



Photo Location 1. View of Wetland 1. Photograph taken facing northeast.



Photo Location 1. View of Wetland 1. Photograph taken facing east.





Photo Location 2. View of Wetland 2. Photograph taken facing east.



Photo Location 2. View of Wetland 2. Photograph taken facing southeast.





Photo Location 3. View of Wetland 2. Photograph taken facing south.



Photo Location 4. View of Wetland 2. Photograph taken facing east.





Photo Location 5. View of Wetland 3. Photograph taken facing southwest.



Photo Location 5. View of Wetland 3. Photograph taken facing west.





Photo Location 5. View of Wetland 3. Photograph taken facing northwest.



Photo Location 6. Representative view of upland drainage feature along existing roadway.

# **Habitat Photographs**







Photo Location 1. Representative view of old field habitat. Photograph taken facing west.



Photo Location 2. Representative view of old field habitat. Photograph taken facing north.





Photo Location 3. Representative view of old field habitat. Photograph taken facing north.



Photo Location 4. Representative view of mixed early successional/second growth deciduous forest habitat. Photograph taken facing north.





Photo Location 5. Representative view of mixed early successional/second growth deciduous forest habitat. Photograph taken facing south.



Photo Location 6. Representative view of industrial habitat. Photograph taken facing southwest.

# **Appendix D** Data Forms

D.1 WETLAND DETERMINATION DATA FORMS





#### WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region

Project/Site:	Lamandaul	Jaminan 420 W/ Ta		a Dalass	ation Dual		Stantec Project #:	400704700		Doto	11/07/16
Applicant:		Harrison 138 kV Tra Electric Power	ansmission Lir	ie Reloca	ation Proj	ect	Stantec Project #:	193704783		Date: County:	11/07/16 Athens
Investigator #1:				Invocti	igator #2:	Lody Nie	choleon			State:	Ohio
Soil Unit:		ilt loam, 0 to 3 perd	ent clones	IIIVESU	iyaiti #2.		NWI/WWI Classification	None			Wetland 1
Landform:		iii loam, o to o perc	crit slopes	Loc	al Relief:			None		Sample Point:	
Slope (%):	4%	l atitude	39.38321744510		ongitude:			Datum:	NAD83	Community ID:	
		ditions on the site ty							No	Section:	1
		or Hydrology □sig			· (ii 1.10, 1	I I	Are normal circumsta			Township:	12N
		or Hydrology □na						□No		Range:	15W Dir:
SUMMARY OF		, , , , , ,								, see green	
Hydrophytic Ve		sent?		☑ Yes	. □ No	)		Hydric Soils	Present?		
Wetland Hydrol				Yes						Within A Wetla	
Remarks:									<u> </u>		
HYDROLOGY											
Wetland Hydr	ology Indic	ators (Check here	if indicators ar	e not pre	esent )	: П			Secondary:		
Primary		(0.1001.1101.0		oo. p. o	,,					B6 - Surface So	il Cracks
	A1 - Surface				B9 - Wate						getated Concave Surface
	A2 - High Wa				B13 - Aqı					B10 - Drainage B16 - Moss Trin	
					B14 - Tru C1 - Hydi					C2 - Dry Season	
							spheres on Living Roots			C8 - Crayfish Bu	
	B3 - Drift De						educed Iron		_		Visible on Aerial Imagery
							duction in Tilled Soils			D1 - Stunted or	
		oosits on Visible on Aerial Im	agery		C7 - Thin Other (Ex					D2 - Geomorph D3 - Shallow Ac	
	Di manadi	on violbic on Acriai in	lagery		Othor (L)	.piaiii iii i te	manoj			D4 - Microtopog	
									✓	D5 - FAC-Neutr	al Test
Field Observat	tions:										
Surface Water	Present?	☐ Yes 🕡 No	Depth:		(in.)			Wetland Hy	drology Pr	esent?	Yes □ No
Water Table Pr	esent?	☐ Yes  ☑ No	Depth:		(in.)			Wetland Hy	urology i i	esciit: [v	163 🖺 140
Saturation Pres	sent?	☐ Yes  ☑ No	Depth:		(in.)						
Describe Record	ded Data (str	eam gauge, monitor	ing well, aerial	photos, p	revious in	spections	), if available:		N/A		
Remarks:	,	<u> </u>									
SOILS											
Map Unit Name		FitchvillE silt loam	, 0 to 3 percen	t slopes			Series Dr	ainage Class:	Somewha	t poorly draine	d
Taxonomy (Sub	<del> </del>										
		the depth needed to document the in			s.) (Type: C=Con	centration, D=De	oletion, RM=Reduced Matrix, CS=Covered/Co		n: PL=Pore Lining, M	=Matrix)	T
Тор	Bottom			Matrix	1			Mottles	1	1	Texture
Depth	Depth	Horizon	Color (N		%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	10	1	10YR	4/2	90	10YR	6/8	10	С	M	silt loam
							-				
							-				
							-				
											1
	Soil Field Ir	ndicators (check h			present	): 🗆	E40 Jan Managara	- M			r Problematic Soils 1
1- Histosol 2 - Histic Epip	edon		55 - Sandy Re 56 - Stripped I				F12 - Iron-Manganes	E IVIASSES (LRR N, I	MLRA 136)	A10 - 2cm N	IUCK (MLRA 147) rairie Redox (MLRA 147, 148)
			37 - Dark Surf				F19 - Piedmont Floor	dplain Soils (MLRA		F19 - Piedmon	t Floodplain Soils (MLRA 136, 147)
3 - Black Histi	ic		8 - Polyvalue							-	Shallow Dark Surface
				Surface (	MLRA 147, 148)		_ F21 - Red Parent Ma	terial (MLRA 127, 147		☐ Other (Expla	in in Remarks)
3 - Black Histi 4 - Hydrogen 5 - Stratified L	Sulfide .ayers		9 - Thin Dark								
3 - Black Histi 4 - Hydrogen 5 - Stratified L 10 - 2 cm Muc	Sulfide .ayers ck (LRR N)	urface	2 - Loamy Gl	eyed Matri	ix					_	
3 - Black Histi 4 - Hydrogen 5 5 - Stratified L 10 - 2 cm Muc	Sulfide .ayers ck (LRR N) Below Dark Si	urface	2 - Loamy Gl ✓ 3 - Depleted	eyed Matri Matirx			Ц			_	
3 - Black Histi 4 - Hydrogen 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar	Sulfide .ayers ck (LRR N) Below Dark Si		2 - Loamy Gl	eyed Matri Matirx ark Surface	Э		Ц				
3 - Black Histi 4 - Hydrogen : 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle	Sulfide .ayers ck (LRR N) Below Dark Sirk Surface ck Mineral (LRR		2 - Loamy Gl 3 - Depleted 6 - Redox Da	eyed Matri Matirx ark Surface Dark Surfa	Э		Ц	<sup>1</sup> Indicators of hydroph			e present, unless disturbed or problematic
3 - Black Histi 4 - Hydrogen : 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle Restrictive Layer	Sulfide Layers Lk (LRR N) Below Dark Sirk Surface Lk Mineral (LRR Lyed Matrix		✓ 2 - Loamy Gl ✓ 3 - Depleted — 6 - Redox Da 7 - Depleted	eyed Matri Matirx ark Surface Dark Surfa	e ace			<sup>1</sup> Indicators of hydropt  Hydric Soil	hytic vegetation and	wetland hydrology must b	
3 - Black Histi 4 - Hydrogen : 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle  Restrictive Layer (If Observed)	Sulfide Layers Lk (LRR N) Below Dark Sirk Surface Lk Mineral (LRR Lyed Matrix	N, MLRA 147, 148)	✓ 2 - Loamy Gl ✓ 3 - Depleted — 6 - Redox Da 7 - Depleted	eyed Matri Matirx ark Surface Dark Surfa epressions	e ace				hytic vegetation and	wetland hydrology must b	
3 - Black Histi 4 - Hydrogen : 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle Restrictive Layer	Sulfide Layers Lk (LRR N) Below Dark Sirk Surface Lk Mineral (LRR Lyed Matrix	N, MLRA 147, 148)	✓ 2 - Loamy Gl ✓ 3 - Depleted — 6 - Redox Da 7 - Depleted	eyed Matri Matirx ark Surface Dark Surfa epressions	e ace				hytic vegetation and	wetland hydrology must b	
3 - Black Histi 4 - Hydrogen : 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle  Restrictive Layer (If Observed)	Sulfide Layers Lk (LRR N) Below Dark Sirk Surface Lk Mineral (LRR Lyed Matrix	N, MLRA 147, 148)	✓ 2 - Loamy Gl ✓ 3 - Depleted — 6 - Redox Da 7 - Depleted	eyed Matri Matirx ark Surface Dark Surfa epressions	e ace				hytic vegetation and	wetland hydrology must b	



## WETLAND DETERMINATION DATA FORM

**Eastern Mountains and Piedmont Region** 

Project/Site:	Lemaster-Harrison 138 kV Transmission	Line Relocation	on Projec	ct	Wetland ID: Wetland 1 Sample Point: SP-1
VEGETATION		e species.)			
Tree Stratum (Pl	ot size: 30 ft radius)				
	<u>Species Name</u>	% Cover D	ominant I	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 80
	Total Cover	r = 0			FACW spp. 30 x 2 = 60
					FAC spp. $0   x   3 = 0$
Sapling/Shrub St	ratum (Plot size: 15 ft radius)				FACU spp. 0 x 4 = 0
1.					UPL spp. $0   x   5 = 0$
2.					
3.					Total 110 (A) 140 (B)
4.					(0)
5.					Prevalence Index = B/A = 1.273
6.					1 Tevaletice IIIuex – D/A = 1.273
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes No Rapid Test for Hydrophytic Vegetation
10.					✓ Yes ☐ No Dominance Test is > 50%
	Total Cover	= 0			✓ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
	ot size: 5 ft radius)				Yes No Problem Hydrophytic Vegetation (Explain) *
1.	Typha X glauca	70	Υ	OBL	
2.	Phalaris arundinacea	20		FACW	present, unless disturbed or problematic.
3.	Angelica atropurpurea	5	N	OBL	
4.	Rosa palustris	5		FACW	Definitions of Vegetation Strata:
5.	Solidago gigantea	5	N	FACW	
6	Scirpus atrovirens	5	N	OBL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	<del></del>				height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
10.	Total Cover				· · · · · · · · · · · · · · · · · · ·
	Total Cover	_ 110			
Moody Vino Stra	tum (Plot size: 30 ft radius)				
1.	tum (Plot size: 30 ft radius)				
2.					
3.					Hydrophytic Vegetation Present Yes No
					nyurophytic vegetation rresent res No
4.					
5.	Total Causa				✓ □
Domailis	Total Cover	r = 0			
Remarks:					
Additional Re	marks:				
l					



#### WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region

D	1	I 400 IV/ T		. D.I	<b>D</b> !.	-1	Otente - Decise t #	400704700		I Data:	11/07/16
Project/Site: Applicant:		Harrison 138 kV Tra Electric Power	anmission Line	e Relocat	ion Proje	CT	Stantec Project #:	193704783		Date: County:	11/07/16 Athens
Investigator #1:				Invoct	igator #2:	Lody Ni	choleon			State:	Ohio
Soil Unit:		ilt loam, 0 to 3 perc	ant elone	IIIVESI	iyalui #2.		NWI/WWI Classification:	· None			Wetland 1
Landform:		iit loam, o to o pero	ent slops	Loc	al Relief:			. None		Sample Point:	
Slope (%):	4%	l atitude	39.38319645410		ongitude:			Datum:	NAD83	Community ID:	
		ditions on the site ty							No	Section:	1
		or Hydrology □sig			Car : (11 110, 1	I I	Are normal circumsta			Township:	12N
		or Hydrology □na						□No		Range:	15W Dir:
SUMMARY OF		or rijurorogj	is an array process					_		9	
Hydrophytic Ve		sent?		□ Yes	☑ No	)		Hydric Soils	Present?		☐ Yes ☑ No
Wetland Hydrol				☐ Yes						Within A Wetla	
Remarks:	- 07								<u> </u>		
HYDROLOGY											
	ology Indic	ators (Check here	if indicators ar	e not nre	sent \	: 🗸			Secondary:		
Primary:		ators (Oneok nere	ii iiidicators ai	e not pre	30111 )	. 🔽				B6 - Surface So	il Cracks
	A1 - Surface				B9 - Wate	er-Stained	Leaves				egetated Concave Surface
	A2 - High W				B13 - Aqu					B10 - Drainage	
	A3 - Saturati B1 - Water N				B14 - Tru C1 - Hydr					B16 - Moss Trin C2 - Dry Season	
l H	B2 - Sedime						spheres on Living Roots			C8 - Crayfish B	
	B3 - Drift De				C4 - Pres	ence of Re	educed Iron		ä		Visible on Aerial Imagery
	B4 - Algal M						eduction in Tilled Soils			D1 - Stunted or	
	B5 - Iron De	oosits on Visible on Aerial Im	ageny		C7 - Thin Other (Ex					D2 - Geomorph D3 - Shallow Ac	
	bi - munuan	OII VISIBLE OII AEIIAI IIII	agery		Other (Ex	piaiii iii Ne	marks)			D4 - Microtopoo	
										D5 - FAC-Neutr	al Test
Field Observat	ions:										
Surface Water	Present?	☐ Yes ☑ No	Depth:		(in.)			W-41	de e la esse De	10	V N-
Water Table Pr	esent?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	arology Pr	esent?	Yes ☑ No
Saturation Pres	ent?	☐ Yes ☑ No	Depth:		(in.)						
Describe Record	led Data (str	eam gauge, monitor	ing well aerial	nhotos n	revious in	enections	) if available:		N/A		
Remarks:	ioa Data (oti	cam gaage, memor	ing won, donar	рпосоо, р	1011000111	ороснопо	), ii availabio.				
rtemants.											
SOILS											
Map Unit Name	·.	Fitchville silt loam,	0 to 3 percent	t slops			Series Dr	rainage Class:	Somewha	t poorly draine	d
Taxonomy (Sub								- ge elect			-
	<del>U 17</del>	the depth needed to document the in	dicator or confirm the abse	ence of indicators	.) (Type: C=Con	centration, D=De	pletion, RM=Reduced Matrix, CS=Covered/Co	nated Sand Grains; Locatio	n: PL=Pore Lining, M	=Matrix)	
Тор	Bottom			Matrix				Mottles			Texture
Depth	Depth	Horizon	Color (N	/loist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	6	1	10YR	4/4	100						silt loam
NRCS Hydric	Soil Field In	ndicators (check h	ere if indicator	s are not	present	): 🗆				Indicators fo	r Problematic Soils 1
1- Histosol			55 - Sandy Re			. П		se Masses (LRR N,	MLRA 136)	A10 - 2cm N	
2 - Histic Epip			66 - Stripped I				F13 - Umbric Surface	e (MLRA 122, 136)		m ATO - COASE F	rairie Redox (MLRA 147, 148)
3 - Black Histi		ŀ	57 - Dark Surf 88 - Polyvalue		rk Surface	(MI DA 147 14	F19 - Piedmont Floor	apiain Soils (MLRA		T FIS-FIEUIIIOII	t Floodplain Soils (MLRA 136, 147) Shallow Dark Surface
5 - Stratified L		ŀ	9 - Thin Dark				F21 - Ped Parent Ma	aterial (MLRA 127, 147		☐ Other (Expla	in in Remarks)
10 - 2 cm Muc			2 - Loamy Gl				□ 121 - Ned Falelit Ma		,		,
11 - Depleted		urface	3 - Depleted								
12 - Thick Dar			6 - Redox Da								
1 - Sandy Muc		N, MLRA 147, 148)	F8 - Redox De		ace			1 Indicators of hydroni	hytic venetation and	wetland hydrology must h	e present, unless disturbed or problematic.
Restrictive Layer		Deals	]	•	CII						
(If Observed)	ı ype:	Rock		Depth:	6"			Hydric Soil	Present?		Yes No
Remarks:											
1											



