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (Saturation Visible on Aerial Imagery (C9)
Aigai Mat or Crust (B4)	Other (Explain in Re	marks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)			Geomorphic Position (D2)
Inundation Visible on Aerial Imagery	· (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)		r	FAC-Neutral Test (D5)
Field Observations:			
	No <u>×</u> Depth (inches): <u></u>		
	No 🔀 Depth (inches): 🚬		· · · · · · · · · · · · · · · · · · ·
Saturation Present? Yes (includes capillary fringe)	No <u> </u>	Wetland H	lydrology Present? Yes No 🔀
Describe Recorded Data (stream gauge,	, monitoring well, aerial photos, pr	evious inspections), if ava	ilable:
Remarks:	_		
1100 and hura	SAM		
upland hydr	or the		
U			

Sampling Point: <u>SP-\b</u>

Abso Abso			Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 K</u>) %C 1. Copulus deltoides 70	over <u>Species?</u> 072/	Status FAC	Number of Dominant Species That Are OBL, FACW, or FAC:
2. Cetter occidentalis 35	5% Y	FACU	()
3. aver Rarcharumum 15	5% N	FACIN	Total Number of Dominant Species Across All Strata: (B)
4 5			Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
6			Prevalence Index worksheet:
7	~~~~		
12	0%= Total Cove		
50% of total_cover: _ <u>らい</u> 20	0% of total cover:_	dT_	
Sapling/Shrub Stratum (Plot size: 15' R)			FACW species 50 x 2 = 100
1			FAC species <u>82</u> x 3 = <u>346</u>
2			FACU species 77 x4 = 308
3			UPL species \bigcirc x 5 = \bigcirc
4			Column Totals: 209 (A) 654 (B)
5 6			Prevalence Index = $B/A = 3.12$
			Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
8			2 - Dominance Test is >50%
9	্ৰ্যি ≃ Total Cove		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 20		۲ مست	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: <u>5' R</u>)	on total cover		data in Remarks or on a separate sheet)
1. Untica dioica 35	52 V	FACI	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Boermaria culmaina 35		$\overline{\Box}$	
	7 <u>0 7</u> 70 N	PAC P	¹ Indicators of hydric soil and wetland hydrology must
	$\frac{70}{30}$ $\frac{1}{30}$		be present, unless disturbed or problematic.
4 Viola soloria 5	<u>70 N</u>	<u>FAC</u>	Definitions of Four Vegetation Strata:
5. Parthanocierus guingueldia =		<u>FACU</u>	 [↑]Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Bolin aparline 2	<u>70</u> N	FACL	more in diameter at breast height (DBH), regardless of
7			height.
8			Sapling/Shrub – Woody plants, excluding vines, less
9			than 3 in. DBH and greater than or equal to 3.28 ft (1
10			m) tall.
11			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 43.5 20	$\frac{7}{2}$ = 10tal Covel	7.4	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: <u>30'R</u>)		<u> </u>	Woody vine Ali woody vines greater than 3.28 ft in
1. Johnodendram radicana 2	2 N	FAC	height.
2.	<u></u>	- / 1000	
2. <u></u>			
S			
4			Hydrophytic
<u>ر</u>	b = Total Cover		Vegetation Present? Yes No 🗡
50% of total cover: 20			
Remarks: (Include photo numbers here or on a separate sheet.)			
Dominant upland veget	talion,		

ŧ

ches) Color (moist) %	Color (moist)	<u>Features</u>	Loc ² Tex	ture	Remarks
-13" 10YR3/2 100		مسحير محمر		ty clay	Joam
	- <u>.</u>			M may	
		<u> </u>			
				······································	
	w +				
,					
be: C=Concentration, D=Depletion, RN	/=Reduced Matrix_MS	=Masked Sand Grain		ion: PL=Pore Li	ning M=Matrix
Iric Soil Indicators:	i riduddd many, mo	Madikod Gana Gran			Problematic Hydric Soils ³
Histosol (A1)	Dark Surface	(97)			(A10) (MLRA 147)
Histic Epipedon (A2)		ow Surface (S8) (ML	RA 147 148)	Coast Prair	
Black Histic (A3)		face (S9) (MLRA 14		(MLRA 1	
Hydrogen Sulfide (A4)	Loamy Gleyed		, 140,		loodplain Soils (F19)
Stratified Layers (A5)	Depleted Mat			(MLRA 1	,
2 cm Muck (A10) (LRR N)	Redox Dark S				w Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark	· ·			ain in Remarks)
Thick Dark Surface (A12)	Redox Depres				,
Sandy Mucky Mineral (S1) (LRR N,	-	se Masses (F12) (LF	RR N,		
MLRA 147, 148)	MLRA 136		•		
Sandy Gleyed Matrix (S4)		, e (F13) (MLRA 136,	122)	³ Indicators of I	ydrophytic vegetation and
Sandy Redox (S5)		dplain Soils (F19) (N			ology must be present,
Stripped Matrix (S6)	Red Parent M	aterial (F21) (MLRA	127, 147)	unless distur	bed or problematic.
trictive Layer (if observed):					
-ype: N/A					
Depth (inches):			Hvdr	ic Soil Present?	Yes No
narks:					
N VANA ANV V	ang				
pland soil fo					
pland soil fa	0				
pland soil fo	0				
pland soil fo	0				
pland soil fa	0				
pland soil fa	0				
pland soil fo	0				
pland soil fo	0				
pland soil fo	0				
V	0				
pland soil fo	0				
V	0				
V	0				
V	0				
V	0				
V					
V					
V					
V					·
V					

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WETLAND DETERMINATION	DATA FORM – Eastern M	ountains and Piedmont Region
Project/Site: <u>RML DOOOB</u>	City/County: CMC	mati Hame Sampling Date: 5/18/20/1
Applicant/Owner: Duhe Energy		State: OHSampling Point: SP-17
Investigator(s): JAV/DMG (CEC)		lange: S23, TIN, R5E
Landform (hillslope, terrace, etc.): Thomas Con	Local relief (concave, co	nvex, none): <u>Concare</u> Slope (%): <u>O</u>
Subregion (LRR or MLRA): LRR N Lat: 3	<u>9.083064</u> La	ong: <u>-84.42,7519</u> Datum: <u>WqS84</u>
Soil Man Unit Name: Ur (X CO-UNDON, LOMA	-Udosthents compl	QX 0 TON Classification: PFO
Are climatic / hydrologic conditions on the site typical forth	is time of year? Yes 📈 No	(If no, explain in Remarks.)
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u>	significantly disturbed? Are	e "Normal Circumstances" present? Yes 🛒 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If r	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point	locations, transects, important features, etc.
Hydric Soil Present? Yes Yes Wetland Hydrology Present? Yes Yes	No Is the Sample No within a Wetla	
Remarks: Field confumed PFO	wetland	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Tru	e Aquatic Plants (B14)	K Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hyd	lrogen Sulfide Odor (C1)	🔀 Drainage Patterns (B10)
Saturation (A3) Oxi	dized Rhizospheres on Living Roo	ots (C3) Moss Trim Lines (B16)
Water Marks (B1) Pre	sence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Rec	cent Iron Reduction in Tilled Soils	(C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thi	n Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Oth	er (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		K FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _K De	enth (inches): N/A	
	· · · ·	
	1 1 1	
Saturation Present? Yes No <u>*</u> De (includes capillary fringe)	epth (inches): <u>/ i &</u>	Vetland Hydrology Present? Yes <u>≻</u> No
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspectior	ns), if available:
Remarks:	<i>ti</i>	
wattand hydrology of	beenred.	
•		

VEGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: <u>SP-17</u>
On/ D	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' P</u>)	<u>% Cover</u>	<u>Species?</u>		Number of Dominant Species
1. Plantanus occidentalis	65%	7	FACL	That Are OBL, FACW, or FAC: (A)
2. Populus deltaides	<u>~0</u>	<u> </u>	EAC	/ Total Number of Dominant
3. aler sacchannum	570	<u>~</u> ~	<u>rn</u> u	Species Across All Strata: (B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				
7				Prevalence Index worksheet:
1-1	<u>_95%</u>	= Total Cov	er, a	Total % Cover of: Multiply by:
50% of total cover: 47 .	<u>్</u> 20% of	total cover:		OBL species O $x_1 = O$ FACW species 93 $x_2 = 186$
Sapling/Shrub Stratum (Plot size: 1518)	. ~ 0	~ /	<u> </u>	FACW species $\frac{93}{45}$ x 2 = $\frac{186}{35}$ /FAC species $\frac{45}{x3}$ = $\frac{135}{35}$
1. acor saccharinum		<u> </u>	FACU	
2. Cotis occidentales	1%	N	LAGU	FACU species x 4 = UPL species
	2%	<u>N</u>	FALW	UPL species 0 $x 5 = 0$ Column Totals: 139 (A) 325 (B)
4. Ulmus, ambricand	_1%o_	<u> </u>	FACW	
5 6				Prevalence Index = B/A = <u>2.33</u>
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				<u>≯</u> 2 - Dominance Test is >50%
	14%:	= Total Cov	er	$4 - 3$ - Prevalence Index is $\leq 3.0^1$
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: <u>5'R</u>)	_			data in Remarks or on a separate sheet)
1. Jourodendian rodreams	20%	<u> </u>	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Leensia mainica	<u> </u>	2	FACW	1
3. Cover graye	5%	2	EACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
40				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9	<u> </u>			than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11	A^h			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15	20% of	total cover:	0	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30'R)				height.
1				
2				
3				
4		,	·	Hydrophytic
5	<u></u>			Vegetation Present? Yes <u>×</u> No
50% of total cover:		= Total Cov total cover:		
Remarks: (Include photo numbers here or on a separate si	_			L
	•		×	
Dominant lydrophytic	NRQE	LOUL	γ (
	3. 1.			
			I	

Profile Description: (Describe to the dept	h needed to document the indicator or confirm the absence of indicators.)
Depth <u>Matrix</u>	Redox Features
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ² Texture Remarks
0-6" IOYR \$1 85	7.5YR4/4_15_C_M_Sittloam
6-10" LOVD41, 05	7 6404/1 2 0 14 0:41 0 0
<u>e 12 104K71 00</u>	T. JYR 14 15 C M Silly lay loam
· · · .	
¹ Type: C=Concentration, D=Depletion, RM=I	
Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7) 2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	K Depleted Matrix (F3) (MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7) Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,
MLRA 147, 148)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.
Restrictive Layer (if observed):	
Type: N/A	
E E	
Depth (inches):	Hydric Soil Present? Yes 🔀 No
Remarks:	
	•
Hydric sort foc	Mg.
0	
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	Eastern Mountains and Piedmont Region
Project/Site: Line DOODB City/C	County: Conconnati Hame Sampling Date: 5/19/20/6
Applicant/Owner: Duke Evergy	State: <u>OH</u> Sampling Point: <u>SP-18</u>
	on, Township, Range: <u>S23, TIN, R5E</u>
	ief (concave, convex, none):
Subregion (LRR or MLRA): LRR N Lat: 39.08292	
Soil Map Unit Name: Ur UXCO-wbon Land - Un	
Are climatic / hydrologic conditions on the site typical for this time of year?	NWI classification: <u>r</u>
Are Vegetation N, Soil N, or Hydrology N significantly distu	bed? Are "Normal Circumstances" present? Yes 🔀 No
Are Vegetation N , Soil N , or Hydrology N naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	ppling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗡 No	Is the Sampled Area
Hydric Soil Present? Yes <u>×</u> No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes <u> No</u> No	
Remarks:	j
Field confirmed PEM wetter	N
Ϋ	
2	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Od	or (C1) X Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizosphere	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reductio	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Rer	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	🔟 Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	Kind outpost post (D5)
Field Observations:	
Surface Water Present? Yes No _K_ Depth (inches):N	12
Water Table Present? Yes No 🔀 Depth (inches): 21	2"
Saturation Present? Yes No 🔀 Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
water and hydrology abserved.	
weather a she and a constant	

Sampling Point: <u>SP-18</u>

5 mm ² - 0	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>0.05 ouve</u>) 1	<u>% Cover</u>	<u>Species?</u>	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata:(B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
7			······	Total % Cover of: Multiply by:
		= Total Cov		OBL species OBL Image: Species Image: Species
	20% of	total cover:	,	FACW species $\underline{96}$ $x_2 = \underline{192}$
Sapling/Shrub Stratum (Plot size: 0.05 alle)	32	2	FACU	FAC species 21 $x_3 = 63$
1. Cornes amomum			<u>-nu</u>	FACU species x4 =
2				UPL species $x = 0$ $x = 0$
3				Column Totals: (7 (A) 255 (B)
4 5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				$\frac{1}{2}$ 2 - Dominance Test is >50%
9	24	= Total Cov		\times 3 - Prevalence Index is $\leq 3.0^{1}$
50% of total cover:	<u>20% of</u>	= Lotal Cov total cover	er	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5' R)	20/001			data in Remarks or on a separate sheet)
	70%	\mathbf{Y}	FACIN	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Corof grays 2. Lysimachik nummulari	a 202	N	FAM	<i>s1</i>
3. Fricodandian rodicant	- 10%	4	FAC	^{1/1} Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Violasororia	- 5%	<u>N</u>	FAC	Definitions of Four Vegetation Strata:
5. Vernonia gizantea	3%	<u>4</u>	FAC	
6. Pholaris annamaca	3%	<u>N</u>	EACU	/ Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Rument crespira		<u>N</u>	HC	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		<u></u>		m) tall.
11	114%	= Total Cov	er 228	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>57</u> <u>Woody Vine Stratum</u> (Plot size: <u>0,05 なんへん</u>)	≝ 20% of	total cover:	<u>aa.u</u>	Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes 🔀 No
50% of total cover:		= Total Cov total cover:		
Remarks: (Include photo numbers here or on a separate				
Dominant hydrophytic	-	tat	en.	
	V			

Profile Description: (Describe to the dep	oth needed to document the Indicator or confirm	n the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	$\frac{\text{Color}(\text{moist})}{1000} = \frac{\%}{1000} \frac{\text{Type}^{1}}{100000000000000000000000000000000$	Texture Remarks
0-14" 10YR 3/2 95	<u>2.5VR1/8 5 C M</u>	Silty day loam
		0 0
		,
	······································	
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histosof (A1) Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Depleted Matrix (13) Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148)	MLRA 136)	¢.
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Gleyed Wathx (34) Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147	
Restrictive Layer (if observed):		
C / A		
Туре:/А		
Depth (inches):		Hydric Soil Present? Yes <u> </u>
Remarks:		
1 1 1 1 1 1 1 1 1 1		
Hydric sort fo	ung	
V	\mathbf{O}	
	~	
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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: <u>Line DOODB</u> City/County: Coman Mate Hamilton Date: 5/19/20/6
Applicant/Owner: DWUC energy State: OH Sampling Point: SF-19 Investigator(s): JAV/DMG (CEC) Section, Township, Range: S23, TIN, RSE
Landform (hillslope, terrace, etc.): <u>Floodplann</u> Local relief (concave, convex, none): <u>Convex</u> , Slope (%): 0%
Subregion (LRR or MLRA): LRR N Lat: 39.082924 Long: 84.42772 Datum: 49.84
Soil Map Unit Name: UN UXCO - Unban Long - Udor then to completive classification: Upland
Are climatic / hydrologic conditions on the site typical for this time officer? Yes No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N, significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _X Is the Sampled Area within a Wetland? Yes No _X Hydric Soil Present? Yes No _X Is the Sampled Area within a Wetland? Yes No _X Wetland Hydrology Present? Yes No _X Is the Sampled Area within a Wetland? Yes No _X Remarks: Wetland Dompday Quantation Yes No _X Yes No _X
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No Depth (inches): N/A
Water Table Present? Yes No <u> begin{bmatrix} Ves No <u> bepth (inches): 212 4</u></u>
Saturation Present? Yes No $\not\leftarrow$ Depth (inches): $\not> 12''$ Wetland Hydrology Present? Yes No $\not\times$
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
None observed.