## WETLAND DETERMINATION DATA FORM

**Eastern Mountains and Piedmont Region** 

Project/Site:	Lemaster-Harrison 138 kV Tranmission L	_ine Relocati	ion Proje	ct	Wetland ID: Wetland 1 Sample Point: SP-2
VEGETATION		ve species.)			
Tree Stratum (Pl	ot size: 30 ft radius)				
	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata: (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.					·
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0
	Total Cove	er = 0			FACW spp. 5 x 2 = 10
					FAC spp. $10$ $x 3 = 30$
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. 82 X 4 = 328
1.					UPL spp. $0$ $x = 0$
2.					··· <del></del>
3.					Total 97 (A) 368 (B)
4.					
5.					Prevalence Index = B/A = 3.794
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes No Rapid Test for Hydrophytic Vegetation
10.					Voc. No. Deminance Test in a 500/
10.	Total Cove	er = 0			Yes No Prevalence Index is ≤ 3.0 *
	Total Cove	–			
Harb Stratum /Dia	ot size: 5 ft radius)				
1.	Schedonorus arundinaceus	25	Υ	FACU	
2.	Lonicera japonica	10	N	FAC	
3.	Solidago altissima	25	Y	FACU	present, unless disturbed or problematic.
4.	Plantago lanceolata	5	N	FACW	Definitions of Vegetation Strata:
5.	Melilotus officinalis	2	N	FACU	Definitions of Vegetation Strata.
6	Daucus carota	5	N	UPL	Troo
7.	Achillea millefolium	5	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
8.		10	N	FACU	····g···(= - · /) · · · g··· · · · · · · · · · · · · · ·
	Trifolium repens	10			Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
9.	Apocynum cannabinum		N	FACU	ft. tall.
10.	Dipsacus fullonum	5	N	FACU	
11.					The I All harbonous (non-used) alente regardless of size
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.					•
14.					M. I. M. Allered I. C.
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cove	er = 102			
Woody Vine Strat	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present Yes No
4.					
5.					
	Total Cove	er = 0			
Remarks:					
-					
Additional Re	marks:				
	-				



#### WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region

Project/Site:	Lemaster-l	Harrison 138 kV Tra	nmission Line	e Relocat	ion Proje	ct	Stantec Project #:	193704783		Date:	11/07/16
Applicant:		Electric Power								County:	Athens
Investigator #1:	Aaron Kwo	lek		Investi	gator #2:					State:	Ohio
Soil Unit:	Water					1	NWI/WWI Classification:	PEM1C		Wetland ID:	Wetland 2
Landform:	Terrace			Loc	al Relief:	Concav	e			Sample Point:	SP-3
Slope (%):	4%	Latitude:	39.38628155920	Lo	ongitude:	-82.182	8612	Datum:	NAD83	Community ID:	PSS
Are climatic/hyd	drologic cond	ditions on the site ty	pical for this ti					☑ Yes □	No	Section:	1
Are Vegetation	□. Soil □.	or Hydrology □sig	nificantly distu	urbed?			Are normal circumsta	inces present?	)	Township:	12N
		or Hydrology □nat						□No		Range:	15W Dir:
SUMMARY OF			on only produced							· 1419	
Hydrophytic Ve		sant?		∀es	□ No			Hydric Soils	Present?		☑ Yes □ No
Wetland Hydrol				☑ Yes						Within A Wetla	
Remarks:		ed of fly ash pond.		<u> </u>				is this ballip	ning Form	WILLIIII A WELIA	iliu: M les Mil
Remarks.	Kennani L	ed of thy astriportu.									
LIVER OL OOV											
HYDROLOGY											
Wetland Hydr	ology Indic	ators (Check here is	f indicators ar	e not pre	sent )	: 🗆			Secondary:		
Primary:										B6 - Surface So	
	A1 - Surface				B9 - Wate						egetated Concave Surface
_	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturati B1 - Water N				B14 - Tru C1 - Hydr					B16 - Moss Trin C2 - Dry Season	
l H	B2 - Sedime						spheres on Living Roots			C8 - Crayfish Bu	
l ä	B3 - Drift De						educed Iron				Visible on Aerial Imagery
	B4 - Algal Ma						duction in Tilled Soils			D1 - Stunted or	
	B5 - Iron Dep									D2 - Geomorph	
	B7 - Inundati	on Visible on Aerial Ima	agery		Other (Ex	plain in Re	emarks)			D3 - Shallow Ac	
										D4 - Microtopog D5 - FAC-Neutr	
										D5 - FAC-Neuti	ai rest
Field Observat											
Surface Water		☐ Yes  ☑ No	Depth:		(in.)			Wetland Hyd	drology Pr	esent?	Yes   No
Water Table Pr		☐ Yes  ☑ No	Depth:		(in.)				0.0 g,		
Saturation Pres	ent?	☐ Yes  ☑ No	Depth:		(in.)						
Describe Record	led Data (str	oam gaugo, monitorii	ng woll poriol	nhataa n							
				onoios di	revious in:	spections	) if available:		N/A		
	(0.11	eam gauge, monitorii	ng wen, aenar	priotos, pr	revious in	spections	), if available:		N/A		
Remarks:	(611	eam gauge, monitorii	ng well, aerial	priotos, pr	revious in	spections	), if available:		N/A		
Remarks:	(0.1	eam gauge, monitorii	ng wen, aenar	priotos, pr	revious in:	spections	), if available:		N/A		
Remarks:	· ·	0 0	ng wen, aenar	priotos, pr	revious in:	spections				WALL Drain a	
Remarks:  SOILS  Map Unit Name	:	Water	ng well, aerial	priotos, pr	revious in:	spections		ainage Class:		y Well Drained	i .
Remarks:  SOILS  Map Unit Name Taxonomy (Sub	ogroup):	Water					Series Dr	•	Moderatel		ı
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip	e: ogroup): otion (Describe to	Water	dicator or confirm the abse	ence of indicators.			Series Dr	ated Sand Grains; Location	Moderatel		
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip	e: ogroup): otion (Describe to Bottom	Water the depth needed to document the inc	dicator or confirm the abse	once of indicators.  Matrix	.) (Type: C=Cond		Series Dr	ated Sand Grains; Locatio	Moderatel n: PL=Pore Lining, M	=Matrix)	Texture
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	ogroup):  ttion (Describe to  Bottom  Depth	Water the depth needed to document the inc	dicator or confirm the abse	ence of indicators.  Matrix  Moist)	.) (Type: C=Cone	centration, D=De	Series Dr  Series Dr  Series Dr  Color (Moist)	ated Sand Grains; Location Mottles	Moderatel n: PL=Pore Lining, M	=Matrix)  Location	Texture (e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip	e: ogroup): otion (Describe to Bottom	Water the depth needed to document the inc	dicator or confirm the abse	once of indicators.  Matrix	.) (Type: C=Cond		Series Dr	ated Sand Grains; Locatio	Moderatel n: PL=Pore Lining, M	=Matrix)	Texture
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	ogroup):  ttion (Describe to  Bottom  Depth	Water the depth needed to document the inc	dicator or confirm the abse	ence of indicators.  Matrix  Moist)	.) (Type: C=Cone	centration, D=De	Series Dr  Series Dr  Series Dr  Color (Moist)	ated Sand Grains; Location Mottles	Moderatel n: PL=Pore Lining, M	=Matrix)  Location	Texture (e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	estion (Describe to  Bottom  Depth  4	Water the depth needed to document the inc Horizon 1	Sicator or confirm the abset  Color (N  10YR	ence of indicators.  Matrix  Moist)  4/2	.) (Type: C=Cond	centration, D=Dep	Series Dr Series Dr Color (Moist) 6/8	ated Sand Grains; Location  Mottles  %  30	Moderatel n: PL=Pore Lining, M Type C	Location	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):  ogroup):  otion (Describe to  Bottom  Depth  4	Water the depth needed to document the inc Horizon 1	Color (N	ence of indicators.  Matrix  Moist)  4/2	% 70	centration, D=Dep	Series Dr Series Dr Color (Moist) 6/8	mated Sand Grains; Location  Mottles  %  30	Moderatel n: PL=Pore Lining, M Type C	=Matrix)  Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):  ogroup):  otion (Describe to  Bottom  Depth  4	Water the depth needed to document the inc Horizon 1	Color (N	Matrix Moist) 4/2	% 70	5YR	Series Dr Series Dr Color (Moist) 6/8	ated Sand Grains; Locatio  Mottles  % 30	Moderatel  Type C	Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):  pgroup):  btion (Describe to  Bottom  Depth  4	Water  the depth needed to document the inc  Horizon  1	Color (N	mce of indicators.  Matrix  Moist)  4/2	% 70	5YR	Series Dr  Series Dr  Series Dr  Color (Moist)  6/8	ated Sand Grains; Locatio Mottles  % 30	Moderatel  Type C	Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):  pgroup):  btion (Describe to  Bottom  Depth  4	Water  the depth needed to document the inc  Horizon  1	Color (N	mace of indicators.  Matrix  Moist)  4/2	% 70	5YR	Series Dr  Series Dr  Color (Moist)  6/8	ated Sand Grains; Locatio Mottles % 30	Moderatel  Type C	Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	e: Degroup): Describe to Depth  4	Water  the depth needed to document the inc  Horizon  1	Color (N	mace of indicators.  Matrix  Moist)  4/2	% 70	5YR	Series Dr  Series Dr  Color (Moist)  6/8	ated Sand Grains; Locatio Mottles % 30	Moderatel  Type C	Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	e: ggroup): btion (Describe to  Bottom Depth 4	Water  Horizon  1	Color (N 10YR	more of indicators.  Matrix  Moist)  4/2	% 70	5YR	Series Dr  Series Dr  Color (Moist)  6/8	ated Sand Grains; Locatio Mottles % 30	Moderatel  Type C	Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	e: ggroup): btion (Describe to  Bottom Depth 4	Water  the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  4/2     s are not	% 70	5YR	Series Dr  Series Dr  Color (Moist)  6/8	wheel Sand Grains; Location Mottles % 30	Moderatel Type C	Location PL Indicators fo	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	egroup):  stion (Describe to  Bottom  Depth  4     Soil Field Ir	Water  Horizon  1	Color (Management of the subset of the subse	Matrix Moist) 4/2 s are not edox	% 70	5YR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes	ated Sand Grains; Locatio Mottles % 30	Moderatel Type C	Location PL Indicators fo A10 - 2cm N	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip	egroup):  pgroup):  btion (Describe to Depth 4 Soil Field In edon	Water  Horizon  1	Color (N 10YR	Matrix Moist)  4/2     s are not doox Matrix	% 70	5YR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface	ated Sand Grains; Locatio  Mottles  % 30	Moderatel  Type C MLRA 136)	Location PL Indicators fo A10 - 2cm M A16 - Coast P	Texture (e.g. clay, sand, loam) silty clay loam r Problematic Soils 1 luck (MLRA 147) trairie Redox (MLRA 147, 148)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip 3 - Black Histir	Bottom Depth 4 Soil Field Ir	Water  Horizon  1	Color (N 10YR	Matrix Moist)  4/2    s are not edox Mutrix	% 70 present	SYR	Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface	ated Sand Grains; Locatio  Mottles  % 30	Moderatel Type C	Location   PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip 3 - Black Histic 4 - Hydrogen S	e: pgroup): ption (Describe to Depth 4 Soil Field Ir edon C Sulfide	Water  Horizon  1	Color (N 10YR	Matrix Moist)  4/2     s are not edox Matrix ace Below Dai	% 70 present	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	ated Sand Grains; Location Mottles  % 30	Moderatel Type C	Location   PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip 3 - Black Histir	sigroup):  pgroup):  pgroup):  btion (Describe to Depth 4	Water  Horizon  1	Color (N 10YR	Matrix Moist)  4/2    s are not edox Matrix acce as Bellow Data Surface (n	% 70 present	SYR	Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface	ated Sand Grains; Location Mottles  % 30	Moderatel Type C	Location   PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	pgroup):  btion (Describe to Depth 4 Soil Field Ir edon C Sulfide ayers ck (LRR N)	Water  Horizon  1  ndicators (check he	Color (N 10YR	Matrix  Moist)  4/2     s are not dox Matrix ace Below Dat Surface (a eyed Matrix)	% 70 present	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	ated Sand Grains; Location Mottles  % 30	Moderatel Type C	Location   PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip 3 - Black Histid 4 - Hydrogen 3 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar	e: pgroup): pgroup): ption (Describe to Depth 4 Soil Field In edon C Sulfide ayers k (LRR N) Below Dark Si k Surface	Water  Horizon  1	Color (Management of the second of the secon	Matrix Moist)  4/2    s are not down Matrix acc Below Dar s Surface (a eyed Matrix ark Surface (a surfac	9% 70 present	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	ated Sand Grains; Location Mottles  % 30	Moderatel Type C	Location   PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	est of the state o	Water  Horizon  1	Color (N 10YR	Matrix Moist)  4/2    s are not edox Matrix ace Below Dat Surface (new year Matrix Matr	9% 70 present	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	ated Sand Grains; Locatio Mottles  % 30	Moderatel  Type C MLRA 136)	Location PL	Texture (e.g. clay, sand, loam) silty clay loam
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	est of the state o	Water  Horizon  1	Color (Management of the second of the secon	Matrix Moist)  4/2    s are not edox Matrix ace Below Dat Surface (new year Matrix Matr	9% 70 present	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	ated Sand Grains; Locatio Mottles  % 30	Moderatel  Type C MLRA 136)	Location PL Indicators fo A10 - 2cm N A16 - Coast P F19 - Piedmon TF12 - Very Other (Expla)	Texture  (e.g. clay, sand, loam)  silty clay loam       r Problematic Soils   t Floodplain Soils (MLRA 147, 148) t Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip 3 - Black Histi 4 - Hydrogen 3 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle Restrictive Layer	est of the state o	Water  Horizon  1	Color (N 10YR	Matrix Moist)  4/2    s are not edox Matrix ace Below Dat Surface (new year Matrix Matr	y/6 70 present rk Surface	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	ated Sand Grains; Locatio Mottles  % 30	Moderatel Type C MLRA 136)	Location PL Indicators fo A10 - 2cm N A16 - Coast P F19 - Piedmon TF12 - Very Other (Expla)	Texture  (e.g. clay, sand, loam)  silty clay loam       r Problematic Soils   t Floodplain Soils (MLRA 147, 148) t Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	e: pgroup): ption (Describe to Depth 4 Soil Field Ir edon C Sulfide ayers k (LRR N) Below Dark S k Surface k Mineral (LRR yed Matrix	Water  Horizon  1	Color (N 10YR	Matrix  Moist)  4/2    s are not edox Matrix ace Below Dar Surface (A eyed Matrix ark Surface Dark Surface)  Matrix ark Surface (A eyed Matrix ark Surface)	y/6 70 present rk Surface	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	wheel Sand Grains; Location Mottles 9% 30	Moderatel Type C MLRA 136)	Location PL Indicators fo A10 - 2cm N A16 - Coast P F19 - Piedmon TF12 - Very Other (Expla)	Texture  (e.g. clay, sand, loam)  silty clay loam       r Problematic Soils 1  luck (MLRA 147) rairie Redox (MLRA 147, 148) Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric 1- Histosol 2 - Histic Epip 3 - Black Histi 4 - Hydrogen 3 5 - Stratified L 10 - 2 cm Muc 11 - Depleted 12 - Thick Dar 1 - Sandy Muc 4 - Sandy Gle Restrictive Layer	e: pgroup): ption (Describe to Depth 4 Soil Field Ir edon C Sulfide ayers k (LRR N) Below Dark S k Surface k Mineral (LRR yed Matrix	Water  Horizon  1	Color (N 10YR	Matrix  Moist)  4/2    s are not edox Matrix ace Below Dar Surface (A eyed Matrix ark Surface Dark Surface)  Matrix ark Surface (A eyed Matrix ark Surface)	y/6 70 present rk Surface	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	wheel Sand Grains; Location Mottles 9% 30	Moderatel Type C MLRA 136)	Location PL Indicators fo A10 - 2cm N A16 - Coast P F19 - Piedmon TF12 - Very Other (Expla)	Texture  (e.g. clay, sand, loam)  silty clay loam       r Problematic Soils   t Floodplain Soils (MLRA 147, 148) t Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)
Remarks:  SOILS  Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	e: pgroup): ption (Describe to Depth 4 Soil Field Ir edon C Sulfide ayers k (LRR N) Below Dark S k Surface k Mineral (LRR yed Matrix	Water  Horizon  1	Color (N 10YR	Matrix  Moist)  4/2    s are not edox Matrix ace Below Dar Surface (A eyed Matrix ark Surface Dark Surface)  Matrix ark Surface (A eyed Matrix ark Surface)	y/6 70 present rk Surface	SYR	Series Dr  Series Dr  Color (Moist)  6/8      F12 - Iron-Manganes  F13 - Umbric Surface  F19 - Piedmont Floor  8)	wheel Sand Grains; Location Mottles 9% 30	Moderatel Type C MLRA 136)	Location PL Indicators fo A10 - 2cm N A16 - Coast P F19 - Piedmon TF12 - Very Other (Expla)	Texture  (e.g. clay, sand, loam)  silty clay loam       r Problematic Soils   t Floodplain Soils (MLRA 147, 148) t Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)



## WETLAND DETERMINATION DATA FORM

**Eastern Mountains and Piedmont Region** 

Project/Site:	Lemaster-Harrison 138 kV Tranmission Line	Relocation Pro	ect	Wetland ID: Wetland 2 Sample Point: SP-3
VEGETATION	(Species identified in all uppercase are non-native s	pecies.)		
Tree Stratum (Plo	et size: 30 ft radius)			
	Species Name	% Cover Dominan	Ind.Status	Dominance Test Worksheet
1.				
2.				Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.				
4.				Total Number of Dominant Species Across All Strata:(B)
5.				
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				
8.				Prevalence Index Worksheet
9.				Total % Cover of: Multiply by:
10.				OBL spp5
	Total Cover =	0		FACW spp. <u>180</u> x 2 = <u>360</u>
				FAC spp. $0   X   3 = 0$
Sapling/Shrub Stra	atum (Plot size: 15 ft radius)			FACU spp. $0   x   4 = 0$
1.	Salix interior	70 Y	FACW	UPL spp. $0   x   5 = 0$
2.				
3.				Total 185 (A) <u>365</u> (B)
4.				
5.				Prevalence Index = B/A = 1.973
6.				
7.				
8.				Hydrophytic Vegetation Indicators:
9.				Yes No Rapid Test for Hydrophytic Vegetation
10.				Voc. No. Deminance Test in a 500/
	Total Cover =	70		
Herb Stratum (Plo	t size: 5 ft radius)			
1.	Juncus effusus	85 Y	FACW	
2.	carex frankii	5 N	OBL	Ind☑ators of hydric soil and wetland hydrology must be
3.	Agrimonia parviflora	20 N	FACW	present, unless disturbed or problematic.
4.	Scirpus atrovirens	5 N	FACW	Definitions of Vegetation Strata:
5.				
6				Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.				height (DBH), regardless of height.
8.				
9.				Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.				ft. tall.
11.				
12.				Herb - All herbaceous (non-woody) plants, regardless of size,
13.				and woody plants less than 3.28 ft. tall.
14.				
15.				Woody Vines - All woody vines greater than 3.28 ft. in height.
10.	Total Cover =	115		
	Total Cover =	110		
Woody Vine Strati	um (Plot size: 30 ft radius)			
1.				
2.				
3.				Hydrophytic Vegetation Present Yes No
4.				
5.				
J	Total Cover =	0		
Remarks:	i otal covel =	U		
Tomarks.				
<u> </u>				
Astalia LE	and a			
Additional Ren	пагкs:			
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#### WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region

Project/Site:		Harrison 138 kV Tra	nmission Line	e Relocat	ion Proje	ct	Stantec Project #:	193704783		Date:	11/07/16
Applicant:		Electric Power								County:	Athens
Investigator #1:				Investi	gator #2:	Jody Nic				State:	Ohio
Soil Unit:	-	t loam, 6 to 12 perce	ent slopes				IWI/WWI Classification:	PEM1C		Wetland ID:	
Landform:	Terrace					Concave				Sample Point:	
Slope (%):	4%		39.38610991870			-82.1827			NAD83	Community ID:	•
		ditions on the site typ			ar? (If no, e	explain in rem			No	Section:	1
Are Vegetation	□ , Soil ☑,	or Hydrology □sig	nificantly distu	urbed?			Are normal circumstar	•	,	Township:	12N
Are Vegetation	□, Soil □,	or Hydrology □nat	urally problem	natic?			Yes	□No		Range:	15W Dir:
SUMMARY OF		_									
Hydrophytic Veg								Hydric Soils			☐ Yes ☑ No
Wetland Hydrol	ogy Present	?		☐ Yes	☑ No	1		Is This Samp	oling Point \	Within A Wetla	and? ■ Yes ☑ No
Remarks:											
HYDROLOGY											
Wetland Hydro	ology Indic	ators (Check here it	f indicators ar	e not pre	sent )				Secondary:		
Primary:										B6 - Surface So	
	A1 - Surface					er-Stained I			_		egetated Concave Surface
	A2 - High War A3 - Saturati					ıatic Fauna e Aquatic F					
	B1 - Water N					ogen Sulfic				C2 - Dry Season	
	B2 - Sedime						spheres on Living Roots		□		
_	B3 - Drift De						duced Iron				Visible on Aerial Imagery
_	B4 - Algal Ma B5 - Iron De						duction in Tilled Soils				Stressed Plants
		วงรแร on Visible on Aerial Ima	anerv			Muck Surfa plain in Re			H	D2 - Geomorphi D3 - Shallow Ad	
	Di manaati	on violbio on Aonai inic	agory		Othor (EX	piaiii iii ito	nanoj			D4 - Microtopog	
										D5 - FAC-Neutr	al Test
Field Observat	ions:										
Surface Water F	Present?	☐ Yes ☑ No	Depth:		(in.)			Water at the	.l	10	V N-
Water Table Pre	esent?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hyd	arology Pr	esent?	Yes ☑ No
Saturation Pres	ent?	☐ Yes ☑ No	Depth:		(in.)						
Doscribo Pocord	lod Data (etr	eam gauge, monitorii	na woll porial	nhotos n	rovious in	cnoctions)	if available:		N/A		
Remarks:	eu Dala (Sil	eam gauge, monitorii	ig well, aeriai į	priotos, p	revious iris	speciions,	, ii avaiiabie.		IN/A		
Remarks.											
SOILS											
SOILS		Omulgo cilt loom 6	S to 12 person	t clopes			Sorios Dr.	ainaga Class:			
Map Unit Name		Omulga silt loam, 6	6 to 12 percen	nt slopes			Series Dra	ainage Class:			
Map Unit Name Taxonomy (Sub	group):		•		) (Table 0 One)	outesting D. Do		<u> </u>		Mark	
Map Unit Name Taxonomy (Sub Profile Descrip	group): otion (Describe to		dicator or confirm the abse	ence of indicators	.) (Type: C=Con	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	ated Sand Grains; Location		=Matrix)	Texture
Map Unit Name Taxonomy (Sub Profile Descrip Top	group): otion (Describe to Bottom	the depth needed to document the ind	dicator or confirm the abse	ence of indicators		centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	nted Sand Grains; Location	n: PL=Pore Lining, M	1	Texture
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	ogroup):  otion (Describe to  Bottom  Depth	the depth needed to document the ind	dicator or confirm the abse	nce of indicators Matrix Moist)	%		letion, RM=Reduced Matrix, CS=Covered/Coa     Color (Moist)	nted Sand Grains; Location Mottles	n: PL=Pore Lining, M	Location	(e.g. clay, sand, loam)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	ogroup):  ation (Describe to Bottom Depth 16	the depth needed to document the ind  Horizon  1	Color (M	Matrix Moist) 4/4	% 100		letion, RM=Reduced Matrix, CS=Covered/Coa     Color (Moist) 	Mottles	n: PL=Pore Lining, M  Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  ation (Describe to Bottom Depth 16	the depth needed to document the ind  Horizon  1	Color (M	Matrix Moist) 4/4	% 100 		letion, RM=Reduced Matrix, CS=Covered/Coa Color (Moist)	Mottles  %	Type	Location 	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  ption (Describe to Bottom Depth 16	the depth needed to document the ind  Horizon  1	Color (M	Matrix Moist) 4/4	% 100  		letion, RM=Reduced Matrix, CS=Covered/Coa Color (Moist)  	sted Sand Grains; Location  Mottles  %	Type	Location  	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to  Bottom  Depth  16	the depth needed to document the ind  Horizon  1	Color (M	Matrix Moist)  4/4	% 100  		letion, RM=Reduced Matrix, CS=Covered/Coa I Color (Moist)	sted Sand Grains; Location  Mottles  %	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to  Bottom  Depth  16	the depth needed to document the ind  Horizon  1	Color (N	Matrix Moist)  4/4	% 100   		letion, RM=Reduced Matrix, CS=Covered/Coa I Color (Moist)	sted Sand Grains; Location  Mottles  %	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to  Bottom Depth  16	Horizon  1	Color (N	Matrix Moist)  4/4	% 100    		letion, RM=Reduced Matrix, CS=Covered/Coa I Color (Moist)	sted Sand Grains; Location  Mottles  %	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to  Bottom  Depth  16	the depth needed to document the ind  Horizon  1	Color (N	Matrix Moist)  4/4	% 100   		letion, RM=Reduced Matrix, CS=Covered/Coa I Color (Moist)	sted Sand Grains; Location  Mottles  %	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to  Bottom Depth  16	Horizon  1	Color (M	Matrix Moist) 4/4	% 100		letion, RM=Reduced Matrix, CS=Covered/Coa I Color (Moist)	sted Sand Grains; Location  Mottles  %	Type		(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S	group):  tion (Describe to  Bottom Depth  16	Horizon  1	Color (N 10YR	Matrix Moist)  4/4      s are not	% 100		letion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location  Mottles  %	n: PL=Pore Lining, M Type	Location Indicators for	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S	pgroup):  tion (Describe to Depth 16 Soil Field In	Horizon  1	Color (M 10YR	Matrix Moist)  4/4      s are not edox	% 100		letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles %	Type	Location Indicators for	(e.g. clay, sand, loam) silt loam r Problematic Soils <sup>1</sup>
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S	group):  stion (Describe to Depth 16 Soil Field In	Horizon  1	Color (M 10YR	Matrix Moist)  4/4     s are not	% 100		etion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location  Mottles  %	n: PL=Pore Lining, M  Type	Location	(e.g. clay, sand, loam) silt loam r Problematic Soils <sup>1</sup> luck (MLRA 147, 148)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to Depth 16 Soil Field In	Horizon  1	Color (M 10YR	Matrix Moist)  4/4     s are not edox Matrix	% 100       present	):	etion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location  Mottles  %	Type	Location	(e.g. clay, sand, loam) silt loam r Problematic Soils <sup>1</sup>
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric : 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified La	egroup):    Stion (Describe to Depth	Horizon  1	Color (M 10YR	Matrix  Moist)  4/4      s are not edox  Matrix  doist)	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	Mottles 9/6	Type	Location	(e.g. clay, sand, loam)  silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified L 10 - 2 cm Mucl	group):  tion (Describe to Depth 16 Soil Field In edon C Sulfide ayers k (LRR N)	Horizon  1  ndicators (check he	Color (M 10YR	Matrix Moist)  4/4     s are not dox Matrix ace Below Da Surface (reyed Matrix)	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Coa	Mottles 9/6	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):    Stion (Describe to Depth   16	Horizon  1  ndicators (check he	Color (M 10YR	Matrix Moist)  4/4     s are not edox Matrix ace Below Da s Surface (reved Matrix Matrix	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	Mottles 9/6	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified La 10 - 2 cm Mucl 11 - Depleted I 12 - Thick Darl	egroup):    Stion (Describe to Depth   16	the depth needed to document the ind  Horizon  1	Color (M 10YR	moe of indicators Matrix floist) 4/4 s are not sdox Matrix ace Below Da S Surface (to eyed Matrix ark Surface (to synthesis)	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	Mottles 9/6	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):    Stion (Describe to Depth	the depth needed to document the ind  Horizon  1	Color (M 10YR	Matrix  Moist)  4/4     s are not edox Matrix  ace Below Da Surface (reyed Matrix Matirx Matirx Matirx Ark Surface Dark Surfa	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	e Masses (LRR N, 16) (MLRA 122, 147) (MLRA 127, 147)	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):    Stion (Describe to Depth   16	the depth needed to document the ind  Horizon  1       ndicators (check he	Color (M 10YR	Matrix  **Toist**    4/4	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	e Masses (LRR N, 1  e Masses (LRR N, 1  e Masses (LRR N, 1  f (MLRA 122, 136)  dplain Soils (MLRA  terial (MLRA 127, 147	Type	Location	(e.g. clay, sand, loam)  silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified Le 10 - 2 cm Muci 11 - Depleted I 12 - Thick Darl 1 - Sandy Muc 4 - Sandy Gley	egroup):    Stion (Describe to Depth	the depth needed to document the ind  Horizon  1       ndicators (check he	Color (M 10YR	Matrix  Moist)  4/4     s are not edox Matrix  ace Below Da Surface (reyed Matrix Matirx Matirx Matirx Ark Surface Dark Surfa	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	e Masses (LRR N, 16) (MLRA 122, 147) (MLRA 127, 147)	Type	Location	(e.g. clay, sand, loam) silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):    Stion (Describe to Depth   16	the depth needed to document the ind  Horizon  1       ndicators (check he	Color (M 10YR	Matrix  **Toist**    4/4	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	e Masses (LRR N, 1  e Masses (LRR N, 1  e Masses (LRR N, 1  f (MLRA 122, 136)  dplain Soils (MLRA  terial (MLRA 127, 147	Type	Location	(e.g. clay, sand, loam)  silt loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup):    Stion (Describe to Depth   16	the depth needed to document the ind  Horizon  1       ndicators (check he	Color (M 10YR	Matrix  **Toist**    4/4	% 100 present	):	cetion, RM=Reduced Matrix, CS=Covered/Coa	e Masses (LRR N, 1  e Masses (LRR N, 1  e Masses (LRR N, 1  f (MLRA 122, 136)  dplain Soils (MLRA  terial (MLRA 127, 147	Type	Location	(e.g. clay, sand, loam)  silt loam