Sampling Point: <u>SP-19</u>

00/0	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30' R</u>) 1	<u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
23		Total Number of Dominant Species Across All Strata: (B)
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC:
6		
7		Prevalence Index worksheet:
	0% = Total Cover	Total % Cover of: Multiply by:
50% of total cover:	20% of total cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 ' R)		FACW species x 2 =0
1		FAC species x 3 =
2		FACU species <u>106</u> x 4 = <u>424</u>
		UPL species x 5 =
3		Column Totals: 18 (A) 455 (B)
4 5		Prevalence Index = $B/A = 3.85$
6		Hydrophytic Vegetation Indicators:
7		
8		1 - Rapid Test for Hydrophytic Vegetation
2		2 - Dominance Test is >50%
9	0% = Total Cover	3 - Prevalence Index is ≤3.0 ¹
EQ9/ of total on you		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5 R</u>)	LOO VI EACI	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Festuca anundinaced	<u>60% Y FACL</u>	
2. Infolim repend	<u>40% } FAC</u>	Indicators of hydric soil and wetland hydrology must
3. Viola socoria	THO P FAC	be present, unless disturbed or problematic.
4. Plantage marcol	5% N FACI	Definitions of Four Vegetation Strata:
5. Cupenus openantus,	5% N FACW	Demmaons of Four Vegetation outdat.
6. Jorasbourn deunale	1% N FACL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
		more in diameter at breast height (DBH), regardless of
7		height.
8		Sapling/Shrub - Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11		Herb All herbaceous (non-woody) plants, regardiess
	<u>118%</u> = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of total cover: <u>23.</u>	No to de a Allowe douise a sector than 2.08 ft is
Woody Vine Stratum (Plot size: <u>30' R</u>)		Woody vine – All woody vines greater than 3.28 ft in height.
1		noight
2		
3		
4		Hydrophytic
5	- 17	Vegetation Present? Yes No
	= Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	
Remarks: (Include photo numbers here or on a separate	sheet.)	
Dominant upland N	egeraneri.	
	ij	
1		

		to the dept				or confirn	n the absence of indicat	ors.)
Depth (inches)	<u>Matrix</u> Color (moist)	%	Redo Color (moist)	x Features	<u> </u>	Loc ²	Toyturo	Domorka
	10YR3/2				ype		Texture Sult Joann	Remarks
0-12"	10/12/2	100					Sult Joam	comported_
	k	- <u> </u>	· · · · · · · · · · · · · · · · · · ·				<u></u>	/
		• • • • • • • • • • •		•				
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·		· ·						
<u> </u>								
		· ·					· ······	
· ·		· ·				·		
					·			
¹ Type: C=Cor	ncentration, D=Dep	letion RM=F	Reduced Matrix MS	S=Masked	Sand Gra	ine	² Location: PL=Pore Lini	ina M-Matrix
Hydric Soil In			Ceddoed Matrix, Me					roblematic Hydric Soils ³ :
Histosol (/			Dark Surface	(97)				-
	pedon (A2)		Polyvalue Be		e (S8) (M	RA 147		A10) (MLRA 147) Redox (A16)
Black Hist			Thin Dark Su				(MLRA 14	• •
	Sulfide (A4)		Loamy Gleye			,,		podplain Soils (F19)
	Layers (A5)		Depleted Mat		_,		(MLRA 13	
	k (A10) (LRR N)		Redox Dark S		6)			/ Dark Surface (TF12)
Depleted	Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)			in in Remarks)
Thick Dar	k Surface (A12)		Redox Depre	ssions (F8	i)			·
	icky Mineral (S1) (L	RR N,	Iron-Mangane	ese Masse	s (F12) (L	RR N,		
	147, 148)		MLRA 13	-			_	
	eyed Matrix (S4)		Umbric Surfa					ydrophytic vegetation and
Sandy Re			Piedmont Flo					logy must be present,
Stripped N			Red Parent N	laterial (F2	21) (MLRA	127, 147) unless disturb	ed or problematic.
	ayer (if observed):							
· · · · · · · · · · · · · · · · · · ·	N/A							
Depth (inch	nes):		_				Hydric Soil Present?	Yes No
Remarks:								
1100.00	nd soil	Δ						
apren	100 12000	- Ko-	ang					
		V	0					
		•	_					

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WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region
Project/Site: time DOODB City/County: Cincinnati Hame Sampling Date: 5/19/2016
Applicant/Owner Diskley France Added State: OH Sampling Point: SP-20
Investigator(s): <u>JAV/DMG (CEC)</u> Section, Township, Range: <u>SQ3</u> , <u>T1N</u> , <u>RSE</u>
Landform (hillslope, terrace, etc.):
Subregion (LRR or MLRA): LRR N Lat: 39.090361 Long: -84, 427389 Datum: W9584
Soil Map Unit Name: Ur UXCO - Ulan Jand - Udathenty complex, NWI classification: PEN
o to (2% 0,000, occon an all the Revealed in the site typical for this time of years) Yes <u>ک</u> No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes K No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Yes Xo Wetland Hydrology Present? Yes Xo No within a Wetland? Yes Xo
Field confirmed PEM wettand area.
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1)True Aquatic Plants (B14)Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Valer Marks (D1) Presence of Neduced IIOI (C4) Divise a Solitivater Pable (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)
Inundation Visible on Aenal Imagery (B7)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13)
Field Observations:
Surface Water Present? Yes No <u>×</u> Depth (inches): <u>N/A</u>
Water Table Present? Yes No <u>×</u> Depth (inches): <u>>12.</u>
Saturation Present? Yes No 😕 Depth (inches): 212." Wetland Hydrology Present? Yes K. No.
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Field confirmed wetland hydrology.
v (

Sampling Point: <u>SP-20</u>

1 material and the second s	Absolute	Dominant Indic	
Tree Stratum (Plot size: CATAL WETDAMS	<u>% Cover</u>	Species? Sta	Number of Dominant Species \ That Are OBL, FACW, or FAC: (A)
2 3			Total Number of Dominant Species Across All Strata: (B)
4 5			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6		· ·	Prevalence Index worksheet:
7		·	Total % Cover of:Multiply by:
		= Total Cover	- OBL species 35 x1= 35
50% of total cover:		f total cover:	FACW species 10 $x^2 = 20$
Sapling/Shrub Stratum (Plot size: Entire use)	sno		
1		· ·····	
2			
3			UPL species $2 \times 5 = 3$ Column Totals: 5×5 (A) 8×5 (B)
4			Column Totals: <u>55</u> (A) <u>65</u> (B)
5 6			Prevalence index = $B/A = 1.54$
7			Hydrophytic Vegetation Indicators:
8			→ 1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
9	0%	= Total Cover	— <u>×</u> 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:			4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 / P)	,		data in Remarks or on a separate sheet)
1. Le 2 renoralectus surgers	35%	V 01	3) Problematic Hydrophytic Vegetation ¹ (Explain)
2. Rumer crispile	5%	NF	
3. Viola solova	5%	N F	1 Indicators of hydric soil and wetland hydrology must
4. Conjum maculatum	10%	N FA	be present, unless disturbed or problematic.
			Definitions of Four Vegetation Strata:
5			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			more in diameter at breast height (DBH), regardless of
7			height.
8			Sapling/Shrub – Woody plants, excluding vines, less
9			than 3 in. DBH and greater than or equal to 3.28 ft (1
10			m) tall.
11	55%	= Total Cover	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>27</u> Woody Vine Stratum (Plot size: <u>Entrel</u> rate	<u>, 5</u> 20% o and	f total cover:	Woody vine – All woody vines greater than 3.28 ft in height.
1			
2			
3			
4			
5.			Vegetation
		= Total Cover	Present? Yes <u>×</u> No
50% of total cover:	20% c	f total cover:	
Remarks: (Include photo numbers here or on a separate			
		station	1
Dominant hydrophyte			
	· · · · ·		

Profile Description: (Describe to the dep	th needed to document th	e indicator or confirm	n the absence of indicators.)	
Depth <u>Matrix</u>	Redox Featu	ires2		
(inches) Color (moist) %	Color (moist) %	Type ¹ Loc ²	Texture Remarks	
0-5" 10YR4/2 95	7. SYR16 5	<u> </u>	Selt Iram	
5-12" 104R3/2 95	7.5YR.5/6 5		Set loam	
			~ ~ ~	
······				
· · · · · · · · · · · · · · · · · · ·	·····	, ,	·····	
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, MS=Masi	ked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils	³ :
Histosol (A1)	Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)	Polyvalue Below Su	rface (S8) (MLRA 147,		
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matri	• •	Piedmont Floodplain Soils (F19)	
Stratified Layers (A5)	Depleted Matrix (F3)		(MLRA 136, 147)	
2 cm Muck (A10) (LRR N)	K Redox Dark Surface		Very Shallow Dark Surface (TF12)	
Depleted Below Dark Surface (A11)	Depleted Dark Surfa		Other (Explain in Remarks)	
Thick Dark Surface (A12)	Redox Depressions			
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Ma	sses (F12) (LRR N,		
MLRA 147, 148)	MLRA 136)			_
Sandy Gleyed Matrix (S4)	Umbric Surface (F1: Diadment Floadalais		 ³Indicators of hydrophytic vegetation and wetland hydrology must be present, 	3
Sandy Redox (S5) Stripped Matrix (S6)		1 Soils (F19) (MLRA 14 (F21) (MLRA 127, 14 7		
Restrictive Layer (if observed):		(121) (MERA 121, 14)		
Type: N/A				
.,,,				
Depth (inches):			Hydric Soil Present? Yes <u></u> No No	
Remarks:				
Hydric soil fo	ind			
Ayan son fo	and.			
	V			
	*			
				-
				-

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: Rine DOODB City/County: Concernati/Home Sampling Date: 5/19/2016
Applicant/Owner: Dune Energy State: OH Sampling Point: SP-21
Investigator(s): <u>JAV/DMG (DEC)</u> Section, Township, Range: <u>SR3</u> , <u>T1N</u> ,
Landform (hillslope, terrace, etc.): <u>Floodplam</u> Local relief (concave, convex, none): <u>Nav</u> Slope (%): <u>O</u>
Subregion (LRR or MLRA): <u>LRR N</u> Lat: <u>39,090382</u> Long: <u>-84.427416</u> Datum: <u>W9584</u>
Soil Map Unit Name: Ur UXCO - ulan land - Udor Utents comprise classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 2 No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N, significantly disturbed? Are "Normal Circumstances" present? Yes 🔀 No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>F</u> naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Is the Sampled Area within a Wetland? No Hydric Soil Present? Yes No No within a Wetland? Yes No Wetland Hydrology Present? Yes No No No
upland sampling location
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1)True Aquatic Plants (B14)Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Vater Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches): N/A
Water Table Present? Yes No <u>×</u> Depth (inches): <u>> (2</u> "
Saturation Present? Yes No <u>+</u> Depth (inches): <u>212.</u> Wetland Hydrology Present? Yes <u>No +</u>
(includes capillary fringe)
Remarks: Mone observed

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Sampling Point: <u>SP-2(</u>

	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'R</u>) 1	<u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2 3		Total Number of Dominant Species Across All Strata:
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
7		
	= Total Cover	Total % Cover of: Multiply by:
	20% of total cover:	OBL species \bigcirc $x_1 = \bigcirc$
Sapling/Shrub Stratum (Plot size: 151 R)		
1		FAC species \bigcirc $x_3 = \bigcirc$
2		FACU species 10 x4 = 440
3		UPL species x 5 =
4		Column Totals: $(A) + 440$ (B)
5		Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.0 ¹
	= Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
	20% of total cover:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5' R</u>)	100	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Infolium repend	-6070 Y FACU	
2. Festuca anundinacea	50% Y FACU	¹ Indicators of hydric soil and wetland hydrology must
3	·	be present, unless disturbed or problematic.
4	·	Definitions of Four Vegetation Strata:
5		
		Tree Woody plants, excluding vines, 3 in. (7.6 cm) or
6		
6 7		Tree — Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
6 7 8		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6 7 8 9		Tree — Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
6 7 8 9 10		 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6 7 8 9		 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless
6 7 8 9 10 11 50% of total cover: 55	110%= Total Cover	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6 7 8 9 10 11 50% of total cover: 55	110%= Total Cover	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	<u>110</u> = Total Cover 20% of total cover: 22	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6		 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6		 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6		 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6	= Total Cover 20% of total cover:22	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6	Total Cover 2= Total Cover 20% of total cover:22	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	$\frac{1}{0} \frac{1}{20} = \text{Total Cover}$ $20\% \text{ of total cover} = \frac{20}{20}$	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	= Total Cover 20% of total cover: 	 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation

Profile Description: (Describe to the depth	needed to document t	he indicator	or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Feat			.
(inches) Color (moist) %	, ,		_Loc ²	Texture Remarks
0-14" 10YR4/3 100				Siltloam
		······ , ······	·	·
\ \ \ldots \ \ldots \ \ldots \ \ldots \ \ldots \ \ldots				
	······ ·			
¹ Type: C=Concentration, D=Depletion, RM=Re		ked Sand Gra	ains	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:				Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)			2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below St	urface (S8) (M	LRA 147.	
Black Histic (A3)	Thin Dark Surface ((MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Mati			Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3	3)		(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface	• •		Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surfa			Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions			
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Ma	asses (F12) (I	RR N,	
MLRA 147, 148)	MLRA 136)	0) (141 DA 40	C 400)	31
Sandy Gleyed Matrix (S4)	Umbric Surface (F1 Piedmont Floodplai			³ Indicators of hydrophytic vegetation and 8) wetland hydrology must be present,
Sandy Redox (S5) Stripped Matrix (S6)	Red Parent Materia		-	
Restrictive Layer (jf observed):			H 12 1, 141	j dness distance of problematic.
Type: N/A				
i i				
Depth (inches):	_			Hydric Soil Present? Yes No
Remarks:	•			
upland soil for	ung			
upearer aorer for	0			

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	- Eastern Mountains and Piedmont Region
Project/Site: <u>Line DOODB</u> city/C	county: CMCMRath Ham Sampling Date: 5/19/2016
Applicant/Owner: Duhe Energy	State: OH Sampling Point: SP-22
	on, Township, Range: S24, T1N, RSE
Landform (hillslope, terrace, etc.): <u>Icodolalam</u> Local rel	ief (concave, convex, none): <u>Concaré</u> Slope (%): <u>02</u>
Subregion (LRR or MLRA): LRR N Lat: 39.09445	86 Long: -84.4284-03 Datum: W9884-
Soil Map Unit Name: UrUXCO - whom Cond-1	LAGULANTA COM NWI classification:
Are climatic? hydrologic conditions on the site typical for this time of year (es No (If no, explain in Remarks.)
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} significantly distur	bed? Are "Normal Circumstances" present? Yes K. No
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} naturally problema	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes Yes No	Is the Sampled Area within a Wetland? Yes <u> </u>
Remarks: Field confirmed PFO wetle	and
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
K High Water Table (A2) Hydrogen Sulfide Od	
	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reductio	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Ren	
Iron Deposits (B5)	Certain Arritered (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Year-Stained Leaves (B9)	
Aquatic Fauna (B13) Field Observations:	
Surface Water Present? Yes \times No Depth (inches): 2	4"
Water Table Present? Yes <u>×</u> No Depth (inches);	
Saturation Present? Yes Yes No Depth (inches):	Wetland Hydrology Present? Yes <u>×</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Remarks:	
Strong wetland hydrology	

Sampling Point: SP-22

20/0	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 K)	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Number of Dominant Species
1. aver Saechannum.	<u>90% Y FACU</u>	That Are OBL, FACW, or FAC: (A)
2. Saler migra	10% N OBL	Total Number of Deminant
3.		Total Number of Dominant Species Across All Strata:
4		
		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: _\OO% (A/B)
6		Prevalence Index worksheet:
7		
	Total Cover	Total % Cover of: Multiply by:
	20% of total cover: 20	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' R)	-	FACW species <u>(00</u> x 2 = <u>206</u>
1. acer souch arunum	10% Y FACI	FAC species x 3 =
2. Robinia pseudoacacia	22 N FACI	FACU species x 4 =
	$\underline{-\alpha \gamma a}$ $\underline{-10}$ $\underline{-1760}$	UPL species \bigcirc $x 5 = \bigcirc$
3		
4	, , ,	Column Totals: <u>113</u> (A) <u>221</u> (B)
5		Prevalence Index = $B/A = 1.95$
6		
		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		😕 2 - Dominance Test is >50%
9		_ <u>≻</u> 3 - Prevalence Index is ≤3.0 ¹
	= Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
	20% of total cover:	
Herb Stratum (Plot size: <u>5' R</u>)		data in Remarks or on a separate sheet)
1		Problematic Hydrophytic Vegetation ¹ (Explain)
2		¹ Indicators of hydric soil and wetland hydrology must
3		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		
6		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7		more in diameter at breast height (DBH), regardless of height.
		neight.
8		Sapling/Shrub Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11		Herb – All herbaceous (non-woody) plants, regardless
	O h = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of total cover:	
Woody Vine Stratum (Plot size: 30' C.)		Woody vine All woody vines greater than 3.28 ft in
1. SourodenMan roducane	- 1% N FAC	height.
2		
3		
4		Hydrophytic
5.		Vegetation
	= Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	
Remarks: (Include photo numbers here or on a separate s	- F	
Dominant Rydiophyt	ic reactallas	
our and share the		
	×**	
1		

Depth	Matrix	·		x Feature		2	- <i>i</i>		.	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹		<u>Texture</u>		Remarks	
0-12"	104R 4/1	90	10YR 4/8	10		M	Clay	Loom	L	
			5 g							
	<u>.</u>									
								····· ·		
				,		•				
		·								
										,
·										·····
¹ Type: C=Co	ncentration, D=Depl	letion, RM=R	educed Matrix, MS	S≃Masked	Sand Gra	ains.	² Location:	PL=Pore Lin	ing, M=Matrix.	
Hydric Soil I	dicators:								roblematic Hy	dric Soils ³ :
Histosol (A1)		Dark Surface	(S7)				2 cm Muck ((A10) (MLRA 1	47)
Histic Epi	pedon (A2)		Polyvalue Be	low Surfac	ce (S8) (N	ILRA 147,	148)	Coast Prairie	e Redox (A16)	
Black His	• •		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 14	· •	
-	Sulfide (A4)		Loamy Gleye		F2)				oodplain Soils	(F19)
	Layers (A5)		Depleted Mat					(MLRA 13		
	k (A10) (LRR N)	(.	Redox Dark §				<u> </u>		v Dark Surface	
	Below Dark Surface	e (A11)	Depleted Dar					Other (Expla	ain in Remarks)	
	k Surface (A12) Jcky Mineral (S1) (L		Redox Depre		-					
	147, 148)	.rxix in,	MLRA 13		55 (1 12) (1	-1313 13,				
	eyed Matrix (S4)		Umbric Surfa		MLRA 13	6. 122)	3	ndicators of h	ydrophytic veg	etation and
Sandy Re			Piedmont Flo			· -			plogy must be p	
-	Matrix (S6)		Red Parent M	-		-	-	-	ed or problem	
	ayer (if observed):			•			1			
Type:										
Depth (inc	1		_				Hvdric Se	oil Present?	Yes 🗡	No
Remarks:			_							
	· /\	Δ	,							
11.1.	ic soil	LAC	ma							
pyan		- Drew	7-							
U		V	\lor							
										•

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: Line DOOD B City/County: Concernanti / Horne Sampling Date: 5/19/2016
Applicant/Owner: Duhe Energy
Investigator(s): <u>JAV/DMG (CEC)</u> Section, Township, Range: <u>S24</u> , <u>T1N</u> , <u>R5E</u>
Landform (hillslope, terrace, etc.): <u>Floodplain</u> Local relief (concave, convex, none): <u>Nave</u> Slope (%): <u>0</u> %
Subregion (LRR or MLRA): LRRIN Lat: 39.094481 Long: 84.428428 Datum: 29584
Soil Map Unit Name: UNXCO - Unit of Veat And - Unit Unit Comparison Solution: Upland Are climatic / hydrologic conditions on the site typical for this time of year Yes No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No within a Wetland? Yes No Wetland Hydrology Present? Yes No No Mo Remarks:
upland sampling focation
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B6)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (85) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No 🔀 Depth (inches): N/ 📐
Water Table Present? Yes No ⊀ Depth (inches): 20
Saturation Present? Yes No 🗡 Depth (inches): 212 ^{if} Wetland Hydrology Present? Yes No 🗡
(includes capiliary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
None observed.

Sampling Point: <u>SP-23</u>

2210	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30/ R</u>) 1	<u>% Cover Species? Status</u>	Number of Dominant Species (A)
2 3		Total Number of Dominant (B)
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC: 07/2 (A/B)
6		
7		Prevalence Index worksheet: Total % Cover of: Multiply by:
	0% = Total Cover	
	20% of total cover:	
Sapling/Shrub Stratum (Plot size: 15 ' R)		FACW species \bigcirc $x_2 = \bigcirc$
1		FAC species 0 x3 = 0 FACU species 35 x4 = 140
2		
3		UPL species $40 \times 5 = 200$
4		Column Totals: ± 5 (A) 340 (B)
5 6		Prevalence index = $B/A = 4.53$
7		Hydrophytic Vegetation Indicators:
8		1 - Rapid Test for Hydrophytic Vegetation
9.		2 - Dominance Test is >50%
	O% = Total Cover	$3 - Prevalence Index is \leq 3.0^1$
50% of total cover:	20% of total cover:	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5/ 8)		data in Remarks or on a separate sheet)
1. Sollaria media	40% Y UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Festulagrundimarea.	25% Y FACL	
3. Forariarum officinal		¹ Indicators of hydric soil and wetland hydrology must
		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6 7		more in diameter at breast height (DBH), regardless of height.
8		Sapling/Shrub – Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tail.
11	75% Total Cover	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 37	.5 20% of total cover: 15	
Woody Vine Stratum (Plot size: <u>301</u>)		Woody vine – All woody vines greater than 3.28 ft in height.
1		
2		
3		
4		Hydrophytic
5		Vegetation Present? Yes No
	20% of total cover:	
Remarks: (Include photo numbers here or on a separate		
Dominant upland we	gelalion.	
	Č.	

Sampling Point: SP-23

		to the depth h				confirm th	ne absence of indicator	s.)
Depth (inches)	<u>Matrix</u> Color (moist)		Color (moist)	<u>ox Features</u> %			Texture	Remarks
0-12"				100000 ×		Margarenter,	S. of lann	(onland)
				••••••••••••••••••••••••••••••••••••••			<u>ann roanne</u>	
		, ,						
							······································	
••••	b		· · · · · · · · · · · · · · · · · · ·					
		·······						
1- 0.0								
Type: C=Co Hydric Soil Ir	ncentration, D=Deple	etion, RM=Rec	luced Matrix, M	S=Masked S	Sand Grains	. 1	.ocation: PL=Pore Lining	
-				(07)				blematic Hydric Soils ³ :
Histosol (• •	—	_ Dark Surface Date stude Br			A 447 44	2 cm Muck (A1	
Black His	ipedon (A2) tic (A3)	_	Polyvalue Be Thin Dark Su				 Coast Prairie F (MLRA 147) 	
Hydrogen		•	_ Loamy Gleye			140)	•	dplain Soils (F19)
Stratified			_ Depleted Ma	•	-)		(MLRA 136,	,
	k (A10) (LRR N)	_	Redox Dark)			Dark Surface (TF12)
	Below Dark Surface	(A11)	_ Depleted Da		•		Other (Explain	
Thick Dar	rk Surface (A12)	_	_ Redox Depre	essions (F8)				·
	ucky Mineral (S1) (L I	RR N,	_ Iron-Mangan	ese Masses	s (F12) (LRF	RN,		
	147, 148)		MLRA 13	,				
	eyed Matrix (S4)		_ Umbric Surfa					rophytic vegetation and
Sandy Re		·	_ Piedmont Flo				•	gy must be present,
Stripped I			_ Red Parent I	Material (F2	1) (MLRA 12	27, 147)	unless disturbed	or problematic.
	ayer (if observed):							
Туре: 🚺	•							./
Depth (incl	hes):	······································				ł	ydric Soil Present?	Yes No
Remarks:	A	ň '						
1100	liod br	Lar	at A					
upra	VVQ) Maria	Der	ng -					
		V	U					
			-					
		·						

• •

	– Eastern Mountains and Piedmont Region
Project/Site: Line POODB City/C	County: Concernate / Hamelton Sampling Date: 5/19/2016
Applicant/Owner: 10, he Eneron	State: <u>OH</u> Sampling Point: <u>SP-24</u>
	on, Township, Range: SO30, T1N, RSE
Landform (hillslope, terrace, etc.): <u>Flocaplam</u> Local reli	
Subregion (LRR or MLRA): <u>LRR</u> <u>N</u> Lat: <u>39.10567</u>	
Soil Map Unit Name: HU- Huntington sult log.	
<i>d</i>	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} significantly distur	bed? Are "Normal Circumstances" present? Yes <u>X</u> No
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problema	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _X Hydric Soil Present? Yes No _X Wetland Hydrology Present? Yes No _X	Is the Sampled Area within a Wetland? Yes No
Remarks:	
Upland sampling area	
	•
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odd	
	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reductio	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Ren Iron Deposits (B5)	narks) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):N	
Water Table Present? Yes No 🖌 Depth (inches):	<u>/12</u> "
Saturation Present? Yes No - Depth (inches):	No_★ Wetland Hydrology Present? Yes No_★
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), il available:
Remarks:	
upland hydrology observed	
L	