## WETLAND DETERMINATION DATA FORM

**Eastern Mountains and Piedmont Region** 

Project/Site:	Lemaster-Harrison 138 kV Tranmission Line	Relocation P	roject	Wetland ID: Wetland 2 Sample Point: SP-4
VEGETATION	(Species identified in all uppercase are non-native sp	pecies.)		
Tree Stratum (Plo	ot size: 30 ft radius)			
	Species Name	% Cover Domir		Dominance Test Worksheet
1.				
2.				Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.				
4.				Total Number of Dominant Species Across All Strata: 4 (B)
5.				-
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.				
8.				Prevalence Index Worksheet
9.				Total % Cover of: Multiply by:
10.	Total Occurr			OBL spp. 0 x 1 = 0
	Total Cover =	0		FACW spp. 49 X 2 = 98
0 - 1 - 1 0 - 1 0 - 1	(District A5 (1 or 1) or			FAC spp. 7
	atum (Plot size: 15 ft radius)	40 \	/ FACI	FACU spp. 48
1. 2.	Pinus strobus		Y FACU N FACU	
3.	Lonicera morrowii			
3. 4.	Salix interior Platanus occidentalis		Y FACW	
5.				
6.				Prevalence Index = B/A = 2.990
7.				
8.				Hydrophytic Vegetation Indicators:
9.				Yes No Rapid Test for Hydrophytic Vegetation
10.				Veg No Deminance Test is a FOO'
	Total Cover =	20		
Herb Stratum (Plo	t size: 5 ft radius)			Yes No Morphological Adaptations (Explain) *
1.	Rumex crispus	5 N	N FAC	
2.	Andropogon virginicus	25	Y FACL	
3.	Solidago altissima	10 N	N FACL	present, unless disturbed of problematic.
4.	Agrimonia parviflora	25	Y FACV	Definitions of Vegetation Strata:
5.	Daucus carota	5 N	N UPL	
6	Symphyotrichum lateriflorum	2	N FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Juncus torreyi	2	N FACW	height (DBH), regardless of height.
8.	Juncus effusus	3 1	N FACV	
9.	Poa palustris	10 N	N FACV	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.	Viola sororia	2	N FAC	it. tali.
11.				
12.				<ul> <li>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</li> </ul>
13.				and moody planto lood than onzo th tail.
14.				Allow to a contract
15.				Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	89		
	(D)			
	um (Plot size: 30 ft radius)			
1. 2.				_
3.				Hydrophytic Vegetation Present Yes No
4.			<u> </u>	Tryurophytic vegetation Frescht 165 140
5.				
<u> </u>	Total Cover =	0		
Remarks:	1000 00001 -	<u>~</u>		
Additional Rer	narks:			
	-			



#### WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region

										1	
Project/Site:		Harrison 138 kV Tra	nmission Line	e Relocat	ion Proje	ct	Stantec Project #:	193704783		Date:	11/08/16
Applicant:	American I	Electric Power								County:	Athens
Investigator #1:				Investi	gator #2:	Jody Nic	holson			State:	Ohio
Soil Unit:	Omulga sil	t loam, 6-12 percent	t slopes			N	IWI/WWI Classification:	None		Wetland ID:	Wetland 3
Landform:	Depression	า		Loc	al Relief:	Concave	)			Sample Point:	SP-5
Slope (%):	4%	Latitude:	:	L	ongitude:			Datum:	NAD83	Community ID:	PSS
Are climatic/hyd	rologic cond	ditions on the site ty	pical for this t	ime of ye	ar? (If no, e	explain in rem	arks)	☑ Yes □	No	Section:	1
		or Hydrology □sig					Are normal circumstar	nces present?	)	Township:	12N
Are Vegetation I	□ . Soil □.	or Hydrology □nat	urally problen	natic?				□No		Range:	15W Dir:
SUMMARY OF	FINDINGS		j proces							1109	
Hydrophytic Veg		sant?		∀es	□ No			Hydric Soils	Present?		☑ Yes □ No
Wetland Hydrold				☑ Yes						Within A Wetla	
Remarks:	Wetland	.:		<u> </u>				is This Samp	Jilly Politi	WILLIIII A WElla	iliu: M les Mil
Nemarks.	Welland										
uvosal aav											
HYDROLOGY											
Wetland Hydro	ology Indic	ators (Check here i	f indicators ar	e not pre	sent )	: 🗆			Secondary:		
Primary:										B6 - Surface So	il Cracks
	A1 - Surface					er-Stained I			_		getated Concave Surface
_	A2 - High W					uatic Fauna					
	A3 - Saturati B1 - Water N					e Aquatic F ogen Sulfic				B16 - Moss Trin C2 - Dry Season	
	B2 - Sedime						spheres on Living Roots		H		
	B3 - Drift De			H			duced Iron				Visible on Aerial Imagery
	B4 - Algal M			П			duction in Tilled Soils		Ħ		
	B5 - Iron De	oosits			C7 - Thin	Muck Surfa	ace		7	D2 - Geomorphi	ic Position
	B7 - Inundati	on Visible on Aerial Ima	agery		Other (Ex	plain in Re	marks)			D3 - Shallow Aq	
										D4 - Microtopog	
									<b>✓</b>	D5 - FAC-Neutr	ai i est
Field Observati	ions:										
Surface Water F	Present?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hyd	drology Pr	ocont?	Yes
Water Table Pre	esent?	☐ Yes ☑ No	Depth:		(in.)			welland my	urology Fi	esent:	162   140
Saturation Prese	ent?	☐ Yes ☑ No	Depth:		(in.)						
Doscribo Pocordo	od Data (etr	eam gauge, monitorii	ng woll porial	nhotos n	rovious in	enactione)	if available:		N/A		
	eu Dala (Sil	earri gauge, monitorii	ilg well, aellal	priotos, p	evious iii	speciions)	, ii avaiiabie.		14/74		
Remarks:											
0011.0											
SOILS											
Map Unit Name:		Omulga silt loam, 6	6-12 percent s	slopes			Series Dra	ainage Class:	Moderatel	y Well Drained	I
Map Unit Name: Taxonomy (Sub	group):										ı
Map Unit Name: Taxonomy (Sub- Profile Descrip	group): tion (Describe to		dicator or confirm the abse	ence of indicators	.) (Type: C=Con	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	ated Sand Grains; Location			
Map Unit Name: Taxonomy (Sub- Profile Descrip Top	group):		dicator or confirm the abse	ence of indicators Matrix	•	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	nted Sand Grains; Location			Texture
Map Unit Name: Taxonomy (Sub- Profile Descrip	group): tion (Describe to		dicator or confirm the abse	ence of indicators Matrix	.) (Type: C=Con	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	ated Sand Grains; Location			
Map Unit Name: Taxonomy (Sub- Profile Descrip Top	group): tion (Describe to Bottom	the depth needed to document the inc	dicator or confirm the abse	ence of indicators Matrix	•	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	nted Sand Grains; Location	n: PL=Pore Lining, M	=Matrix)	Texture
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth	group): tion (Describe to Bottom Depth	the depth needed to document the inc	dicator or confirm the abse	ence of indicators Matrix Moist)	%		letion, RM=Reduced Matrix, CS=Covered/Coa I Color (Moist)	nted Sand Grains; Location Mottles	n: PL=Pore Lining, M	=Matrix)	Texture (e.g. clay, sand, loam)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth	group): tion (Describe to Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/1	% 70	10YR	letion, RM=Reduced Matrix, CS=Covered/Coa Color (Moist) 6/8	Mottles % 15	n: PL=Pore Lining, M	=Matrix)  Location  M	Texture (e.g. clay, sand, loam) clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/1	% 70 	10YR 10YR	letion, RM=Reduced Matrix, CS=Covered/Coa Color (Moist) 6/8 2/1	Mottles % 15	Type C	=Matrix)  Location  M  M	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/1	% 70  	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa Color (Moist) 6/8 2/1	Mottles % 15 15	Type C C	=Matrix)  Location  M  M	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/1	% 70   	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	Mottles % 15 15	Type C C	Location M M	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist) 5/1	% 70	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	Mottles % 15 15	Type C C	Location M M	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/1	% 70   	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	Mottles % 15 15	Type C C	Location M M	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to  Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/1	% 70	10YR 10YR    	letion, RM=Reduced Matrix, CS=Covered/Coa	Mottles % 15 15	Type C C	Location M M	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S	group): tion (Describe to  Bottom Depth 4	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist) 5/1 s are not	% 70	10YR 10YR    	letion, RM=Reduced Matrix, CS=Covered/Coa Color (Moist) 6/8 2/1    	wited Sand Grains; Location  Mottles  % 15 15	Type C C	Location M M Indicators for	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$	group):  tion (Describe to Depth 4 Soil Field In	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/1      s are not edox	% 70	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location  Mottles  %  15  15	Type C C	Location M M Indicators for	Texture (e.g. clay, sand, loam) clay clay r Problematic Soils <sup>1</sup>
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe	group):  tion (Describe to Depth 4 Soil Field In	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/1	% 70	10YR 10YR    	letion, RM=Reduced Matrix, CS=Covered/Coa	### Masses (LRR N, 1  ### Masses (LRR N, 1)  ### Masses (LRR N, 1)	n: PL=Pore Lining, M Type C C MLRA 136)	Location  M  M  Indicators for A10 - 2cm M  A16 - Coast P	Texture (e.g. clay, sand, loam) clay clay r Problematic Soils 1 luck (MLRA 147) trairie Redox (MLRA 147, 148)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic	group):  tion (Describe to Depth 4 Soil Field In	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist) 5/1 s are not edox	% 70 present	10YR 10YR     ):	letion, RM=Reduced Matrix, CS=Covered/Coa	### Masses (LRR N, 1  ### Masses (LRR N, 1)  ### Masses (LRR N, 1)	Type C C C	Location  M  M  Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmont	Texture (e.g. clay, sand, loam)  clay  clay          Troblematic Soils 1  luck (MLRA 147)  raiire Redox (MLRA 147, 148)  t Floodplain Soils (MLRA 136, 147)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S	group):  tion (Describe to Depth 4 Soil Field In Describe to Depth 4 Sulfide	the depth needed to document the inc  Horizon  1	Color (M 10YR             	Matrix Aoist) 5/1 s are not adox Matrix ace Below Da	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location Mottles  % 15 15 e Masses (LRR N, I (MLRA 122, 136) Iplain Soils (MLRA	Type C C C	Location  M  M  Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmont TF12 - Very Other (Expla	Texture (e.g. clay, sand, loam) clay clay r Problematic Soils 1 luck (MLRA 147) rairie Redox (MLRA 147, 148) Floodplain Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen \$ 5 - Stratified La	group):  tion (Describe to Depth 4 Soil Field In column	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/1      s are not edox Matrix doist)	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location Mottles  % 15 15 e Masses (LRR N, I (MLRA 122, 136) Iplain Soils (MLRA	Type C C C	Location  M  M     Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmont TF12 - Very	Texture (e.g. clay, sand, loam) clay clay
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S	group):  tion (Describe to Depth 4	the depth needed to document the inc  Horizon  1  ndicators (check he	Color (M 10YR             	Matrix Moist)  5/1    s are not edox Matrix Matrix S are selected as a selected as selected as selected as selected as selected as selected as a selected as	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location Mottles  % 15 15 e Masses (LRR N, I (MLRA 122, 136) Iplain Soils (MLRA	Type C C C	Location  M  M  Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmont TF12 - Very Other (Expla	Texture (e.g. clay, sand, loam) clay clay r Problematic Soils 1 luck (MLRA 147) rairie Redox (MLRA 147, 148) Floodplain Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified L 10 - 2 cm Mucl	group):  tion (Describe to Depth 4	the depth needed to document the inc  Horizon  1  ndicators (check he	Color (N 10YR	Matrix Moist)  5/1    s are not edox Matrix face Below Da s Surface (reyed Matrix Matirx Matrix	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wited Sand Grains; Location Mottles  % 15 15 e Masses (LRR N, I (MLRA 122, 136) Iplain Soils (MLRA	Type C C C	Location   M   M	Texture (e.g. clay, sand, loam) clay clay r Problematic Soils 1 luck (MLRA 147) rairie Redox (MLRA 147, 148) Floodplain Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen \$ 5 - Stratified La 10 - 2 cm Mucl 11 - Depleted B 12 - Thick Darl 1 - Sandy Mucl	group):  tion (Describe to Depth 4 Soil Field In dedon 5: Sulfide despers k (LRR N) Below Dark S & Sk Surface k Mineral (LRR	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/1     s are not edox Matrix doise Below Da s Surface (reyed Matrix Matirx Matirx Matirx Surface Dark Surface	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles  % 15 15  e Masses (LRR N, 18) (MLRA 122, 136) Iplain Soils (MLRA 127, 147)	Type C C C	Location M M	Texture  (e.g. clay, sand, loam)  clay  clay     r Problematic Soils   luck (MLRA 147)  rairie Redox (MLRA 147, 148)  s Floodplain Soils MLRA 136, 147)  Shallow Dark Surface in in Remarks)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen \$ 5 - Stratified Le 10 - 2 cm Mucl 11 - Depleted I 12 - Thick Dark 1 - Sandy Mucl 4 - Sandy Gley	group):  tion (Describe to Depth 4 Soil Field In dedon 5: Sulfide despers k (LRR N) Below Dark S & Sk Surface k Mineral (LRR	the depth needed to document the inc  Horizon  1	Color (M 10YR             	Matrix Moist)  5/1     s are not edox Matrix doise Below Da s Surface (reyed Matrix Matirx Matirx Matirx Surface Dark Surface	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles  % 15 15  e Masses (LRR N, 18) (MLRA 122, 136) Iplain Soils (MLRA 127, 147)	Type C C C	Location M M	Texture (e.g. clay, sand, loam) clay clay r Problematic Soils 1 luck (MLRA 147) rairie Redox (MLRA 147, 148) Floodplain Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3- Black Histic 4- Hydrogen S 5- Stratified La 10- 2 cm Mucl 11- Depleted B 12- Thick Darl 1- Sandy Mucl 4- Sandy Gley Restrictive Layer	group):  tion (Describe to Depth 4 Soil Field In dedon 5: Sulfide despers k (LRR N) Below Dark S & Sk Surface k Mineral (LRR	the depth needed to document the inc  Horizon  1       ndicators (check he	Color (N 10YR	Matrix Moist)  5/1     s are not edox Matrix doise Below Da s Surface (reyed Matrix Matirx Matirx Matirx Surface Dark Surface	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles  % 15 15  e Masses (LRR N, 18) (MLRA 122, 136) Iplain Soils (MLRA 127, 147)	Type C C MLRA 136)  148)	Location  M  M   Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmon	Texture  (e.g. clay, sand, loam)  clay  clay     r Problematic Soils   In Floodplain Soils (MLRA 147, 148)  to Floodplain Soils (MLRA 136, 147)  Shallow Dark Surface in in Remarks)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3- Black Histic 4- Hydrogen S 5- Stratified S 10- 2 cm Mucl 11- Depleted E 12- Thick Darl 1- Sandy Mucl 4- Sandy Gley Restrictive Layer (If Observed)	group):  tion (Describe to Depth 4	the depth needed to document the inc  Horizon  1       ndicators (check he	Color (N 10YR	Matrix  Moist)  5/1    s are not edox Matrix  face Below Da  s Surface (reyed Matri Matrix  fack Surface surfaces  Below Da  s Surface surfaces  Below Da  s Surfaces  Bel	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles  %  15  15      e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA terial (MLRA 127, 147)	Type C C MLRA 136)  148)	Location  M  M   Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmon	Texture  (e.g. clay, sand, loam)  clay  clay      r Problematic Soils   luck (MLRA 147)  rairie Redox (MLRA 147, 148)  Floodplain Soils (MLRA 136, 147)  Shallow Dark Surface in in Remarks)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3- Black Histic 4- Hydrogen S 5- Stratified La 10- 2 cm Mucl 11- Depleted B 12- Thick Darl 1- Sandy Mucl 4- Sandy Gley Restrictive Layer	group):  tion (Describe to Depth 4	the depth needed to document the inc  Horizon  1       ndicators (check he	Color (N 10YR	Matrix  Moist)  5/1    s are not edox Matrix  face Below Da  s Surface (reyed Matri Matrix  fack Surface surfaces  Below Da  s Surface surfaces  Below Da  s Surfaces  Bel	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles  %  15  15      e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA terial (MLRA 127, 147)	Type C C MLRA 136)  148)	Location  M  M   Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmon	Texture  (e.g. clay, sand, loam)  clay  clay     r Problematic Soils   to Floodplain Soils (MLRA 147, 148) to Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3- Black Histic 4- Hydrogen S 5- Stratified S 10- 2 cm Mucl 11- Depleted E 12- Thick Darl 1- Sandy Mucl 4- Sandy Gley Restrictive Layer (If Observed)	group):  tion (Describe to Depth 4	the depth needed to document the inc  Horizon  1       ndicators (check he	Color (N 10YR	Matrix  Moist)  5/1    s are not edox Matrix  face Below Da  s Surface (reyed Matri Matrix  fack Surface surfaces  Below Da  s Surface surfaces  Below Da  s Surfaces  Bel	% 70 present	10YR 10YR 	letion, RM=Reduced Matrix, CS=Covered/Coa	wed Sand Grains; Location Mottles  %  15  15      e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA terial (MLRA 127, 147)	Type C C MLRA 136)  148)	Location  M  M   Indicators for A10 - 2cm M A16 - Coast P F19 - Piedmon	Texture  (e.g. clay, sand, loam)  clay  clay     r Problematic Soils   In Floodplain Soils (MLRA 147, 148)  to Floodplain Soils (MLRA 136, 147)  Shallow Dark Surface in in Remarks)