Sampling Point: <u>SP-24</u>

2010	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30' R</u>) 1	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2 3		Total Number of Dominant Species Across All Strata:
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		φ υ
7		Prevalence Index worksheet:
	= Total Cover	Total % Cover of; Multiply by:
50% of total cover:	20% of total cover:	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 ' R)		FACW species x 2 =
1		FAC species \bigcirc x 3 = \bigcirc
2		FACU species <u>50</u> x 4 = <u>200</u>
3		UPL species x 5 =
4		Column Totals: <u>50</u> (A) <u>200</u> (B)
5		Prevalence Index = B/A = 4-00
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤ 3.01
	= Total Cover	
50% of total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: <u>5/ R</u>)		data in Remarks or on a separate sheet)
1. Festilca oundinacea	40% Y FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Tacado Cumo All Cimald	JO% Y FACU	
2. Jarado eur officinale	= 1970 - 1000	¹ Indicators of hydric soil and wetland hydrology must
3		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6		more in diameter at breast height (DBH), regardless of
7		height.
8		Sapling/Shrub – Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11.		Herb – All herbaceous (non-woody) plants, regardless
	50% = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	50% = Total Cover 20% of total cover: \0	We device All we advise greater than 2.39 ft in
Woody Vine Stratum (Plot size: <u>30'R</u>)		Woody vine – Ali woody vines greater than 3.28 ft in height.
1		
2.		
3.		
4		Hydrophytic
0	= Totai Cover	Vegetation Present? Yes No
	-34	
50% of total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)	
non to and or	ANTINA	
Dominant upland NE	gerand (
8	\sim	
1		

Sampling Point: <u>SP-24</u>

Profile Description: (Describe to the depth	needed to document the inc	dicator or confirm	the absence of indicator	·s.)
Depth <u>Matrix</u>	Redox Features	- 1 - 7-		
(inches) Color (moist) %	Color (moist) %	Type ¹ Loc ²		Remarks
0-12" 10YR4/3 100		parana.	Setloam	50
				· · · · · · · · · · · · · · · · · · ·
	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··		·	
			·······	
		······································		
		·····		
· · · · · · · · · · · · · · · · · · ·				
			<u> </u>	
¹ Type: C=Concentration, D=Depletion, RM=R	educed Matrix. MS=Masked S	and Grains	² Location: PL=Pore Linin	o. M=Matrix
Hydric Soil Indicators:	<u></u>			blematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)		2 cm Muck (A	•
Histosof (A1) Histic Epipedon (A2)	Polyvalue Below Surface	(S8) (MI RA 147		
Black Histic (A3)	Thin Dark Surface (S9) ((MLRA 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2		-	dplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	-)	(MLRA 136	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	1		Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F		Other (Explain	
Thick Dark Surface (A12)	Redox Depressions (F8)	•)		in Komanay
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses	(E12) (LRR N.		
MLRA 147, 148)	MLRA 136)	(, (,		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MI	LRA 136. 122)	³ Indicators of hyd	Irophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils			gy must be present,
Stripped Matrix (S6)	Red Parent Material (F21			d or problematic.
Restrictive Layer, (if observed):				•
туре: <u>N/A</u>				
Depth (inches):	—		Hydric Soil Present?	Yes No 🗡
			riyune ook Fresenti	
Remarks:				
Lingand and back	·			
upland soil for	when .			
V	U U			

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: Line DOOOB City/County: Concernate / Hamilton Sampling Date: 5/19/20/6
Applicant/Owner: DUNL EMAN, State: OH Sampling Point: SP-25
Investigator(s): <u>JAV/DMG</u> (CAC) Section, Township, Range: <u>SO30</u> , T1N, RSE
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR or MLRA): LRR N Lat: 39.105927 Long: -84.435067 Datum: W9984
Soil Map Unit Name: Hu- Huntington selt loam occasionally (NWi classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No (If no, explain in Remarks.)
Are Vegetation <u>N</u> , soil <u>N</u> , or Hydrology <u>N</u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes Xo within a Wetland? Yes No Wetland Hydrology Present? Yes Yes No No No
Remarks:
Field confirmed forested wetland
V V
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
🔀 Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
🖄 High Water Table (A2) Hydrogen Sulfide Odor (C1) 🕺 Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
K Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) /_ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)Other (Explain in Remarks)Stunted or Stressed Plants (D1)
Iron Deposits (B5)
★ Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Note: A later of the same (D2) Nicente page (D4)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) X FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>⊁</u> No Depth (inches): \2 ^{′′}
Water Table Present? Yes <u>×</u> No Depth (inches):
Saturation Present? Yes <u>></u> No Depth (inches): Wetiand Hydrology Present? Yes <u>></u> No (includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Strong wetland hydrology indicators

Sampling Point: <u>SP-25</u>

0210	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 / R</u>)		<u>Species?</u>		Number of Dominant Species
1. acor saccharinim	65%)	FACh	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				
				Percent of Dominant Species That Are OBL, FACW, or FAC:
5				That Are OBL, FACW, or FAC: 100 / (A/B)
6		·····		Prevalence Index worksheet:
7	1001			Total % Cover of: Multiply by:
		= Total Cov	er	$OBL species \qquad O \qquad x1 = O$
50% of total cover:	20% of	total cover:		
Sapling/Shrub Stratum (Piot size: 151 R		P		FACW species <u>110</u> x 2 = <u>220</u>
1. aur sachaunum	15%	<u> </u>	FACW	FAC species x 3 =
2				FACU species x 4 =
3		,,		UPL species x 5 =
				Column Totals: 10 (A) 226 (B)
4			1	
5				Prevalence Index = B/A =OO
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				Y - Napla rest is right vegetation Y - 2 - Dominance Test is >50%
9.				
	15%	= Total Cov	er	<u> </u>
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting
<u>Herb Stratum</u> (Plot size: 5^{\prime} R_{\star})	207001	(0(2) 00701,		data in Remarks or on a separate sheet)
1. Lancia Mainia	102	1	EANI	Problematic Hydrophytic Vegetation ¹ (Explain)
1 m	100	<u> </u>	FACUL	
2. conium maculature	1270	_7	FACW	¹ Indicators of hydric soil and wetland hydrology must
3. hypmachia nummulai	<u>a 5%</u>	N	<u>tracu</u>	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb All herbaceous (non-woody) plants, regardless
	<u> </u>	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>15</u>		total cover:		Marine Allowed wines constantion 2.00 ft in
Woody Vine Stratum (Plot size: <u>30' R</u>)				Woody vine – All woody vines greater than 3.28 ft in height.
1.				
2				
3			, <u> </u>	
4				Hydrophytic
5	~ 11			Vegetation
		= Total Cov		Present? Yes <u>×</u> No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	sheet.)			
O wat had a first		a .	alla	1
Dominant hydrophyte	N.	El Ser	del a contra	
		V		

Sampling Point: SP-25

Depth	Matrix	•		x Features		m the absence of Indicators.)
(inches)	Color (moist)	%	Color (moist)	%Туре		Texture Remarks
0-111"	10YR 3/2	90	10 YR 5/6	<u>10</u> C	<u>_ M</u>	Silty day loam
						0 0
		· • •		, <u></u> ,		
		· ·		······		
		·				
		· -				
						·····
		·		<u> </u>		
		· ·				
	ncentration, D=Dep	letion, RM≕F	Reduced Matrix, MS	S=Masked Sand	Grains.	² Location: PL=Pore Lining, M=Matrix.
lydric Soil li						Indicators for Problematic Hydric Soils ³ :
Histosol (Histic Eni	(A1) ipedon (A2)		Dark Surface	e (S7) elow Surface (S8)		2 cm Muck (A10) (MLRA 147) , 148) Coast Prairie Redox (A16)
Black His				inface (S9) (MLR/		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma			(MLRA 136, 147)
	ck (A10) (LRR N) Relaw Dark Surface	(444)	Kedox Dark			Very Shallow Dark Surface (TF12)
	Below Dark Surface rk Surface (A12)	e (ATT)	Redox Depre	k Surface (F7) ssions (F8)		Other (Explain in Remarks)
	ucky Mineral (S1) (L	.RR N,		ese Masses (F12) (LRR N,	
MLRA	147, 148)		MLRA 13	6)		_
	eyed Matrix (S4)			ce (F13) (MLRA		³ Indicators of hydrophytic vegetation and
Sandy Re Stripped	edox (S5) Matrix (S6)			odplain Soils (F1 Aaterial (F21) (MI		
	ayer (if observed):					
Type:	- / .					
Depth (inc	2					Hydric Soil Present? Yes 🔀 No
Remarks:						
	ę. – v	ΛΛ				
Hyd	ric sor	l ho	ung.			
U		V	0			
	`					

WETLAND DETERMINATION DATA FORM – Easter	n Mountains and Piedmont Region
Project/Site: Rine POOD B City/County: (ncurnati Hometon Sampling Date: 5/19/2016
Applicant/Owner: Duhe Energy	State: <u>OH</u> Sampling Point: <u>SP-26</u>
Investigator(s): <u>JAV/DMG. (VEC)</u> Section, Townsh	ip, Range: SO25, T2N, R4E
	e, convex, none): Concare, Slope (%): 07
Subregion (LRR or MLRA): LRR N Lat: 39.112423	Long: -84, 439915 Datum: w9384
Soil Map Unit Name: UNXCO - Unbanland - Udollhe	
Are climatic / hydrologic conditions on the site typical for this time of year? Wes	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling po	int locations, transects, important features, etc.
Hydrophytic Veretation Present? Yes X No	npled Area
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1) True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2) High Water Table (A2)	Sparsely vegetated concave ourrace (Bb)
Saturation (A3)	
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled S	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	🔀 Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Linundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13) Field Observations:	<u> </u>
Surface Water Present? Yes No $\underline{\checkmark}$ Depth (inches): $\underline{N/A}$	
Water Table Present? Yes No \checkmark Depth (inches): $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 +$	
Saturation Present? Yes X No Depth (inches): Lun Aut	- Wetland Hydrology Present? Yes <u>×</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ctions), if available:
Remarks:	
Vetland bydrology observed.	

Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: <u>30' R</u>) <u>% Cover Species? Status</u> Number of Dominant Species _____ That Are OBL, FACW, or FAC: (A) 1. _____ 2. Total Number of Dominant À (B) 3. Species Across All Strata: 4. _____ Percent of Dominant Species 🦾 (A/B) 00 5._____ _____ That Are OBL, FACW, or FAC: . _____ 6. Prevalence Index worksheet: Total % Cover of: 0% = Total Cover Multiply by: _ x1= 0 0 OBL species 20% of total cover: 50% of total cover: ____ 85 x2= Sapling/Shrub Stratum (Plot size: 15/R) 170 FACW species Ô x3= FAC species 1._____ Ô x4= FACU species 2._____ \bigcirc x 5 = \bigcirc UPL species 3. 85 (A) 170 Column Totals: (B) 4._____ Prevalence index = B/A = 2.006. _____ Hydrophytic Vegetation Indicators: 7. _____ 1 - Rapid Test for Hydrophytic Vegetation 8. 2 - Dominance Test is >50% $^{-1}$ 3 - Prevalence Index is ≤3.0¹ $O_{\underline{N}}$ = Total Cover 50% of total cover: 4 - Morphological Adaptations¹ (Provide supporting) 20% of total cover:____ data in Remarks or on a separate sheet) Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 1 Philanis anundinacea 2. Leensia mainica _ 25% ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. _____ 4. Definitions of Four Vegetation Strata: 5 Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 6 more in diameter at breast height (DBH), regardless of ······ height. 7. 8. Sapling/Shrub - Woody plants, excluding vines, less _____ than 3 in. DBH and greater than or equal to 3.28 ft (1 9 m) tall. 10. Herb - All herbaceous (non-woody) plants, regardless 11. 85% = Total Cover of size, and woody plants less than 3.28 ft tall. 50% of total cover: 42.520% of total cover: Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: 30' R) height. 1. 2. 3. 4. Hydrophytic Vegetation Yes 🗡 No <u>⊘%</u> = Total Cover Present? 20% of total cover:_____ 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet.) Dominant hydrophytic regetation.

VEGETATION (Four Strata) - Use scientific names of plants.

SP-26

Sampling Point:

SOIL

Profile Description	on: (Describe t	o the depth	needed to docun	ent the in	ndicator	or confirm	n the abs	ence of indica	itors.)	
Depth	Matrix			c Features	1	2	_ .			
	olor (moist)		Color (moist)		Type ¹		<u> </u>		Remark	5
0-11' 10	OYR3/1	85	104R3/6	15	$\underline{\ }$	<u></u>	<u>Qa</u>	y Low	m	
								0		
						·	, · ·	<u> </u>		
		······								
							• • • • • • • • • • • • • • • • • • • •			
		······································								
				·				<u></u>		
					•	. <u> </u>				
¹ Type: C=Concent	tration. D=Deple	etion. RM=F	educed Matrix. MS	=Masked	Sand Gra	ins.	² Locatio	on: PL=Pore Li	ning, M=Matri	x .
Hydric Soil Indica		,						ndicators for		
Histosol (A1)			Dark Surface	(S7)				2 cm Muck	(A10) (MLRA	147)
Histic Epipedo	n (A2)		Polyvalue Bel	• •	e (S8) (M	LRA 147,	148)		ie Redox (A16	
Black Histic (A			Thin Dark Su	face (S9)	(MLRA 1	47, 148)	-	(MLRA 1	47, 148)	
Hydrogen Sulf	ide (A4)		Loamy Gleye	d Matrix (F	2)		-	Piedmont F	loodplain Soil	s (F19)
Stratified Laye			Depleted Mat						136, 147)	
2 cm Muck (A*			K Redox Dark S		-		-		w Dark Surfa	
Depleted Belo		(A11)	Depleted Darl				-	Other (Exp	lain in Remari	(S)
Thick Dark Su			Redox Depres							
Sandy Mucky		KK N,	Iron-Mangane MLRA 136		s (F12) (I	.KK N,				
MLRA 147, Sandy Gleyed	-		Umbric Surfac			6 122)	-	³ Indicators of	hydrophyfic yr	agetation and
Sandy Cleyed			Piedmont Floo				18)		rology must be	
Stripped Matrix			Red Parent M	-		-	-		bed or proble	
Restrictive Layer						,	1			
Type: N	A									
Depth (inches):			_				Hydric	: Soil Present?	Yes X	No
Remarks:										
Remarks.	۰ ۸	Λ	¢							
Hudrie	. sol	la	ina.							
1.70000		1)	0							
v		V	No.							
r										

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region
Project/Site: <u>Rue DOOGB</u> City/County: Concernate Hame Sampling Date: 5/19/20/6
Applicant/Owner: Duke Energy State: OH Sampling Point: SP-27
Investigator(s): JAV/DMG (CEC) Section, Township, Range: SO25, T2N, R4E
Landform (hillslope, terrace, etc.): <u>Thomas and Local relief</u> (concave, convex, none): <u>Mane</u> Slope (%): <u>0</u> %
Subregion (LRR or MLRA): LRR N Lat: 39.112484 Long: -84.440009 Datum: W9584
Soil Map Unit Name: Ur UXCO NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>%</u> No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
SUMMART OF FINDINGS – Allach sile map showing sampling point locations, transects, important realties, etc.
Hydrophytic Vegetation Present? Yes No _X Is the Sampled Area Hydric Soil Present? Yes No _X within a Wetland? Yes No _X Wetland Hydrology Present? Yes No _X No _X No _X
Remarks: Upland sampling location
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3)Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Aigal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No Depth (inches): N/A
Water Table Present? Yes No <u>K</u> Depth (inches): <u>> 12 //</u>
Saturation Present? Yes No <u>></u> Depth (inches): <u>212</u> Wetland Hydrology Present? Yes <u>No ></u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
upland hydrogy observed

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: <u>SP-27</u>

30/52	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30/2</u>)	<u>% Cover Species? Status</u>	Number of Dominant Species
1		That Are OBL, FACW, or FAC: (A)
2		
3		Total Number of Dominant Species Across All Strata: (B)
4		
		Percent of Dominant Species
5		That Are OBL, FACW, or FAC:/ (A/B)
6		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
	= Total Cover	
	20% of total cover:	
Sapling/Shrub Stratum (Plot size: 151 R)		FACW species x 2 =
1		FAC species x 3 =
2		FACU species <u>90</u> x4 = <u>360</u>
3		UPL species x 5 =
4		Column Totals: $\underline{90}$ (A) $\underline{360}$ (B)
5		Prevalence Index = $B/A = 4.00$
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8	·	2 - Dominance Test is >50%
9		3 - Prevalence index is $\leq 3.0^{1}$
	◯ 🏠 = Total Cover	
50% of total cover:	20% of total cover:	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 / 🖌)		data in Remarks or on a separate sheet)
1. Festuca anundinacea	90% V FACL	Problematic Hydrophytic Vegetation ¹ (Explain)
2		*
		¹ Indicators of hydric soil and wetland hydrology must
3		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		
6	······	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		height.
8		
9		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10		mail 5 m. DBH and greater than or equal to 3.26 ft (1 m) tall.
11		Herb – All herbaceous (non-woody) plants, regardless
	= Total Cover	of size, and woody plants less than 3.28 ft tall.
	20% of total cover:	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: <u>30/ R</u>)		height.
1		
2		
3		
4		
5		Hydrophytic Vegetation
	<u> </u>	Present? Yes No
50% of total cover:		
Remarks: (Include photo numbers here or on a separate s		
	•	
Ommant unland on	0 ADTATION	
Dominant upland n		
P	5.4	

SOIL

Profile Description: (Describe to the depth	needed to docum	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth <u>Matrix</u>	Redox	<u>k Features</u>	<u>5</u> 	. 2	
(inches) Color (moist) %	Color (moist)		Type'	_Loc*	Texture Remarks
0-12" 10YR 4/3 100	015 ⁶⁹³			- The second	Sittloam
				·	
				+	
¹ Type: C=Concentration, D=Depletion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface				2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Bel				
Black Histic (A3)	Thin Dark Sur			47, 148)	(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleye		F2)		Piedmont Floodplain Solls (F19)
Stratified Layers (A5)	Depleted Mat				(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark S				Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Darl				Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depres				
Sandy Mucky Mineral (S1) (LRR N,	Iron-Mangane		es (F12) (L	.RR N,	
MLRA 147, 148)	MLRA 136				3
Sandy Gleyed Matrix (S4)	Umbric Surfac				³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Flo	-			
Stripped Matrix (S6)	Red Parent M	laterial (F	21) (MLR/	4 127, 147	7) unless disturbed or problematic.
Restrictive Layer (if observed):					
Туре: / Д					
Depth (inches):	_				Hydric Soil Present? Yes No
Remarks:					
upland soil fo					
upland service fe	rang -				
	$\sim O$				
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APPENDIX C

OHIO EPA ORAM DATA FORMS

	Ohio Rapid Assessment Metho 10 Page Form for Wetland Cat	
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <u>http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</u>

Background Information

Name: Joey Van Skaik / Dustin Giesler Date: 5/16/2016 Affiliation: Civil + Environmental Consultants, Inc. Address: 5899 Montelair BLVD, Milford, OH, 45150 Phone Number: 513 - 483 - 3522 e-mail address: dgiester@ cecinc.com / Jvanskaik@cecinc.com Name of Wetland: Wetland Vegetation Communit(ies): PFO/PEM HGM Class(es): Riverine Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. CEC's wetland and waterbody See Report Lat/Long or UTM Coordinate -84, 433691 39. 03423 **USGS Quad Name** KY-OH Newport County Hamilton Township 1 N Section and Subsection O_23 Hydrologic Unit Code 05090202 - Little Miami River Site Visit 5/16 + 5/18/2016 National Wetland Inventory Map PFO1C - Freshwater Forested /shoub Wetland Ohio Wetland Inventory Map marsh Shallow Soil Survey Gracese Loan, occasionally Flooded Delineation report/map CEC's wetland and waterbody Report See

Name of Wetland: 1 Wetlaw Wetland Size (acres, hectares): ~1 20 Acres Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See CEC's Wetland and Waterbody Report Comments, Narrative Discussion, Justification of Category Changes: See CEC's wetland and Waterbody Report 76,5 Final score : Category: 3

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.	\times	
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.	\times	
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.		\times

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

Narrative Rating

1

Wetland

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	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has 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 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).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	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 threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland.	NO Go to Question 3
		Go to Question 3	LA .
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
; ;	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated 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 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
l	Bogs. Is the wetland a peat-accumulating wetland that 1) has 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 cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that 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 invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
a	"Old Growth Forest." Is the wetland a forested wetland and is the 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-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?	YES Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

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wetland 1

8b	Mature forested wetlands. Is the wetland a forested wetland with	YES)	NO
	50% or more of the cover of upper forest canopy consisting of	\sim	
	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	
		Category 3 status.	
			1
		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
b	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	L NO.
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	Cata Questian Od	Go to Question 10
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question To
	"estuarine" wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth		1.
	wetlands, or those dominated by submersed aquatic vegetation.	YES	1/NO
9d	Does the wetland have a predominance of native species within its	TES -	NO
	vegetation communities, although non-native or disturbance tolerant	Matterd is a Category	Go to Question 9e
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question se
		3 wetiand	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
e .	tolerant native plant species within its vegetation communities?		
	tolerant halfve plant spesses within its vogetation coninternation	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	1	
	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.		NO
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	
	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		Quantitative
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Rating
	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,	Complete Quantitative	, í
	Montgomery, Van Wert etc.).	Rating	
		I reating	

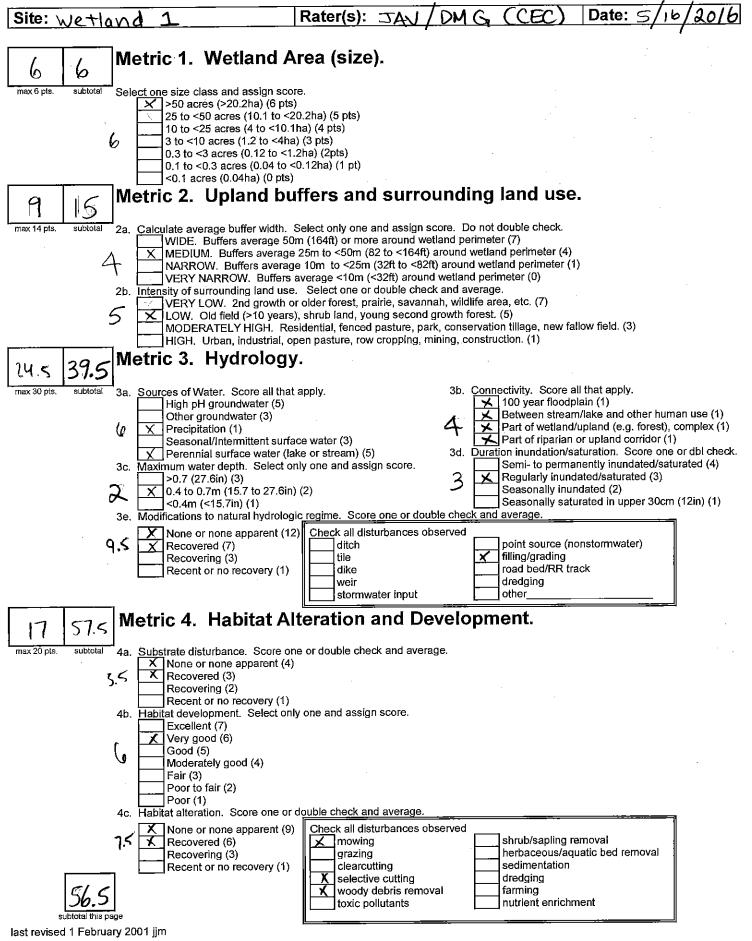
wetland 1

Table 1. Characteristic plant species.

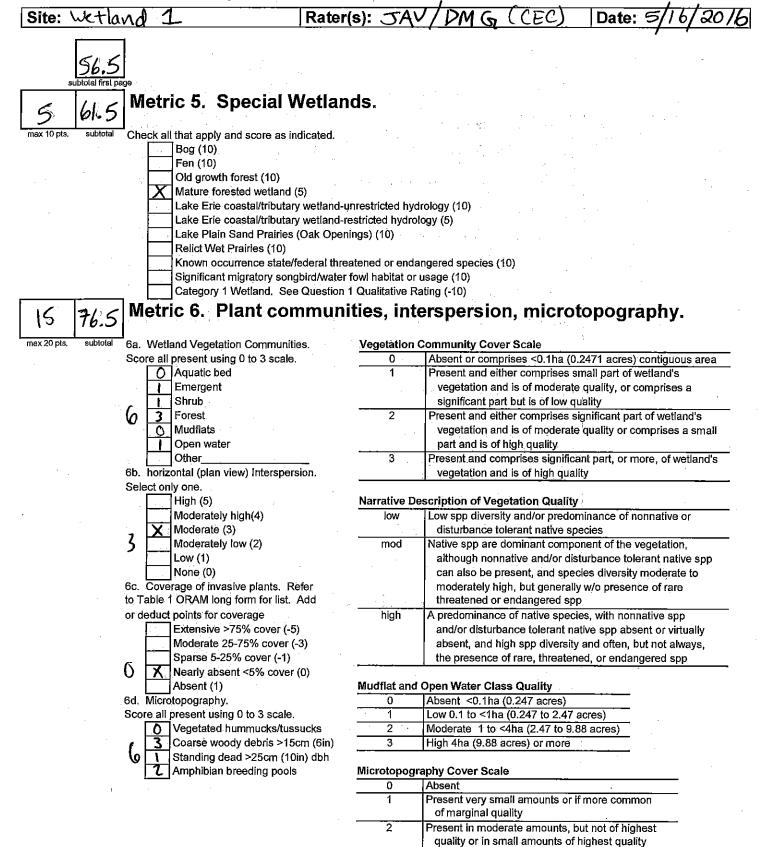
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Invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica 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



76,5

End of Quantitative Rating. Complete Categorization Worksheets.

3

Present in moderate or greater amounts

and of highest quality

ORAM Summary Worksheet

wetland 1

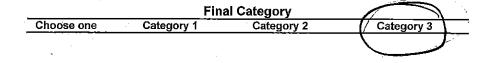
	-	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES 0	If yes, 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	6	
i (dung	Metric 2. Buffers and surrounding land use	9	
	Metric 3. Hydrology	24.5	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	5	
	Metric 6. Plant communities, interspersion, microtopography	15	
	TOTAL SCORE	76.5	Category based on score breakpoints 3

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

wetland I

Choices	Circle one	\sim	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 overcategorized 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 <i>"gray zone"</i> 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	Ô	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 moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not 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	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.