#### WETLAND DETERMINATION DATA FORM

**Eastern Mountains and Piedmont Region** 

Project/Site: Lemaster-Harrison 138 kV Tranmission Line Relocation Project Wetland ID: Wetland 3 Sample Point: SP-5 **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** Species Name % Cover Dominant Ind.Status 2. Number of Dominant Species that are OBL, FACW, or FAC: 4 (A) 3. 4. Total Number of Dominant Species Across All Strata: 5 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B) 7 8. Prevalence Index Worksheet 9 --Total % Cover of: Multiply by: 10 x 1 = OBL spp. --20 Total Cover = x 2 = FACW spp. 125 250 FAC spp. 5 x 3 = 15 x 4 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. 15 60 1. Salix interior 60 ٧ **FACW** x 5 = UPL spp. 0 2 Platanus occidentalis 10 Ν FACW 3. Total 165 345 (B) 4. 5. --Prevalence Index = B/A = 2.091 6. 7. --**Hydrophytic Vegetation Indicators:** 8. 9. Yes No Rapid Test for Hydrophytic Vegetation □ No 10. Yes Dominance Test is > 50% J Total Cover = 70  $\; \; \square \; ^{\mathsf{No}}$ Yes Prevalence Index is ≤ 3.0 \* 4 √ Yes □ No Morphological Adaptations (Explain) \* Yes <sub>ℤ</sub> No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) \* Eupatorium perfoliatum 15 **FACW** \* Ind ators of hydric soil and wetland hydrology must be OBL 2 Scirpus atrovirens 10 N present, unless disturbed or problematic. 3. Carex frankii 5 Ν OBL 4. Carex torreyi 20 **FACW Definitions of Vegetation Strata:** 5. Juncus effusus 15 **FACW** 6 Carex lacustris 5 N OBL Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Schedonorus arundinaceus 15 **FACU** 5 FAC 8. Eupatorium serotinum N Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9. Symphyotrichum lateriflorum **FACW** 5 Ν 10. --11. 12. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall. 13. 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. Total Cover = 95 Woody Vine Stratum (Plot size: 30 ft radius) 1. 2. Hydrophytic Vegetation Present Yes 3 No 4. 5. **V** Total Cover = 0 Remarks: Additional Remarks:



#### WETLAND DETERMINATION DATA FORM Eastern Mountains and Piedmont Region

										_	
Project/Site:		Harrison 138 kV Tra	ınmission Line	e Relocat	ion Proje	ct	Stantec Project #:	193704783		Date:	11/08/16
Applicant:		Electric Power								County:	Athens
Investigator #1:				Investi	gator #2:	Jody Nic				State:	Ohio
Soil Unit:		t Ioam, 6-12 percen	t slopes				IWI/WWI Classification:	None		Wetland ID:	
Landform:	Depression					Concave				Sample Point:	
Slope (%):	4%		39.38645312210			-82.1815			NAD83	Community ID:	•
		ditions on the site ty			ar? (If no, e	explain in rem			No	Section:	1
Are Vegetation I	□ , Soil □,	or Hydrology □sig	nificantly distu	urbed?			Are normal circumsta	•	,	Township:	12N
Are Vegetation I	□, Soil □,	or Hydrology □nat	urally problem	natic?			Yes	□No		Range:	15W Dir:
SUMMARY OF											
Hydrophytic Veg				☐ Yes				Hydric Soils			☐ Yes ☑ No
Wetland Hydrold	<u> </u>	?		☐ Yes	☑ No			Is This Samp	oling Point \	Within A Wetla	and? 🔳 Yes 🗷 No
Remarks:	Wetland										
HYDROLOGY											
Wetland Hydro	ology Indic	ators (Check here i	f indicators ar	e not pre	sent )	: П			Secondary:		
Primary:	3,	(			,					B6 - Surface So	oil Cracks
	A1 - Surface					er-Stained I					egetated Concave Surface
_	A2 - High W					uatic Fauna					
	A3 - Saturati					e Aquatic F					
	B1 - Water N B2 - Sedime			_		ogen Sulfic	spheres on Living Roots			C2 - Dry Season C8 - Cravfish Bu	
	B3 - Drift De						duced Iron				Visible on Aerial Imagery
	B4 - Algal M			Ä			duction in Tilled Soils		H		Stressed Plants
	B5 - Iron De			ä		Muck Surf				D2 - Geomorphi	
	B7 - Inundati	on Visible on Aerial Ima	agery		Other (Ex	plain in Re	marks)				
										D4 - Microtopog	
										D5 - FAC-Neutr	al lest
Field Observati	ions:										
Surface Water F	Present?	☐ Yes  ☑ No	Depth:		(in.)			Wetland Hyd	drology Pr	ocont? -	Yes 🗔 No
Water Table Pre	esent?	☐ Yes ☑ No	Depth:		(in.)			welland my	urology Fi	esent:	1162 1110
Saturation Prese	ent?	☐ Yes ☑ No	Depth:		(in.)						
Describe Records	ed Data (etr	eam gauge, monitori	ng well aerial	nhotos n	revious in	enactions)	if available:		N/A		
Remarks:	ed Data (Sti	eam gauge, monitori	ing well, aeriai	priotos, p	ievious iii.	speciions,	, ii available.		1071		
Remarks.											
2011.0											
SOILS											
Map Unit Name:		Omulga silt loam, 6	6-12 percent s	slopes			Series Dra	ainage Class:	Moderatel	y Well Drained	1
Map Unit Name: Taxonomy (Sub	group):		•								ı
Map Unit Name: Taxonomy (Sub- Profile Descrip	group): tion (Describe to		dicator or confirm the abse	ence of indicators	.) (Type: C=Conv	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	ated Sand Grains; Location			
Map Unit Name: Taxonomy (Sub- Profile Descrip Top	group):		dicator or confirm the abse	ence of indicators		centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	nted Sand Grains; Location			Texture
Map Unit Name: Taxonomy (Sub- Profile Descrip	group): tion (Describe to		dicator or confirm the abse	ence of indicators	.) (Type: C=Cond	centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	ated Sand Grains; Location			
Map Unit Name: Taxonomy (Sub- Profile Descrip Top	group): tion (Describe to Bottom	the depth needed to document the inc	dicator or confirm the abse	ence of indicators		centration, D=Dep	letion, RM=Reduced Matrix, CS=Covered/Coa	nted Sand Grains; Location	n: PL=Pore Lining, M	=Matrix)	Texture
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth	group): tion (Describe to Bottom Depth	the depth needed to document the inc	dicator or confirm the abse	nce of indicators Matrix loist)	%		letion, RM=Reduced Matrix, CS=Covered/Coa	nted Sand Grains; Location Mottles	n: PL=Pore Lining, M	=Matrix)	Texture (e.g. clay, sand, loam)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth	group): tion (Describe to Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (M	Matrix Moist) 5/3	% 100		letion, RM=Reduced Matrix, CS=Covered/Cos Color (Moist)	Mottles %	n: PL=Pore Lining, M	=Matrix)  Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/3	% 100 		letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	Mottles %	Type	=Matrix)  Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N	Matrix Moist) 5/3	% 100  		letion, RM=Reduced Matrix, CS=Covered/Coc Color (Moist)	med Sand Grains; Location  Mottles  %	Type	=Matrix)  Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/3	% 100  		letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	wited Sand Grains; Location  Mottles  %	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist) 5/3	% 100   		letion, RM=Reduced Matrix, CS=Covered/Cos	wited Sand Grains; Location  Mottles  %	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist) 5/3	% 100    		letion, RM=Reduced Matrix, CS=Covered/Cos	weed Sand Grains; Location  Mottles  %	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to  Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/3	% 100		letion, RM=Reduced Matrix, CS=Covered/Cos	weed Sand Grains; Location  Mottles  %	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S	group): tion (Describe to  Bottom Depth 16	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/3     s are not	% 100		letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	wited Sand Grains; Location  Mottles  9/6	Type	Location Indicators for	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$	group):  tion (Describe to Depth 16 Soil Field In	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/3      s are not edox	% 100		letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	wited Sand Grains; Location  Mottles  %	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe	group):  tion (Describe to Depth 16 Soil Field In	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/3     s are not doox Matrix	% 100		letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	wited Sand Grains; Location  Mottles  %	Type	Location Indicators for A10 - 2cm M A16 - Coast P	Texture (e.g. clay, sand, loam) fill Material r Problematic Soils <sup>1</sup> Paririe Redox (MLRA 147, 148)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$	group):  tion (Describe to Depth 16 Soil Field In	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix Moist)  5/3     s are not edox Matrix	% 100       present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	wited Sand Grains; Location  Mottles  %	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic	group):  tion (Describe to Depth 16 Soil Field In Depth 16 Soil Field In Depth 16	the depth needed to document the inc  Horizon  1	Color (N 10YR	Matrix (loist) 5/3 s are not sdox Matrix ace Below Da	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, III) (MLRA 122, 136) (plain Soils (MLRA	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S	group):  tion (Describe to Depth 16 Soil Field In Students	Horizon  1  ndicators (check he	Color (M 10YR      2re if indicator 35 - Sandy Re 36 - Stripped I 37 - Dark Surf 38 - Polyvalue 39 - Thin Dark 22 - Loamy Gl	Matrix Moist)  5/3     s are not dox Matrix ace Below Da Surface (reyed Matrix eyed Matrix	% 100 present	):	Color (Moist)	e Masses (LRR N, III) (MLRA 122, 136) (plain Soils (MLRA	Type	Location	Texture (e.g. clay, sand, loam) fill Material r Problematic Soils 1 luck (MLRA 147, 148) triorde Redox (MLRA 147, 148) Triorde Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified La 10 - 2 cm Mucl 11 - Depleted B	group):  tion (Describe to Depth 16 Soil Field In  edon Sulfide ayers k (LRR N) Below Dark S	Horizon  1  ndicators (check he	Color (N 10YR	Matrix Moist)  5/3    s are not edox Matrix ace Below Da s Surface (reved Matrix Matrix	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, III) (MLRA 122, 136) (plain Soils (MLRA	Type	Location	Texture (e.g. clay, sand, loam) fill Material r Problematic Soils 1 luck (MLRA 147, 148) triorde Redox (MLRA 147, 148) Triorde Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen S 5 - Stratified Le 10 - 2 cm Mucl 11 - Depleted E 12 - Thick Dark	group):  tion (Describe to Depth 16 Soil Field In Depth 16 Soil Field In Depth 16 Soil Field In Depth 16 Sulfide Bayers k (LRR N) Below Dark Sk Surface	Horizon  1	Color (M 10YR	moe of indicators Matrix Toist) 5/3 s are not sdox Matrix ace Below Da S Surface (to eyed Matrix ark Surface (to synthesis)	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, III) (MLRA 122, 136) (plain Soils (MLRA	Type	Location	Texture (e.g. clay, sand, loam) fill Material r Problematic Soils 1 luck (MLRA 147, 148) triorde Redox (MLRA 147, 148) Triorde Soils (MLRA 136, 147) Shallow Dark Surface
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen \$ 5 - Stratified La 10 - 2 cm Mucl 11 - Depleted B 12 - Thick Darl 1 - Sandy Mucl	group):  tion (Describe to Depth 16	Horizon  1	Color (N 10YR	Matrix Moist)  5/3     s are not edox Matrix ace Below Da s Surface (reyed Matrix Matirx Matirx Matirx Matrix Surface Oark Surface Dark Surface	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, 16 (MLRA 122, 147)	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric \$ 1- Histosol 2 - Histic Epipe 3 - Black Histic 4 - Hydrogen \$ 5 - Stratified Le 10 - 2 cm Mucl 11 - Depleted I 12 - Thick Darl 1 - Sandy Mucl 4 - Sandy Mucl 4 - Sandy Gley	group):  tion (Describe to Depth 16	Horizon  1	Color (M 10YR	Matrix Moist)  5/3     s are not edox Matrix ace Below Da s Surface (reyed Matrix Matirx Matirx Matirx Matrix Surface Oark Surface Dark Surface	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA 127, 147	Type	Location	Texture  (e.g. clay, sand, loam)  fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3- Black Histic 4- Hydrogen S 5- Stratified La 10- 2 cm Mucl 11- Depleted B 12- Thick Darl 1- Sandy Mucl 4- Sandy Gley Restrictive Layer	group):  tion (Describe to Depth 16	the depth needed to document the inc  Horizon  1      ndicators (check he	Color (N 10YR	Matrix Moist)  5/3     s are not edox Matrix ace Below Da s Surface (reyed Matrix Matirx Matirx Matirx Matrix Surface Oark Surface Dark Surface	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, 16 (MLRA 122, 147)	Type	Location	Texture  (e.g. clay, sand, loam)  fill Material       r Problematic Soils   1  Iuck (MLRA 147)  Trairie Redox (MLRA 147, 148)  It Floodplain Soils (MLRA 136, 147)  Shallow Dark Surface  in in Remarks)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to Depth 16	the depth needed to document the inc  Horizon  1      ndicators (check he	Color (N 10YR	Matrix    Solution   Solution	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA 127, 147	Type	Location	Texture (e.g. clay, sand, loam) fill Material
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric S 1- Histosol 2- Histic Epipe 3- Black Histic 4- Hydrogen S 5- Stratified La 10- 2 cm Mucl 11- Depleted B 12- Thick Darl 1- Sandy Mucl 4- Sandy Gley Restrictive Layer	group):  tion (Describe to Depth 16	the depth needed to document the inc  Horizon  1      ndicators (check he	Color (N 10YR	Matrix    Solution   Solution	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA 127, 147	Type	Location	Texture  (e.g. clay, sand, loam)  fill Material       r Problematic Soils   1  Iuck (MLRA 147)  Trairie Redox (MLRA 147, 148)  It Floodplain Soils (MLRA 136, 147)  Shallow Dark Surface  in in Remarks)
Map Unit Name: Taxonomy (Sub Profile Descrip Top Depth 0	group):  tion (Describe to Depth 16	the depth needed to document the inc  Horizon  1      ndicators (check he	Color (N 10YR	Matrix    Solution   Solution	% 100 present	):	letion, RM=Reduced Matrix, CS=Covered/Cos  Color (Moist)	e Masses (LRR N, 1 (MLRA 122, 136) dplain Soils (MLRA 127, 147	Type	Location	Texture  (e.g. clay, sand, loam)  fill Material       r Problematic Soils   1  Iuck (MLRA 147)  Trairie Redox (MLRA 147, 148)  It Floodplain Soils (MLRA 136, 147)  Shallow Dark Surface  in in Remarks)



## WETLAND DETERMINATION DATA FORM

**Eastern Mountains and Piedmont Region** 

Project/Site:	Lemaster-Harrison 138 kV Tran	mission Line	Relocation	on Proje	ct	Wetland ID: Wetland 3 Sample Point: SP-6
VEGETATION	(Species identified in all uppercase ar	e non-native spe	ecies.)			
	ot size: 30 ft radius)	<u>'</u>				
	Species Name	_	% Cover [		Ind.Status	Dominance Test Worksheet
1. 2.						Notes (Decision Contest and OD) FACING FAC
3.						Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
3. 4.						Total Number of Dominant Species Across All Strata: 2 (B)
5.						Total Number of Dominant Species Across All Strata(D)
6.						Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.						(AID)
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
10.						OBL spp. $0   x   1 = 0$
	To	otal Cover =	0			FACW spp. 15 x 2 = 30
						FAC spp. $0   x   3 = 0$
Sapling/Shrub Str	atum (Plot size: 15 ft radius)					FACU spp. 55
1.						FACU spp. $\frac{55}{0}$ $x = 4 = \frac{220}{0}$ UPL spp. $\frac{1}{0}$ $x = 5 = \frac{1}{0}$
2.						
3.						Total <u>70</u> (A) <u>250</u> (B)
4.						
5.						Prevalence Index = B/A = 3.571
6.						
7.						Hadron hade Manatadon Indiatana
8.						Hydrophytic Vegetation Indicators:
9. 10.						Yes No Rapid Test for Hydrophytic Vegetation
10.		otal Cover =	0			Yes No Dominance Test is > 50%  ☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
	11	otal Cover =	U			
Horb Strotum (Die	ot size: 5 ft radius)					Yes ✓ No Morphological Adaptations (Explain) *  Yes ✓ No Problem Hydrophytic Vegetation (Explain) *
1.	Schedonorus arundinaceus		30	Υ	FACU	
2.	Andropogon virginicus		10	N	FACU	
3.	Daucus carota		5	N	UPL	present, unless disturbed or problematic.
4.	Solidago altissima		5	N	FACW	Definitions of Vegetation Strata:
5.	Melilotus officinalis		10	N	FACU	•
6	Setaria glauca		30	Υ	#N/A	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Prunella vulgaris		5	N	FACU	height (DBH), regardless of height.
8.	Pycnanthemum tenuifolium		5	N	FACW	
9.	Plantago lanceolata		10	N	UPL	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.	Ludwigia alternifolia		5	N	FACW	it. tail.
11.	<u></u>					
12.						Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.						
14. 15.						Woody Vines - All woody vines greater than 3.28 ft. in height.
15.		otal Carran	 11E			YYOOQY VIIIeS - An Woody Vines greater trian 3.20 it. in neight.
	10	otal Cover =	115			
Woody Vine Strat	um (Plot size: 30 ft radius)					
1.						
2.						
3.						Hydrophytic Vegetation Present Yes No
4.						• • •
5.						
	To	otal Cover =	0			
Remarks:						
Additional Re	marks:					

# LEMASTER-HARRISON 138 KV TRANSMISSION LINE RELOCATION PROJECT, ATHENS COUNTY, OHIO

D.2 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: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

# **Background Information**

Name:	
Agran Kwolek	
Date: (1/14/16	
Affiliation:	
Stantec	
Address: 11687 Lebanon Rd, CMainnati, OH 43 Phone Number:	5241
Phone Number:	1611
513 842 8200 e-mail address:	
Agrono Kwolek @ stantec.com	
Name of Wetland: wetland 1	
Vegetation Communit(ies):	
HGM Class(es):	
Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
T	
luet land	
[ Cndustrial D	
Poston Ra Poston Station	
Poston Station	
Lat/Long or UTM Coordinate	
59.385058, -82.178780	
Nelsonville	
AThens	
Township The Planas	
Section and Subsection	
Hydrologic Unit Code SEC   TIZN R 15W	
050302040801	
11/7/16	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Survey F.A. Fitch ville silt logm, 0-3% slopes Delineation report/map	
TO THE THE THE TOTAL STORY	
Delineation report/map See Justisdictional Voters Delineation Re	

ame of Wetland: wetland 1	
etland Size (acres, hectares): 0,06 ac	
ketch: Include north arrow, relationship with other surface waters, vegetation z	ones, etc.
A	
sland	
wetland	
	111
	111
T.	
	1 111
	1 111.
	1 111
posten station	
7097001	
	/ // /
	10
The History and the second of the second	
	*
11.2	
4	
mments, Narrative Discussion, Justification of Category Changes:	
	Category:

wetland 1

# Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.		
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.		
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.		
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 hydrotogic regime changes.	V	
Step 5	In all Instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		
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.	1	

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

# **Narrative Rating**

wetland 1

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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. The remaining questions are designed to be answered primally 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	NO 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.  Go to Question 3	Go to Question 3
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
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
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 Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, 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
6	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
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
8a	"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	NO Go to Question 8b

b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES (	NO )
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	/
Эа	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		
NI.	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 partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES  Wetland should be evaluated for possible Category 3 status	NO 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	NO
	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
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 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 several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	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 type of wetland and its quality.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Wetland should be evaluated for possible Category 3 status	Complete Quantitative Rating
	Montgomery, Van Wort etc.).	Complete Quantitative Rating	140

wetland 1

Table 1. Characteristic plant species.

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

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

Site: (	net	and 1	Rater(s): AJK	Date: 11/7/16
O	^	Metric 1. Wetla	and Area (size).	
1	0		•	
max 6 pts.	subtotal	Select one size class and a >50 acres (>20.2	ssign score.	
		25 to <50 acres (	10.1 to <20.2ha) (5 pts)	
		10 to <25 acres (	4 to <10.1ha) (4 pts) .2 to <4ha) (3 pts)	
		0.3 to <3 acres (0	1.2 to <4.12ha) (3 pts)	
		0.1 to <0.3 acres	(0.04 to <0.12ha) (1 pt)	
		<0.1 acres (0.04h	, , ,	land use
3	3	Metric 2. Opia	nd buffers and surrounding	ialiu use.
max 14 pts.	subtotal	2a. Calculate average buffe	er width. Select only one and assign score. Do not o	double check.
		WIDE. Buffers a	verage 50m (164ft) or more around wetland perimete	er (7)
		NARROW, Buffer	s average 25m to <50m (82 to <164ft) around wetlan rs average 10m to <25m (32ft to <82ft) around wetla	nd perimeter (4) and perimeter (1)
		VERY NARROW	. Buffers average <10m (<32ft) around wetland perir	meter (0)
		2b. Intensity of surrounding	l land use. Select one or double check and average I growth or older forest, prairie, savannah, wildlife are	). 22 etc (7)
		LOW. Old field (	>10 years), shrub land, young second growth forest.	(5)
		✓ MODERATELY H	HGH. Residential, fenced pasture, park, conservatio dustrial, open pasture, row cropping, mining, construc	n tillage, new fallow field, (3)
1.		Metric 3. Hydr		ction. (1)
4	17	Wettic 3. Hydi	ology.	
max 30 pts.	subtotal	3a. Sources of Water. Sco	re all that apply 3b. Conne	ectivity. Score all that apply
		High pH groundw	rater (5)	100 year floodplain (1)
		Other groundwate Precipitation (1)	ər (3)	Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1)
		Seasonal/Intermi		Part of riparian or upland corridor (1)
				on inundation/saturation. Score one or dbl check Semi- to permanently inundated/saturated (4)
		>0.7 (27.6in) (3)		Regularly inundated/saturated (3)
		0.4 to 0.7m (15.7 ✓ <0.4m (<15.7in) (		Seasonally inundated (2)
		3e. Modifications to natura	hydrologic regime. Score one or double check and	Seasonally saturated in upper 30cm (12in) (1) average.
		None or none ap		
		Recovered (7) Recovering (3)	ditch tile	point source (nonstormwater) filling/grading
		Recent or no rec		road bed/RR track
			weir stormwater input	dredging
		1		other
4		Metric 4. Habi	tat Alteration and Developm	ent.
max 20 pts	subtotal	4a Substrate disturbance	Score one or double check and average.	
		None or none ap	parent (4)	
		Recovered (3) Recovering (2)		
		Recent or no rec	overy (1)	
			Select only one and assign score.	
		Excellent (7) Very good (6)		
		Good (5)	4.0	
		Moderately good Fair (3)	(4)	
		Poor to fair (2)		
		Poor (1)	re one or double check and average.	
		None or none ap		
		Recovered (6)	mowing	shrub/sapling removal
		Recovering (3)  Recent or no rec	grazing	herbaceous/aquatic bed removal
	11	Tecenii oi no fec	overy (1) clearcutting selective cutting	sedimentation dredging
	H		woody debris removal	farming
St	ubtotal this p	age	toxic pollutants	nutrient enrichment
last revised	1 Februa	ary 2001 jjm		