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Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001

Wetland Z

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <u>http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</u>

Name: Joey Van Skaik Dustin Greater Date: 5/18/2016 Affiliation: Consultants Environmental Address: Montelair Blud, Milford, Ohio 45150 5899 Phone Number: 513 - 483 - 3522 e-mail address: JVONSKAi KQLECINC. COM / Saiestar Q Lecinc. Com Name of Wetland: Wetland 2 Vegetation Communit(ies): IPEM PFO. HGM Class(es): Riverine Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. CEC's wetland and Waterbody SCO Report Lat/Long or UTM Coordinate -84.427486 39.083414 USGS Quad Name Newport KY-OH County Hanilton Township 1 Section and Subsection Hydrologic Unit Code 05090203 - Middle Onio - Laughery Site Visit 5/19/2016 5/18 National Wetland Inventory Map Ohio Wetland Inventory Map Soil Survey JXCO, Urban land - Udorthants complex, 0 to 12 packent slopes, occassionally flowed UNXCO, Delineation report/map

Background Information

Name of Wetland: Wetland Z Wetland Size (acres, hectares): 2 Ġ. \sim acces Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See CEC's Wetland and Waterbody Report Comments, Narrative Discussion, Justification of Category Changes: See CEC's Wetland and Waterbody Report Final score : <u>ร</u>ฉ.5 Category: Z

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.	×	
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

Wetland 2

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" ineans the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	Ø
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	So to Queenent L
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	
	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	
	Threatened or Endangered Species. Is the wetland known to contain	YES	
	an individual of, or documented occurrences of federal or state-listed		
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	(NO)
		Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
	Significant Breeding or Concentration Area. Does the wetland	YES	10
	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	
	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	(NO)
	in size and hydrologically isolated and either 1) comprised of		
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria, or 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	1 wedallu	
	no vegetation?	Go to Question 6	
	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO
	significant inflows or outflows, 2) supports acidophilic mosses,	· · · · · · · · · · · · · · · · · · ·	Y
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	3 wetland	
		Go to Question 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 invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland	Go to Question 8a
•	Invasive species listed III Table 1 is \$20%?	Go to Question 8a	
a –	"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	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

wetland 2

	here a standard to the southered a formation with	(YES)	ΓNΟ
8b	Mature forested wetlands. Is the wetland a forested wetland with		NO
	50% or more of the cover of upper forest canopy consisting of	Motor and the stand has	
	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	
	·	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		
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		On the Ownerfine 10	
		Go to Question 10	NO
9e	Does the wetland have a predominance of non-native or disturbance	YES	
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	do to question to
		Category 3 status	
		Category 5 status	
		Go to Question 10	
40	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	· - 0 · · · · · · · · · · · ·	Ψ
	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	LNO .
	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),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	
		<u> </u>	

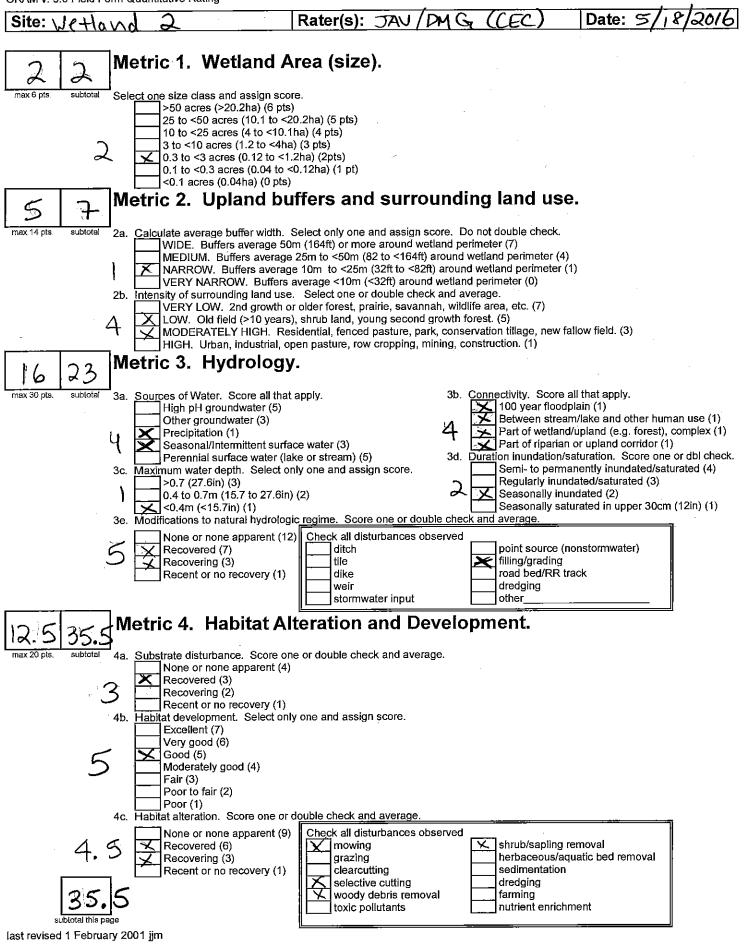
wetland 2

Table 1. Characteristic plant species.

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		5
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum	· -		
	Triglochin palustre		•	

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



ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 2 Rate	r(s): JA	V/DMG (CEC)	Date: 5/18/201
			•
135.D			
subtolal first page			
🦐 👍 🖞 Metric 5. Special Wetla	nds.		
ax 10 pts. subtotal Check all that apply and score as indicated. Bog (10)			
Fen (10)	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
Old growth forest (10)	-		
Mature forested wetland (5)			
Lake Erie coastal/tributary wetland			
Lake Erie coastal/tributary wetland Lake Plain Sand Prairies (Öak Ope	•	logy (5)	
Relict Wet Prairies (10)	, , , , , , , , , , , , , , , , , , ,		
Known occurrence state/federal thr	eatened or end	angered species (10)	
Significant migratory songbird/wate			
Category 1 Wetland. See Question			
Metric 6. Plant commur	nities, int	erspersion, microt	opography.
12 52.5			
ax 20 pts. subtotal 6a. Wetland Vegetation Communities.		Community Cover Scale	
Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2	
Aquatic bed	1	Present and either comprises sm vegetation and is of moderate	-
	2	significant part but is of low qua	
5 3 Forest	2	Present and either comprises sig	
Mudflats		vegetation and is of moderate	-
Open water		part and is of high quality	
Other	3	Present and comprises significan	
6b. horizontal (plan view) Interspersion. Select only one.	<u> </u>	vegetation and is of high qualit	y
High (5)	Narrative D	escription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predom	inance of nonnative or
3 X Moderate (3)		disturbance tolerant native spe	
Moderately low (2)	mod	Native spp are dominant compor	
Low (1) None (0)		although nonnative and/or distu	
6c. Coverage of invasive plants. Refer		can also be present, and speci moderately high, but generally	-
to Table 1 ORAM long form for list. Add		threatened or endangered spp	
or deduct points for coverage	high	A predominance of native specie	
Extensive >75% cover (-5)		and/or disturbance tolerant nati	
Moderate 25-75% cover (-3)		absent, and high spp diversity a	•
Sparse 5-25% cover (-1) Nearly absent <5% cover (0)	<u> </u>	the presence of rare, threatene	a, or endangered spp
Absent (1)	Mudflat and	Open Water Class Quality	
6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
Score all present using 0 to 3 scale.	1 3	Low 0.1 to <1ha (0.247 to 2.47 a	
Vegetated hummucks/tussucks	<u> </u>	Moderate 1 to <4ha (2.47 to 9.88	acres)
Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
Amphibian breeding pools	Microtopog	raphy Cover Scale	
		Absent	·
	1	Present very small amounts or if	nore common
	·	of marginal quality	
	2	Present in moderate amounts, bu	
•.		quality or in small amounts of hi	· · · · · · · · · · · · · · · · · · ·

52.5

End of Quantitative Rating. Complete Categorization Worksheets.

3.

Present in moderate or greater amounts

and of highest quality

ORAM Summary Worksheet

Wetland 2

	······································	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES M	If yes, Category 3.
· · ·	Question 2. Threatened or Endangered	YES NO	If yes, Category 3.
	Species 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	NO 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	
laing	Metric 2. Buffers and surrounding land use	-5	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	12.5	
•	Metric 5. Special Wetland Communities	5	
	Metric 6. Plant communities, interspersion, microtopography	12	
	TOTAL SCORE	52.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

wetland 2

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	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?	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 <i>"gray zone"</i> 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	Ø	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	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.

Final Category Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

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Wetland 3

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001	

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Background Information

Name: Jory Van Skar / Dustin Giesler Date: 19/2016 Affiliation Environmental Consultants Inc. Address: 5899 Montchair Blud, Milford, Ohio 45150 Phone Number: 513-483-3522 e-mail address: JVANSKAik@cecinc.com/ dgiester@cecinc.com Name of Wetland: Wetland 3 Vegetation Communit(ies): VEM HGM Class(es): Riverine Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See CEC's wetland and Waterbody. Report Lat/Long or UTM Coordinate 39.090428, - 84.427214 USGS Quad Name Newport, KY-OH County Hamilton Township 1:N Section and Subsection <u>0</u>23 Hydrologic Unit Code 05090203 - Middle Ohib-Laughery Site Visit 5/14/2016 National Wetland Inventory Map N/A Ohio Wetland Inventory Map N/A Soil Survey Uruxco, Urban Land - Udothents Complex, O to 12 % slops, Occossionally flooded Delineation report/map Turisdictional Waters Report

Name of Wetland: Wetland Size (acres, hectares): <u>0</u>5
 Wetland Size (acres, hectares):
 O.O.

 Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.
 acres See LEC'S Jurisdictional Waters Report Comments, Narrative Discussion, Justification of Category Changes: See CEC'S Jurisdictional workers Report Final score : Category: 17.5

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#	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.	X	
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.	×۲.	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		\times
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

3

wetland

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.

ŧ	Question	Circle one	and the second
	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	Ô
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
	Threatened or Endangered Species. Is the wetland known to contain	YES	NO)
	an individual of, or documented occurrences of federal or state-listed		
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
		3 wetland.	
		Go to Question 3	
	Documented High Quality Wetland. Is the wetland on record in	YES	
	Natural Heritage Database as a high quality wetland?		117
		Wetland is a Category	Go to Question 4
		3 wetland	
		Co to Dupption 4	
	Significant Breeding or Concentration Area. Does the wetland	Go to Question 4	
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		3 wetland	
	Cotogony 4 Wotlanda Is the wotland lass than 0.5 heatings (4	Go to Question 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
i	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
	no vegetation?	Go to Question 6	
	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	NO
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) is <25%?		
		Go to Question 7	<u> </u>
	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YÉS	
	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)	Wetland is a Category	Co to Overtice 7-
	and with one or more plant species listed in Table 1 and the cover of	3 wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?		
		Go to Question 8a	
	"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	Wetland is a Category	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100	3 wetland.	
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
1	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

wetland 3

			ACTION
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO
	50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
		Category 3 status.	
		Go to Question 9a	En
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 landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		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 include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		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 Category 3 status	Go to Question 10
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	(NO)
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within	Wetland is a Category. 3 wetland.	Go to Question 11
	several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this	Go to Question 11	
11	type of wetland and its quality. Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	(NO)
11	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Wetland should be evaluated for possible Category 3 status	Complete Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Complete Quantitative Rating	

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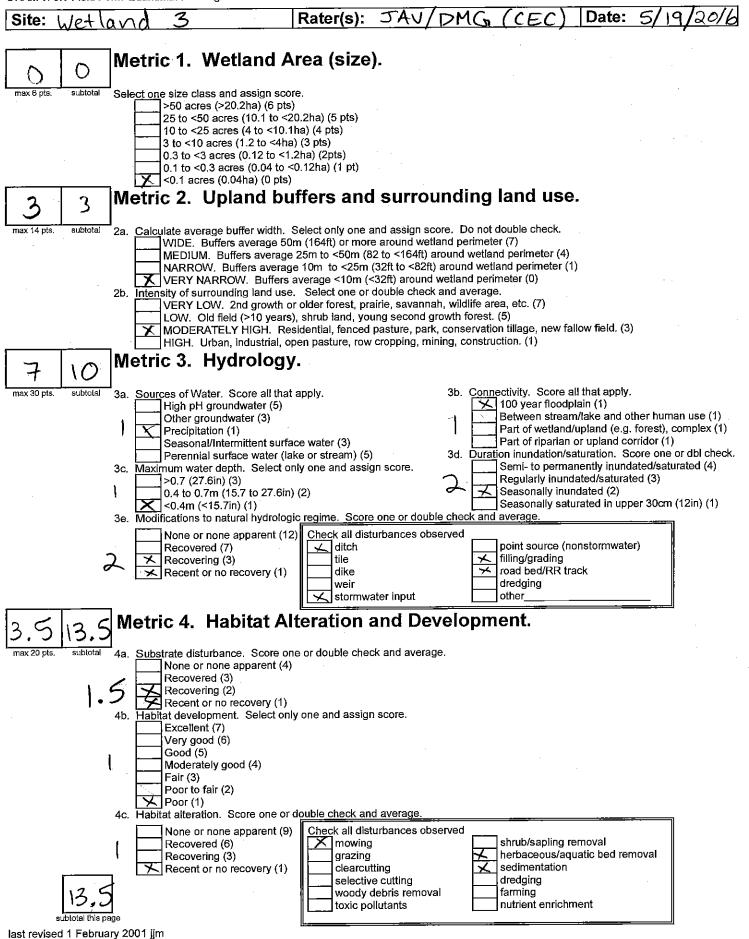
wetland 3

Table 1. Characteristic plant species.

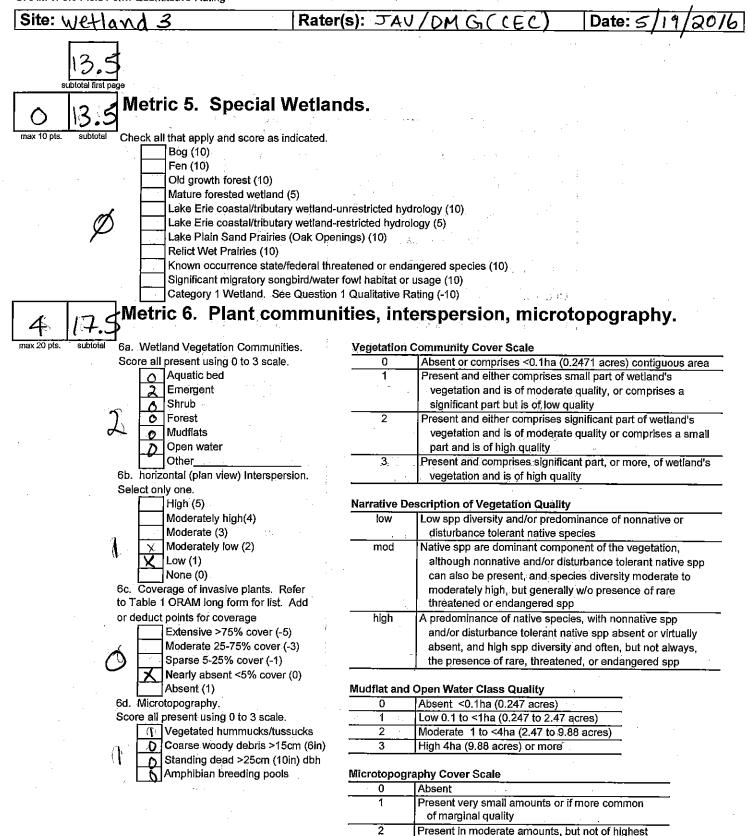
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invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica 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 sartwellij
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	~ 1	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 riddellin
	Salix serissima	Xyris difformis		6
н. 1	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





End of Quantitative Rating. Complete Categorization Worksheets.