Site: wetla	nd 1	Rater	(s): AJK		Date: 11/7/12
subtotal first p	7	. Special Wetlan	ıds.		
max 10 pls. subtotal	Check all that a Bog ( Fen (	•			
	Old g Matur Lake	rowth forest (10) re forested wetland (5) Erie coastal/tributary wetland-t Erie coastal/tributary wetland-t			
	Lake Relict Know	Plain Sand Prairies (Oak Oper Wet Prairies (10) In occurrence state/federal thre ficant migratory songbird/water	nings) (10) eatened or enda	angered species (10)	
	Categ	jory 1 Wetland. See Question	1 Qualitative R		opography.
mex 20 pls subtotal		egetation Communities.		Community Cover Scale	
man ac pro-		nt using 0 to 3 scale	0	Absent or comprises <0.1ha (0.2	2471 acres) contiguous area
	Aqua 3 Emer	tic bed gent	1	Present and either comprises so vegetation and is of moderate	mall part of wetland's quality, or comprises a
	Shrut Fores Mudfl	ats	2	Present and either comprises significant part but is of low que  vegetation and is of moderate	gnificant part of wetland's
	Other	water  plan view) Interspersion.	3	part and is of high quality  Present and comprises significa  vegetation and is of high quali	
	Select only one			and the second second	
		(5) trately high(4) trate (3)	Narrative D	Low spp diversity and/or predon disturbance tolerant native sp	
		rately low (2) 1)	mod	Native spp are dominant compo although nonnative and/or dist can also be present, and spec	nent of the vegetation, turbance tolerant native spp
	6c. Coverage of to Table 1 ORA	of invasive plants. Refer M long form for list. Add		moderately high, but generally threatened or endangered spo	w/o presence of rare
	Mode	s for coverage ssive >75% cover (-5) srate 25-75% cover (-3) se 5-25% cover (-1)	high	A predominance of native speci and/or disturbance tolerant na absent, and high spp diversity the presence of rare, threaten	tive spp absent or virtually and often, but not always,
	Near Abse	y absent <5% cover (0) nt (1)	Mudflat and	Open Water Class Quality	
	6d. Microtopog	raphy.	0	Absent <0.1ha (0.247 acres)	
	Score all prese	nt using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 to	acres)
		tated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.8	38 acres)
		se woody debris >15cm (6in) ding dead >25cm (10in) dbh	3	High 4ha (9.88 acres) or more	
		nibian breeding pools	Microtopoo	raphy Cover Scale	
		indicate processing provide	0	Absent	
			_1	Present very small amounts or i of marginal quality	
			2	Present in moderate amounts, be quality or in small amounts of	highest quality
			3	Present in moderate or greater	amounts

End of Quantitative Rating. Complete Categorization Worksheets.

# **ORAM Summary Worksheet**

wetland 1

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

 ${\bf Complete\ Wetland\ Categorization\ Worksheet}.$ 

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES  Wetland is categorized as a Category 3 wetland	NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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	100	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES  Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	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	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: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

# **Background Information**

Name: Aaran Kwolek	
Date:	
11/14/16 Affiliation:	
Stantec	
Address: 11687 Lebanon Rd, Cincinnati, OH 45. Phone Number:	241
Phone Number:	
513 842 8200 e-mail address:	
Agrono Kwolek @ stantec.com	
Name of Wetland: wetland 2	
Vegetation Communit(ies):	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
wetland 1200 st	
) \	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
17 - 54	
1200	
1	
Cadust sist	
Posts Ord Endustrial Dr	
Poston Rd	
Poston Station	
Loston > 1141601	
Lat/Long or UTM Coordinate	- 25
39.385 364, -82,182403	
Nelsonville	
AThens	
Township The Plains	
Section and Subsection	
Hydrologic Unit Code OFO 3 0 3 7 11 0 7 0 1	+
050302040801	
11/7/16 National Wetland Inventory Map	
PSS 1C	
Ohio Wetland Inventory Map	
soil survey whE, west-moreland-Guernsey gilt loams 25-40% st	cars.
Delineation report/map See Jusisdictional Vators Delineation Per	4
JEE Justisoletional Waters Delineation Fel	OL

Name of Wetland:	etland 2			
Wetland Size (acres, hecta			-41	
Sketch: Include north arro	w, relationship with other		/	ne ansmission
			bcolosen ri	
Comments, Narrative Disc	ussion, Justification of Ca	ategory Changes:		
		IN UDF	,	
	7			
Final score: 35			Categor	y: Z

#### **Scoring Boundary Worksheet**

Wetland 2

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.		1
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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	NO 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.  Go to Question 3	Go to Question 3
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	NO Go to Question 4
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
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 Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, 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
6	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	Go to Question 7
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	NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: 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

wetland 2

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 Category 3 status.	Go to Question 9a
	W	Go to Question 9a	
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)
9b	elevation, or along a tributary to Lake Erie that is accessible to fish?  Does the wetland's hydrology result from measures designed to	Go to Question 9b YES	Go to Question 10
30	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, 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	YES Go to Question 9d	NO Go to Question 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant 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 tolerant native plant species within its vegetation communities?	YES  Wetland should be evaluated for possible Category 3 status	NO Go to Question 10
		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 several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	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	
	type of wetland and its quality.	Va	
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	NO
	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), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Wetland should be evaluated for possible Category 3 status	Complete Quantitative Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

wetland 2

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris arundinacea Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnus frangula Typha angustifolia Typha xglauca	Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spp. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix myricoides Salix serissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum Triglochin palustre	Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides Calamagrostis stricta Calamagrostis canadensis Quercus palustris	Calamagrostis canadensi. Calamogrostis stricto Carex atherode Carex buxbaum Carex pelliti Carex sartwelli Gentiana andrewsi Helianthus grosseserratu Liatris spicati Lysimachia quadriflor Lythrun alatun Silphium terebinthinaceun Sorghastrum nutan Spartina pectinati Solidago riddelli

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

Site: wetland2	Rater(s): AJK	Date: 11/7//6
Metric 1. Wetland	Area (size).	
max 6 pts: subtotal Select one size class and assign s	core	
>50 acres (>20.2ha) (6	ots)	
25 to <50 acres (10.1 to	<20.2ha) (5 pts)	
10 to <25 acres (4 to <1 3 to <10 acres (1.2 to <	u. ma) (4 pts) lha) (3 pts)	
✓ 0.3 to <3 acres (0.12 to	<1.2ha) (2pts)	
0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 p	o <0.12ha) (1 pt) ts)	
	ouffers and surroun	ding land use
13 15 Metric 2. Opiana i	diliers allu surrour	iding land use.
max 14 pts. subtotal 2a. Calculate average buffer widtl	n. Select only one and assign score	Do not double check
WIDE. Buffers average	50m (164ft) or more around wetland	perimeter (7)
MEDIUM. Buffers avera	ige 25m to <50m (82 to <164ft) arou	und wetland perimeter (4)
VERY NARROW. Buffe	rage 10m to <25m (32ft to <82ft) ar rs average <10m (<32ft) around we	ound wetland perimeter (1) tland perimeter (0)
2b. Intensity of surrounding land to	ise. Select one or double check an	d average.
VERY LOW. 2nd growt	n or older forest, prairie, savannah,	wildlife area, etc. (7)
MODERATELY HIGH.	ars), shrub land, young second grow Residential, fenced pasture, park, c	nn forest. (5) onservation tillage, new fallow field. (3)
HIGH. Urban, industrial	, open pasture, row cropping, mining	g, construction. (1)
IG 25 Metric 3. Hydrolog	av.	
G 25 Metric 3. Trydrolog		
max 30 pts. subtotal 3a. Sources of Water. Score all to	nat apply.	3b. Connectivity. Score all that apply.
High pH groundwater (5	)	100 year floodplain (1)
Other groundwater (3) Precipitation (1)		Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1)
Seasonal/Intermittent su		Part of riparian or upland corridor (1)
Perennial surface water		3d. Duration inundation/saturation. Score one or dbl check
3c. Maximum water depth. Selection >0.7 (27.6in) (3)	t only one and assign score.	Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3)
0.4 to 0.7m (15.7 to 27.6	Sin) (2)	Seasonally inundated (2)
30 Modifications to natural hydro	asia sasima. Casas and a decida	Seasonally saturated in upper 30cm (12in) (1)
None or none apparent	ogic regime. Score one or double o	
Recovered (7)	(12) Check all disturbances observed	point source (nonstormwater)
Recovering (3)	tile	filling/grading
Recent or no recovery (		road bed/RR track
	weir stormwater input	other Fly ash lands!
Matria 4 Habitat	NI4	
6   3	Alteration and Deve	elopment.
max 20 µls. sublotal 4a Substrate disturbance Score	one or double check and average.	
None or none apparent	(4)	
Recovered (3)	` '	
Recovering (2) Recent or no recovery (	1)	
4b. Habitat development. Select	only one and assign score.	
Excellent (7)	•	
Very good (6) Good (5)		
Moderately good (4)		
Fair (3)		
Poor to fair (2)		
4c. Habitat alteration. Score one	or double check and average.	
None or none apparent		/ed
Recovered (6)	mowing	shrub/sapling removal
Recovering (3)  Recent or no recovery (	grazing  clearcutting	herbaceous/aquatic bed removal
Thecent of no recovery (	selective cutting	sedimentation 女dredging/ Dayn wit カら
31	woody debris removal	taming
subtotal this page	toxic pollutants	nutrient enrichment
last revised 1 February 2001 jjm		

Site:	wetle	and 2	Rater	(s): AJK		Date: 11/7/16
G max 10 pts.	3   subtotal first pa	Metri	ic 5. Special Wetlar	nds.		
4.4		Matri	Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland- Lake Erie coastal/tributary wetland- Lake Plain Sand Prairies (Oak Oper Relict Wet Prairies (10) Known occurrence state/federal thre Significant migratory songbird/water Category 1 Wetland. See Question  C 6. Plant commun	restricted hydro nings) (10) eatened or enda r fowl habitat or 1 Qualitative R	angered species (10) usage (10) ating (-10)	onography
<u> </u>	35					opograpny.
max 20 pts.	subtotal		and Vegetation Communities. present using 0 to 3 scale.	vegetation	Community Cover Scale Absent or comprises < 0.1ha (0.2)	A71 acros) continuous aroa
		Score all	Aquatic bed Emergent	1	Present and either comprises sn vegetation and is of moderate	nall part of wetland's quality, or comprises a
		3	Shrub Forest Mudflats Open water	2	significant part but is of low que Present and either comprises significant and is of moderate part and is of high quality	nificant part of wetland's
			Otherontal (plan view) Interspersion.	3	Present and comprises significant vegetation and is of high quality	a selection of the contract of
		Select on		Norrative D	escription of Vegetation Quality	
			High (5) Moderately high(4) Moderate (3)	low	Low spp diversity and/or predom disturbance tolerant native spe	
			Moderately low (2) Low (1) None (0) rage of invasive plants. Refer ORAM long form for list. Add	mod	Native spp are dominant compor although nonnative and/or dist can also be present, and speci moderately high, but generally threatened or endangered spp	urbance tolerant native spp es diversity moderate to w/o presence of rare
		or deduct	points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	high	A predominance of native species and/or disturbance tolerant nat absent, and high spp diversity the presence of rare, threatened	ive spp absent or virtually and often, but not always,
		X	Nearly absent <5% cover (0) Absent (1)	Mudflat and	Open Water Class Quality	
			topography.	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 a	
		1	Vegetated hummucks/tussucks Coarse woody debris >15cm (6in)	3	Moderate 1 to <4ha (2.47 to 9.8 High 4ha (9.88 acres) or more	8 acres)
			Standing dead >25cm (10in) dbh Amphibian breeding pools	Microtopoo	raphy Cover Scale	
			I 8	0	Absent	
				1	Present very small amounts or if of marginal quality	more common
				2	Present in moderate amounts, be quality or in small amounts of l	
				3	Present in moderate or greater a	mounts

35

End of Quantitative Rating. Complete Categorization Worksheets.

# ORAM Summary Worksheet wetland 2

		circle answer or insert	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	William The Control
9	Metric 2. Buffers and surrounding land use	13	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	6	San Harris
	Metric 5. Special Wetland Communities	0	10.22 E. S.
	Metric 6. Plant communities, interspersion, microtopography	니	NO PER IN
	TOTAL SCORE	35	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 less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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	<b>(</b> )	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES  Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	0	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, 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.