3

quality or in small amounts of highest quality

Present in moderate or greater amounts

and of highest quality

ORAM Summary Worksheet

wetland 3

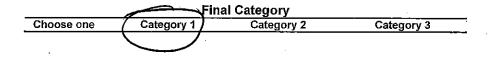
<u> </u>		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES 👧	If yes, Category 3.
	Question 2. Threatened or Endangered	YES 🔊	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES MO	If yes, Category 3.
	Question 4. Significant bird habitat	YES 0	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES 🔞	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.
х. ¹	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	\bigcirc	
Tamg	Metric 2. Buffers and surrounding land use	3	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	7- 3.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	
	TOTAL SCORE	17.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Wetland 3

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		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	Ô	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 I	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?	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 <i>"gray zone"</i> 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		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.

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Version 5.0Ohio Rapid Assessment Method for Wetlands
10 Page Form for Wetland CategorizationVersion 5.0Background Information
Scoring Boundary Worksheet
Narrative Rating
Field Form Quantitative Rating
ORAM Summary WorksheetOhio EPA, Division of Surface Water
Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

Wetland Categorization Worksheet

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <u>http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</u>

Background Information

Name: Giesler Jory Van Skaik / Dustin Date: Affiliation: Civil + Environmental Consultants Address: 5899 Montclair Blud, Milford, Ohio 45150 Phone Number: 513 - 483-3522 e-mail address: SVOUSHONK@CECIAL. com / daiestar@cecial.com Name of Wetland: Wetland 4 Vegetation Communit(ies): 9FC HGM Class(es): Depressional Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See CECS Jurisdictional Waters report Lat/Long or UTM Coordinate 39.094240, -84.428124 USGS Quad Name Newport KY-OH County Hamilton Township 1 J Section and Subsection 024 Hydrologic Unit Code 05090203 Middle-Ohio Laughery Site Visit 5 / 19 / 16 National Wetland Inventory Map N/A Ohio Wetland Inventory Map <u>N/A</u> Soil Survey UrUXCO -urban land - Udorkhants complex, 0 117% Slopes, Occusionally flooded Delineation report/map See (EL'S J. Bootetional Waters Deport

Name of Wetland: Wetland 4 Wetland Size (acres, hectares): ~2 acies Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. LEC'S Juisdictional Waters report See Comments, Narrative Discussion, Justification of Category Changes: CEC'S Juicdictional Waters report See Final score : 43 Category: 2 A.

wetland 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.	X	
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.	X	
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.		\times

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

Narrative Rating

Wetland 4

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	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	(NO)
	a United States Geological Survey 7.5 minute Quadrangle that has		
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	,
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to ducition 2	
2	Threatened or Endangered Species. Is the wetland known to contain	YES	INO D
	an individual of, or documented occurrences of federal or state-listed		
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
		3 wetland.	
		Go to Question 3	
	Documented High Quality Wetland. Is the wetland on record in	YES	(NO)
	Natural Heritage Database as a high quality wetland?	Wetland is a Category	Go to Question 4
		3 wetland	GU to Question 4
		o notiding	
		Go to Question 4	
ŀ	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	Go to Question 5
		3 wetland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	in size and hydrologically isolated and either 1) comprised of		
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
	no vegetation?	Go to Question 6	A
;	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Motord in a Catagony	
	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%?	5 Wettand	
		Go to Question 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)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
а	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NON
-1	forest characterized by, but not limited to, the following characteristics:		
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

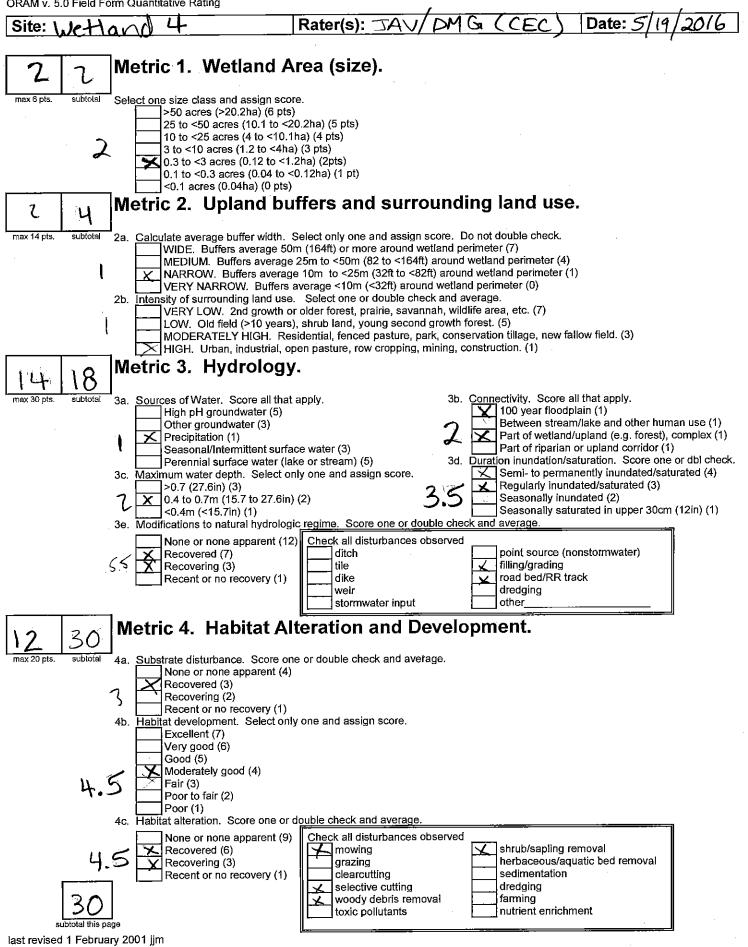
			wetland	4
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally	YES Wetland should be	Go to Question 9a	
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible Category 3 status.		
		Go to Question 9a	á	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	NO	
	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 prevent erosion and the loss of aquatic plants, i.e. the wetland is	YES		
	partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c	
		Go to Question 10		
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland	YES	\bigcirc	
	border alterations), or the wetland can be characterized as an "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.	Go to Question 9d	Go to Question 10	
9d	Does the wetland have a predominance of native species within its	YES	(60)	
9 U	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e	
		Go to Question 10	<u> </u>	
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		
		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 substrate with interspersed organic matter, a water table often within	Wetland is a Category 3 wetland.	Go to Question 11	
	several inches of the surface, and often with a dominance of the 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.		6	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	YES		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete	
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating	
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Salogory S status		
	Montgomery, Van Wert etc.).	Complete Quantitative Rating		

wetland 4

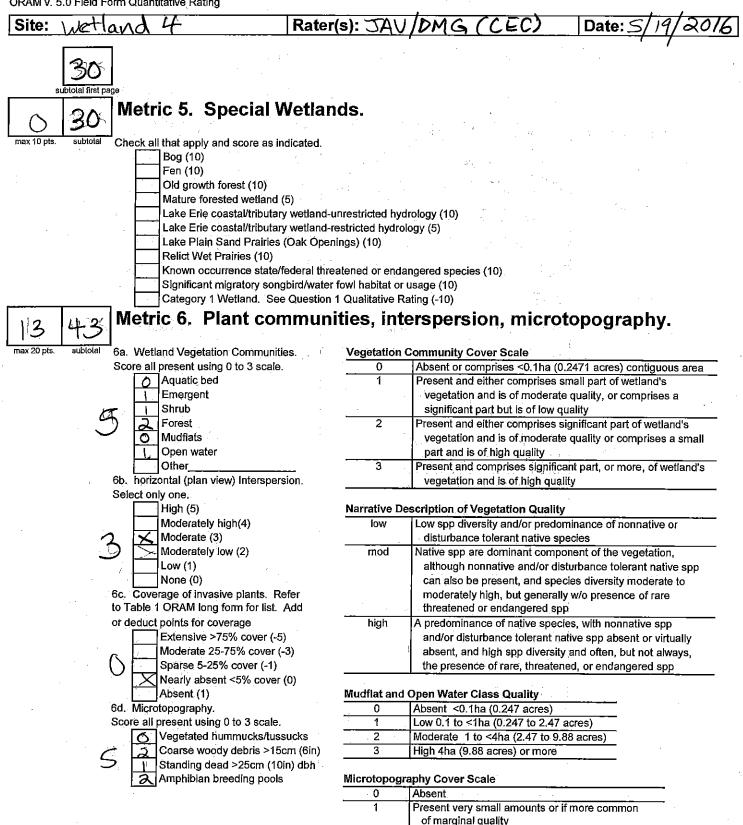
Table 1. Characteristic plant species.

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 buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellite
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwelli
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsi
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratu.
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicate
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
1	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum	•	Sorghastrum nutan
	Salix candida	Vaccinium oxycoccos		Spartina pectinate
	Salix myricoides	Woodwardia virginica	·	Solidago riddelli
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa		•	
	Triglochin maritimum			
	Triglochin palustre			

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



7



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 Worksheet

vetland 4

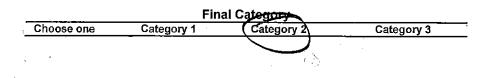
	· · · · · · · · · · · · · · · · · · ·	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. 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 (10)	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. Laké Erie Wetlands - Unrestricted with invasive plants	YES (10)	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	
Indung	Metric 2. Buffers and surrounding land use	2	
÷	Metric 3. Hydrology	14	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	13	
	TOTAL SCORE	43	Category based on score breakpoints Modified

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Wetland 4

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		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	6	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		Is quantitative rating score greater 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?	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 <i>"gray zone"</i> 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		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	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.

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Wetland 5

· .	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001	

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <u>http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</u>

Background Information

Name: Jory Von Skink / Dustin Girshr Date: 5/19/2016 Affiliation: Civil & Environmental Consoltants, inc. Address: 5899 Montclair BLUD, Milford, OH 45150 Phone Number: 513 - 483 - 3522 e-mail address: JVANSKAik@cecinc.com / daiester@cecinc.com Name of Wetland: Wetland 5 Vegetation Communit(ies): PFU HGM Class(es): depressional Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See cec's Jurisdictional waters report Lat/Long or UTM Coordinate 39.106189 - 84.435146 USGS Quad Name Newport, KY+OH County Hamilton Township 12 Section and Subsection Hydrologic Unit Code 05090203 - Middle OHio - Laughern Site Visit 19/16 05 National Wetland Inventory Map NIA Ohio Wetland Inventory Map Huntington Silt Lonny, Occasionally Flooded HJ Delineation report/map See CEC SJ usish ic tring waters report

1

Name of Wetland:)etlai S Wetland Size (acres, hectares): actes R 3 Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See CEC'S Jurisdictional waters report Comments, Narrative Discussion, Justification of Category Changes: See CEC's Jurisdictional Whiters report Final score : Category: 42. 5 2

2

Wetland 5

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.	×	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		\times
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.		\times

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

Narrative Rating

Wetland 5

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 hsted 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	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	NO)
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical	Motored about the	
	habitat" for any threatened or endangered plant or animal species?	Wetland should be evaluated for possible	Go to Question 2
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	1. A
	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	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		A
2.	Threatened or Endangered Species. Is the wetland known to contain	YES	(NO)
	an individual of, or documented occurrences of federal or state-listed		
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		5 wetland.	
		Go to Question 3	
l	Documented High Quality Wetland. Is the wetland on record in	YES	NO2
	Natural Heritage Database as a high quality wetland?		
		Wetland is a Category	Go to Question 4
		3 wetland	}
		Go to Question 4	
ŀ	Significant Breeding or Concentration Area. Does the wetland	YES	
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		3 wetland	
		Go to Question 5	
;	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	1 NO.
	in size and hydrologically isolated and either 1) comprised of		
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or	On the Owner them O	
;	no vegetation? Bogs. Is the wetland a peat-accumulating wetland that 1) has no	Go to Question 6	
,	significant inflows or outflows, 2) supports acidophilic mosses,	160	
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) is <25%?		
		Go to Question 7	
	Fens. 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)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	invasive species listed in Table 1 is <25%?		
		Go to Question 8a	A
a	"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	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100	o welland,	
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

wetland 5

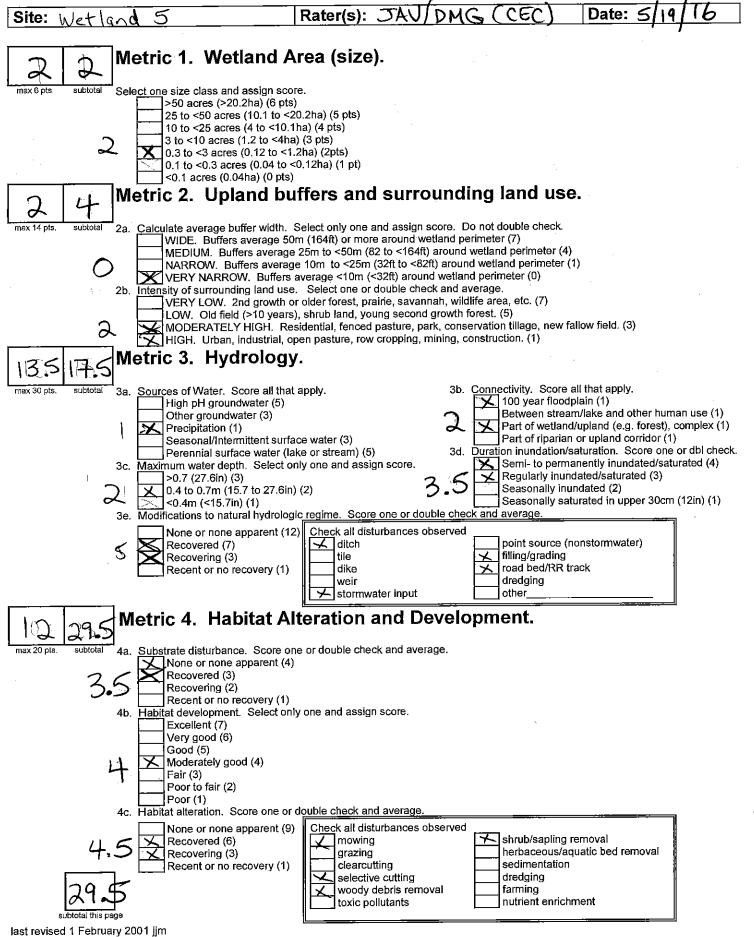
lb	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO
	50% or more of the cover of upper forest canopy consisting of	Wetland should be	Go to Question 9a
	deciduous trees with large diameters at breast height (dbh), generally		Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	1
		Category 3 status.	}
		Go to Question 9a	
a	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
5	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	
;	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NÖ
•	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.		
i.	Does the wetland have a predominance of native species within its	YES	NO
•	vegetation communities, although non-native or disturbance tolerant		
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	÷
		Go to Question 10	Į
¢	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		On the Ownerfing 10
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Go to Question 10	
0	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	(NO
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		
	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	On the Owner time of A	
	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. Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO)
1	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), Sandusky Plans (Wyandol, Clawford, and Martin 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,	Catogory & Status	. canng
	Montgomery, Van Wert etc.).	Complete Quantitative	
	Wongomery, vali wert etc.).	Rating	

Wetland 5

Table 1. Characteristic plant species.