-		al Category	
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

# Version 5.0 Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet

#### **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: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

# **Background Information**

Name: Aaron Kwolek	
/ I I W// > / I	
Date: (1/1/1//	
11/19/16 Affiliation:	
Stantec	
Address:	
11687 Lebanon Rd, Cincinnati, OH 45.	241
513 842 8200	
e-mail address:	
Name of Wetland: 12	
Name of Wetland: wetland 3	
PSS	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
D	
Y	
Timoset	
1/00	
Thought of De	
Poston Ro Poston Station	
a l slala	
602400 > 44416N	
Lat/Long or UTM Coordinate 70 25/ 5 7 19 1 66 /	
Lat/Long or UTM Coordinate 39. 38 63 54, -8 7, 18 1 69 6	
Lat/Long or UTM Coordinate 39.386354, -87.181696  USGS Quad Name  NP   50 p   11   18	
Nelsonville	
County AThens	
Nelsonuille  County  AThens  Township  The Plans	
Nelsonville  County  AThens  Township  The Plains  Section and Subsection	
Nelsonville  County  AThens  Township  The Plains  Section and Subsection  Sec 1 TIZN RISW  Hydrologic Unit Code	
Nelsonville  County  AThens  Township  The Plains  Section and Subsection  Sec   TIZN RISM  Hydrologic Unit Code  050302040801	
Nelsonville  County  AThens  Township  The Plains  Section and Subsection  Sec   TIZN RISW  Hydrologic Unit Code 050302040801  Site Visit  11/7/16	
Nelsonville  County  AThens  Township  The Plains  Section and Subsection  Sec   TIZN RISW  Hydrologic Unit Code 050302040801  Site Visit  11/7/16	
Nelsonville  County  AThens  Township  The Plans  Section and Subsection  Sec   TIZN RISM  Hydrologic Unit Code  050302040801  Site Visit  11/7/16  National Wetland Inventory Map  Ohio Wetland Inventory Map	
County AThens Township The Planns Section and Subsection  Sec I TIZN RISM Hydrologic Unit Code 050302040801  Site Visit 11/7/16 National Wetland Inventory Map None Soil Survey	
Nelsonuille  County AThens Township The Plains Section and Subsection  Sec   TIZN RISW  Hydrologic Unit Code 050302040801  Site Visit 11/7/16  National Wetland Inventory Map None  Ohio Wetland Inventory Map	
Nelsonville  County  AThens  Township  The Plains  Section and Subsection  Sec 1 TIZN RISW  Hydrologic Unit Code  050302040801  Site Visit  11/7/16  National Wetland Inventory Map  None  Ohio Wetland Inventory Map	005

Name of Wetland:	nd 3				
Wetland Size (acres, hectares):	0,029	C			
Wetland Size (acres, hectares): Sketch: Include north arrow, rela	tionship with oth	er surface water	s, vegetation zo	ones, etc.	
		10			
		7.5.			
		N.	2		
			X		
			194		
			13		
			13	531	
				07	
/		1		1	
	wetland	9	\	1/2	
	WETIANU		\	10	
1					
	/				,
	1				
		/			
		19			
		T			
Comments, Narrative Discussion	, Justification of	Category Chang	es:		
,				100	
Final score:				Category:	1

#### **Scoring Boundary Worksheet**

wetland 3

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 3

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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. The remaining questions are designed to be answered based 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	NO 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.  Go to Question 3	NO Go to Question 3
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	NO Go to Question 4
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	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, 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
6	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
Z	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	NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: 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

we tland 3

			^
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 Category 3 status.	Go to Question 9a
	141	Go to Question 9a	$\wedge$
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 elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	(NO) 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 partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES  Wetland should be evaluated for possible Category 3 status	NO Go to Question 9c
9c	Are Lake Erie water levels the watland's primary hydrological influence	Go to Question 10 YES	NO
36	Are Lake Erie water levels the wetland's primary hydrological influence, 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 vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
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	$\circ$
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in 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 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	YES  Wetland is a Category 3 wetland.  Go to Question 11	Go to Question 11
	type of wetland and its quality.		()
11	Rellct Wet Prairies. Is the wetland a relict wet prairie community 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), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.)	YES  Wetland should be evaluated for possible Category 3 status  Complete Quantitative Rating	Complete Quantitative Rating

wetland 3

Table 1	Characteristic plant species	9
lable I.	Characteristic plant species	

invasive/exotic spp	fen species	bog species	Oak 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 stricto
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 spicat
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflor
71 8	Parnassia glauca	Schechzeria palustris		Lythrum alatur
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianui
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceu
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutan
	Salix candida	Vaccinium oxycoccos		Spartina pectinat
	Salix myricoides	Woodwardia virginica		Solidago riddell
	Salix serissima	Xyris difformis		- C.
	Solidago ohioensis	-9		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: U	ur Hav	3	Rater(s): AJK	Date: (1/7/16
		Metric 1. Wetla	nd Area (size).	
0	0		,	
max 6 pts.	subtotal	Select one size class and ass		
		>50 acres (>20.2ha	ı) (o pts) .1 to <20.2ha) (5 pts)	
		10 to <25 acres (4	to <10.1ha) (4 pts)	
		3 to <10 acres (1.2		
		0.3 to <3 acres (0.1 0.1 to <0.3 acres (0.1	2.to < 1.2na) (2pts) 1.04 to <0.12ha) (1 pt)	
		<0.1 acres (0.04ha)	) (0 pts)	
7	7	Metric 2. Uplan	d buffers and surround	ing land use.
max 14 pts.	subtotal	2a. Calculate average buffer	width. Select only one and assign score. D	o not double check.
			rage 50m (164ft) or more around welland pe average 25m to <50m (82 to <164ft) around	
			average 10m to <25m (32ft to <82ft) around	
		VERY NARROW.	Buffers average <10m (<32ft) around wetlan	d perimeter (0)
			and use. Select one or double check and a prowth or older forest, prairie, savannah, wild	
		LOW. Old field (>1	0 years), shrub land, young second growth f	forest. (5)
		MODERATELY HIS	GH. Residential, fenced pasture, park, cons	ervation tillage, new fallow field. (3)
			strial, open pasture, row cropping, mining, c	onstruction. (1)
4	11	Metric 3. Hydro	logy.	
	11			
max 30 pts.	subtotal	3a. Sources of Water. Score High pH groundwar		Connectivity. Score all that apply.
		Other groundwater	` '	100 year floodplain (1)  Between stream/lake and other human use (1)
		Precipitation (1)		Part of wetland/upland (e.g. forest), complex (1)
			ent surface water (3) water (lake or stream) (5) 3d.	Part of riparian or upland corridor (1)
			Select only one and assign score.	Duration inundation/saturation. Score one or dbl check Semi- to permanently inundated/saturated (4)
		>0.7 (27.6in) (3)		Regularly inundated/saturated (3)
		0.4 to 0.7m (15.7 to <0.4m (<15.7in) (1)		Seasonally inundated (2)  Seasonally saturated in upper 30cm (12in) (1)
			ydrologic regime. Score one or double ched	ck and average.
		None or none appa	rent (12) Check all disturbances observed	
		Recovered (7) Recovering (3)	ditch	point source (nonstormwater)
		Recent or no recov	rery (1) tile	✓ filling/grading road bed/RR track
			weir	dredging
		2	stormwater input	other
7	14	Metric 4. Habita	at Alteration and Develo	nment
7	19		at / illoration and bovor	· pinotta
max 20 pta.	bubtotal	4a. Substrate disturbance. S	Score one or double check and average.	
		None or none appa	rent (4)	
		Recovered (3) Recovering (2)		
		Recent or no recov		
			elect only one and assign score.	
		Excellent (7) Very good (6)		
		Good (5)		
		Moderately good (4	1)	
		Fair (3) Poor to fair (2)		
		Poor (1)		
			one or double check and average.	
		None or none appa		
		Recovered (6) Recovering (3)	mowing grazing	shrub/sapling removal herbaceous/aquatic bed removal
		Recent or no recov		sedimentation
	14		selective cutting	dredging
1	1.1		woody debris removal toxic pollutants	farming nutrient enrichment
	ubtotal this p	•	Toxic policiants	
ast revised	1 Febru	ary 2001 jjm		

Site: We-	land 3	Rater	(s): ATK	Date: 11/7//6
subtotal fi	Motrio 5	Special Wetlan	ds.	
max 10 pts. subt	Bog (10 Fen (10) Old grov Mature i Lake Eri Lake Pla Relict W Known o Significa Categor	) wth forest (10) forested wetland (5) ie coastal/tributary wetland-uie coastal/tributary wetland-rain Sand Prairies (Oak Open /et Prairies (10) occurrence state/federal thre ant migratory songbird/water y 1 Wetland. See Question	estricted hydro lings) (10) atened or end fowl habitat or 1 Qualitative F	angered species (10) r usage (10)
1 1	5			
max 20 pts. subt		etation Communities.		Community Cover Scale
	Score all present u	-	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
	Aquatic		1	Present and either comprises small part of wetland's
resent	Emerge.	nτ		vegetation and is of moderate quality, or comprises a
- / -	O Shrub			significant part but is of low quality
cesent 0.25 ac	Forest Mudflats Open wa		2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
	Other	210.	3	Present and comprises significant part, or more, of wetland's
		in view) Interspersion		vegetation and is of high quality
	Select only one.	in view) interspersions	-	Tragalation and to or riight quality
	High (5)		Narrative D	Description of Vegetation Quality
		tely high(4)	low	Low spp diversity and/or predominance of nonnative or
			IOM	disturbance tolerant native species
	Moderat	• •	mod	Native spp are dominant component of the vegetation,
		tely low (2)	mod	although nonnative and/or disturbance tolerant native spp
	Low (1)	`		can also be present, and species diversity moderate to
	1 / 11	,		
		nvasive plants. Refer		moderately high, but generally w/o presence of rare threatened or endangered spp
		long form for list. Add	- LT-6	
	or deduct points fo		high	A predominance of native species, with nonnative spp
		/e >75% cover (-5)		and/or disturbance tolerant native spp absent or virtually
		te 25-75% cover (-3)		absent, and high spp diversity and often, but not always,
		5-25% cover (-1)	_	the presence of rare, threatened, or endangered spp
		bsent <5% cover (0)		2002
	Absent	· <i>'</i>	_	d Open Water Class Quality
	<ol><li>6d. Microtopograp</li></ol>		0	Absent <0.1ha (0.247 acres)
	Score all present u		1	Low 0.1 to <1ha (0.247 to 2.47 acres)
		ed 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	g dead >25cm (10in) dbh	1 . 3 . i	
	Amphibi	an breeding pools	Microtopog	graphy Cover Scale
			0	Absent
			1	Present very small amounts or if more common
				of marginal quality
			2	Present in moderate amounts, but not of highest
			_	quality or in small amounts of highest quality
			3	Present in moderate or greater amounts
1				and of highest quality
				1 and or ingrisor specific

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

wetland 3

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. 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 (NØ	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	
	Metric 2. Buffers and surrounding land use	7	1
	Metric 3 Hydrology	4	
	Metric 4. Habitat	3	Alterial Control
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	* 1	The state of the s
	TOTAL SCORE	15	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

#### **Wetland Categorization Worksheet**

wetland 3

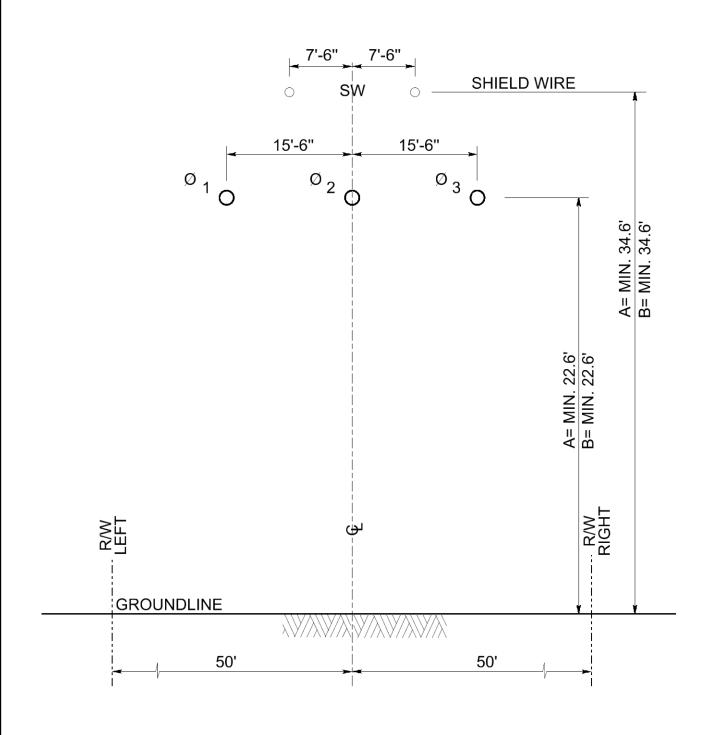
Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit 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, 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.

		al Category	
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

# LETTER OF NOTIFICATION FOR LEMASTER-HARRISON 138 KV TRANSMISSION LINE RELOCATION PROJECT

Appendix D. Structure Design and Phasing Diagrams



DIMENSION "A" SINGLE CIRCUIT - HOR. CONFIGURATION (STEEL POLE) (UNDER EMERGENCY & NORMAL MAX. LINE LOADING)

DIMENSION "B" SINGLE CIRCUIT - HOR. CONFIGURATION (STEEL POLE) (UNDER WINTER NORMAL CONDUCTOR RATING)

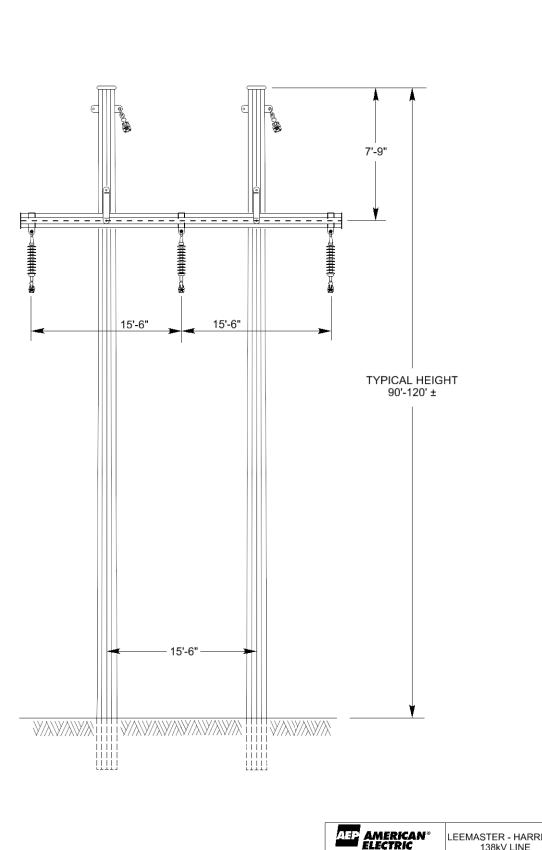


LEEMASTER - HARRISON 138kV LINE

TYPICAL PHASE ARRANGEMENT STEEL POLE

NOT TO SCALE

FIGURE 2



AEP AMERICAN® ELECTRIC POWER

LEEMASTER - HARRISON 138kV LINE

TYPICAL TANGENT STRUCTURE TUBULAR STEEL H-FRAME SUSPENSION

NOT TO SCALE

FIGURE 1

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4/3/2017 11:46:12 AM

in

Case No(s). 17-0631-EL-BLN

Summary: Letter of Notification 2 of 2 electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company