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	2 1	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		5
	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 Rater(s): JAU Site: Date: γJ subtotal first page detric 5. Special Wetlands. max 10 ots. subtote Check all that apply and score as indicated. Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrology (10) Ø Lake Erie coastal/tributary wetland-restricted hydrology (5) Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Prairies (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songbird/water fowl habitat or usage (10) Category 1 Wetland. See Question 1 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. sublote Vegetation Community Cover Scale 6a. Wetland Vegetation Communitles. Score all present using 0 to 3 scale. 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area Aquatic bed 1 Present and either comprises small part of wetland's Emergent vegetation and is of moderate quality, or comprises a Shrub significant part but is of low quality Forest 2 Present and either comprises significant part of wetland's Mudflats 0 vegetation and is of moderate quality or comprises a small Open water part and is of high quality Other 3 Present and comprises significant part, or more, of wetland's 6b. horizontal (plan view) Interspersion. vegetation and is of high quality Select only one. High (5) Narrative Description of Vegetation Quality Moderately high(4) low Low spp diversity and/or predominance of nonnative or Moderate (3) disturbance tolerant native species Moderately low (2) mod Native spp are dominant component of the vegetation. Low (1) although nonnative and/or disturbance tolerant native spp None (0) can also be present, and species diversity moderate to 6c. Coverage of invasive plants. Refer moderately high, but generally w/o presence of rare to Table 1 ORAM long form for list. Add threatened or endangered spp or deduct points for coverage high A predominance of native species, with nonnative spp Extensive >75% cover (-5) and/or disturbance tolerant native spp absent or virtually Moderate 25-75% cover (-3) absent, and high spp diversity and often, but not always, Sparse 5-25% cover (-1) the presence of rare, threatened, or endangered spp (Nearly absent <5% cover (0) Absent (1) Mudflat and Open Water Class Quality 6d. Microtopography, 0 Absent <0.1ha (0.247 acres) Score all present using 0 to 3 scale, 1 Low 0.1 to <1ha (0.247 to 2.47 acres) Vegetated hummucks/tussucks 2 Moderate 1 to <4ha (2.47 to 9.88 acres) Coarse woody debris >15cm (6in) 3 High 4ha (9.88 acres) or more Standing dead >25cm (10in) dbh Amphibian breeding pools **Microtopography Cover Scale** Absent 0 Present very small amounts or if more common 1 of marginal quality



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 Worksheet

Wetland 5

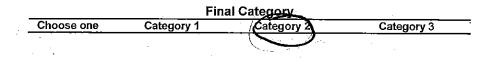
			-
		circle answer or insert	Result
	Question 1 Critical Habitat	YES (10)	If yes, Category 3.
Narrative Rating			n yes, calegory o.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird 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 (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	2	
	Metric 3. Hydrology	13.5	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	13	
	TOTAL SCORE	42.5	Category based on score breakpoints Molified Z

Complete Wetland Categorization Worksheet.

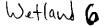
Wetland Categorization Worksheet

Wetland 5

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		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		Is quantitative rating score greater 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?	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 all with the <i>"gray zone"</i> 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		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 ecreational functions AND he wetland was <i>not</i> categorized as a Category 2 vetland (in the case of noderate functions) or a Category 3 wetland (in the case of superior functions) by his 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.



	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization				
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001			

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <u>http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</u>

Background Information

Name: Joey Van Skaik / Dustin Giesler Date: 5/19/16 Affiliation: Civil & Environmental Consultants, Inc. Address: 5899 Montellier BLVD, Milford, OH, 45150 Phone Number: 513 - 483 - 3522 e-mail address: JVanskaik@cecinc.com / dgiester@cecinc.com Name of Wetland: wetland 6 Vegetation Communit(ies): PEM HGM Class(es): Depressional Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See (FC'S Juisdictional Vaturs report Lat/Long or UTM Coordinate -84.439813 39.112298 USGS Quad Name Newport KY-OH County Hanilton Township Section and Subsection 025 Hydrologic Unit Code 05090203 - Middle Ohio-Laugher-Site Visit 5/19/10 National Wetland Inventory Map N/A Ohio Wetland Inventory Map N/A Soil Survey Ur UXCO - urban Land - Udorthents complex, O to 12% Slopes, occasionally flooded See UEL'S Juistictional waters report

Name of Wetland: Wetland Size (acres, hectares): ~~0.6 acres Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Waters Fe poit Jurisdictional See (E('s Comments, Narrative Discussion, Justification of Category Changes: See (E('s Jurisdictional Waters Report Final score : 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.	$ $ \times	
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.	X	
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.	X	
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.		\times
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.		X

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

Narrative Rating

Wetland 6

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	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	/NO
	a United States Geological Survey 7.5 minute Quadrangle that has		\bigcirc
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	
	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	Go to Question 2	$\langle \hat{\boldsymbol{\nabla}} \rangle$
2	has had critical habitat proposed (65 FR 41812 July 6, 2000). Threatened or Endangered Species. Is the wetland known to contain	YES	
2	an individual of, or documented occurrences of federal or state-listed	TES .	NO
• •	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
		3 wetland.	Go to Question J
		o notiana.	
	·	Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in	YES (NO)
	Natural Heritage Database as a high quality wetland?		
	,	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	(NO)
•	contain documented regionally significant breeding or nonbreeding	TES	
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		3 wetland	
	,	Go to Question 5	6
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	in size and hydrologically isolated 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	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or	1 wetland	
	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 Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) is <25%?		
		Go to Question 7	
	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	
	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)	Motional in a Cotona-	Go to Question 8a
	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	6
a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	н _о
	forest characterized by, but not limited to, the following characteristics:		
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canoples; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers		1
	of standing dead snags and downed logs?		

wetland 6

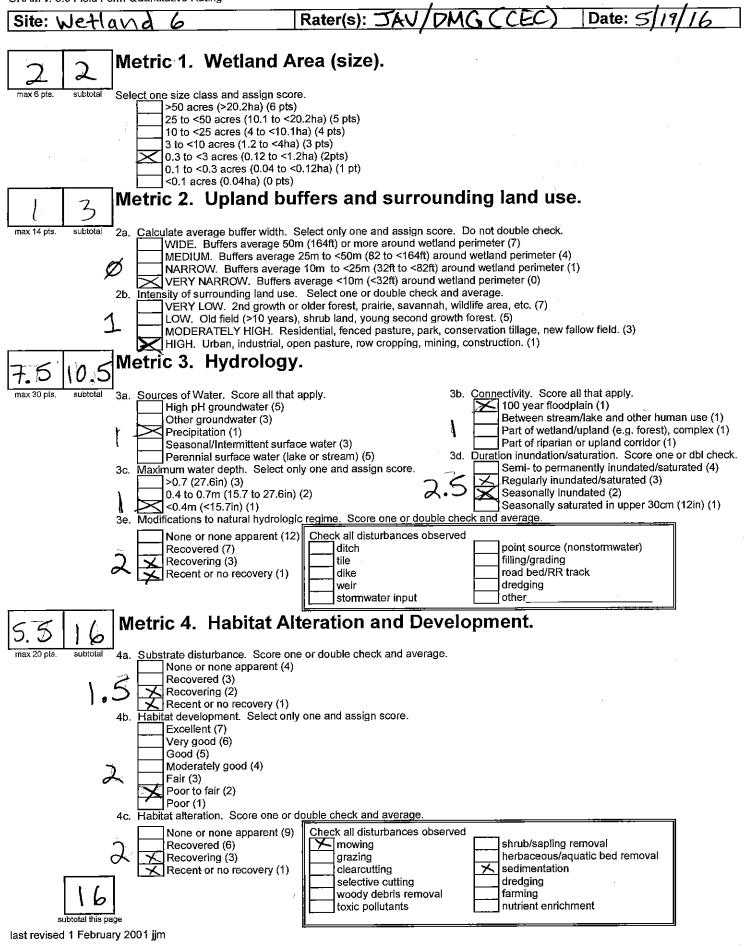
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible	90 Go to Question 9a
		Category 3 status. Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
Ju	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	ŇO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		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 include sandbar deposition wetlands, estuarine wetlands, river mouth	Go to Question 9d	Go to Question 10
	wetlands, or those dominated by submersed aquatic vegetation.		NO
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant	Wetland is a Category	Go to Question 9e
	native species can also be present?	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	
		Oblegory o status	
		Go to Question 10.	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		
	characterized by the following description: the wetland has a sandy	Wetland is a Category 3 wetland.	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	(NQ)
	dominated by some or all of the species in Table 1. Extensive prairies		Complete
	were formerly located in the Darby Plains (Madison and Union	Wetland should be evaluated for possible	Quantitative
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion 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,	Calogory O statuo	, terring
	Montgomery, Van Wert etc.).	Complete Quantitative	
	mongentery, tur there any.	Rating	

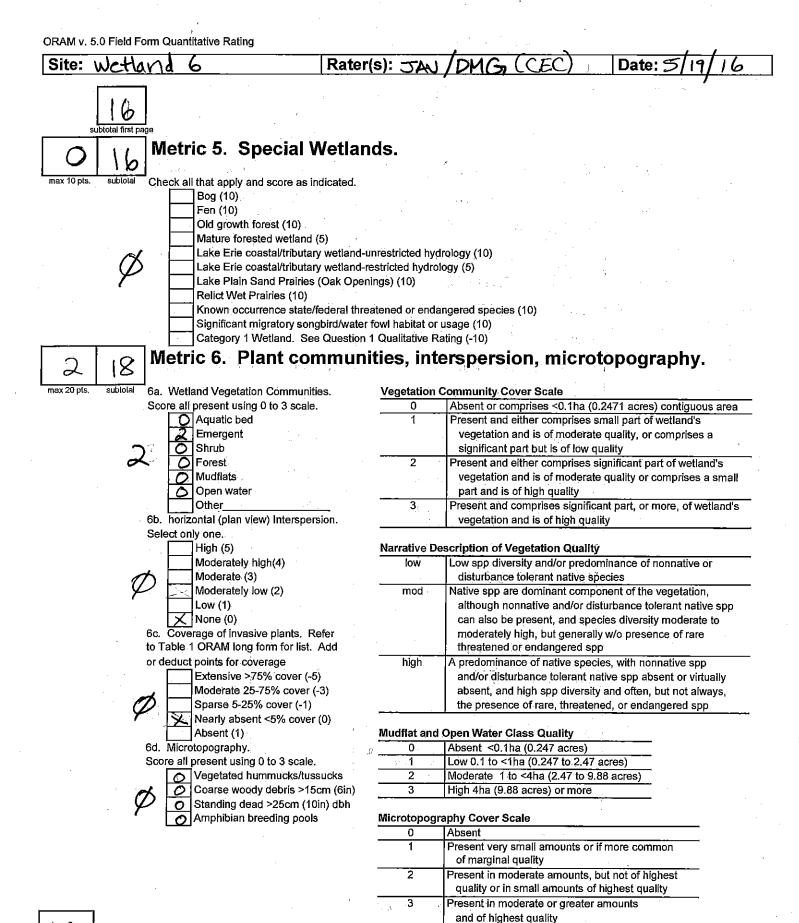
wetland 6

Table 1. Characteristic plant species.

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.





End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

wetland 6

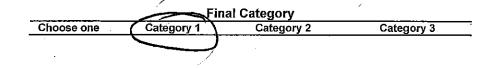
		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES MG	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES MG	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 NG	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.
н. Тарана (тр. 1997) 1997)	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	
Raung	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	75	
	Metric 4. Habitat	5.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE	18	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

wetland 6

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		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-
Did you`answer "Yes" to any of the following questions:	YES (NO	categorized by the ORAM 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
Narrative Rating Nos. 1, 8b, 9b, 9e, 11	evaluated for possible Category 3 status		either of these, it should be categorized as a Category 3 wetland using wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to	YES (NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes,
Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland		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 <i>"gray zone"</i> 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 moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not 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.