MT. VERNON STATION – HEDDING STATION 138 KV TRANSMISSION LINE REBUILD PROJECT, KNOX AND MORROW COUNTIES, OHIO

Appendix D Data Forms

D.1 WETLAND DETERMINATION DATA FORMS





Project/Site:		non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/10/1	6
Applicant:	AEP									County:	Knox	
Investigator #1:	Nate Nolan	nd		Invest	igator #2:	Corey C				State:	Ohio	
Soil Unit:		da silt loam, 12 to 18 pe	ercent slop				NWI Classification:	NA			Wetland	d 1
Landform:	Depression				cal Relief:					Sample Point:		
Slope (%):					ongitude:				NAD83	Community ID:		
		ditions on the site ty				(If no, expla		□ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumstar	nces present?	?	Township:		
		or Hydrology □ nat	turally pr	oblemat	ic?		✓ Yes	N⊎		Range:		Dir:
SUMMARY OF												
Hydrophytic Ve					□ No			Hydric Soils				¹ Yes □ No
Wetland Hydrol	ogy Present	?		☑ Yes	: □ No			Is This Samp	oling Point \	Within A Wetla	ınd? ☑	Yes ■ No
Remarks:	Fringe of p	ond wetland										
HYDROLOGY	YDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicato	rs are n	ot presen	t 🗆).						
Primary:		atoro (orioon noro ii	maioato	,, o a, o , i	ot procon	. – ,.			Secondary:			
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface Soi	il Cracks	
✓	A2 - High Wa	ater Table			B13 - Aqu	atic Fauna	ı			B10 - Drainage I	Patterns	
✓	A3 - Saturation				B14 - True					C2 - Dry-Seasor		able
	B1 - Water M									C8 - Crayfish Bu		
	B2 - Sedimer B3 - Drift Der						spheres on Living Roots			C9 - Saturation		
	B4 - Algal Ma						duced Iron duction in Tilled Soils		_	D1 - Stunted or S D2 - Geomorphi		
	B5 - Iron Der				C7 - Thin					D5 - FAC-Neutra		'
		on Visible on Aerial Ima	agery						_	20 .7.0		
	B8 - Sparsely	y Vegetated Concave S	Surface		Other (Ex	plain in Re	marks)					
Field Observat	ions:											
Surface Water	Present?	☑ Yes □ No	Depth:	6	(in.)			Watland He	dualani. Du		Yes □	. Na
Water Table Pr	esent?	☑ Yes □ No	Depth:	0	(in.)			Wetland Hy	arology Pr	esent? 🗵	res 🗆	I INO
Saturation Pres		☑ Yes □ No	Depth:	0	(in.)							
Dogariba Basard	I D-t- /-t											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A												
2000-120 1 toos too 2 data (choosing the incoming the inc												
Remarks:	ed Data (Stre	eam gauge, monitoring	g well, ae	rial photo	os, previou	s inspecti	ons), if available:		N/A			
Remarks:	ed Data (Stre	eam gauge, monitorino	g well, ae	rial photo	os, previou	s inspecti	ons), if available:		N/A			
Remarks: SOILS	·			•		·			N/A			
Remarks: SOILS Map Unit Name	:	AdD2 Amanda silt I	oam, 12	to 18 pe	ercent slo	pes, eroo	ded					
Remarks: SOILS Map Unit Name Profile Descrip	tion (Describe to	AdD2 Amanda silt I	oam, 12	to 18 pe	ercent slo	pes, eroo	ded on, D=Depletion, RM=Reduced Matrix, CS=C			ore Lining, M=Matrix)		Touture
Remarks: SOILS Map Unit Name Profile Descrip Top	tion (Describe to	AdD2 Amanda silt I	oam, 12	to 18 penthe absence of Matrix	ercent slo f indicators.) (Typ	pes, eroo	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo	x Features	ins; Location: PL=Po	ı		Texture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	otion (Describe to Bottom Depth	AdD2 Amanda silt I the depth needed to document the ind Horizon	oam, 12 icator or confirm Color	to 18 per the absence of Matrix (Moist)	ercent slo f indicators.) (Type	pes, eroc	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location	(e.g. cla	ay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Bottom Depth	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist)	ercent slo f indicators.) (Typ	pes, eroo	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	x Features	ins; Location: PL=Po	Location M	(e.g. cla	
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	otion (Describe to Bottom Depth	AdD2 Amanda silt I the depth needed to document the ind Horizon	oam, 12 icator or confirm Color	to 18 per the absence of Matrix (Moist)	ercent slo f indicators.) (Type	pes, eroc	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location	(e.g. cla	ay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Bottom Depth	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist)	ercent slo f indicators.) (Typ % 85	pes, eroo e: C=Concentral	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist)	ercent slo f indicators.) (Typ % 85	pes, eroc e: C=Concentrat	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence or Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85	pes, eroce: C=Concentral	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% Features	Type C	Location M 	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist) 5/2	% 85	pes, erocentral	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% Features % 15	Type C	Location M 	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist) 5/2	% 85	pes, eroue e. C=Concentral	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Marrix (Moist) 5/2	% 85	pes, eroo	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85	pes, eroce Carconcentral	led on, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist) 7/6	% 15	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence or Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85 re not pre	Des, eroce: C=Concentral	ded on D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist) 7/6	% 15 Indicators	Type C s for Problem	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 16 Soil Field In	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist) 5/2	% 85 re not pre S4 - Sand	Pes, erou	ded on D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist) 7/6	% 15	Type C 5 for Problem	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In	AdD2 Amanda silt I the depth needed to document the ind Horizon 1 ndicators (check he	oam, 12 icator or confirm Color 10YR	to 18 per the absence or Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85 re not pre	pes, eroce c=c=concentral	led on, D=Depletion, RM=Reduced Matrix, CS=C Redoc Color (Moist) 7/6	% 15 Indicators	Type C 5 for Problem A16 - Coast S7 - Dark Sr	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E	AdD2 Amanda silt I the depth needed to document the Ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist) 5/2 cators a	ercent slo f indicators.) (Typ % 85 re not pre 84 - Sand \$5 - Sand	Des, eroce C=Concentral	Redc Color (Moist) 7/6	% 15	Type C for Problen A16 - Coast F7 - Dark St F12 - Iron-M	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR	to 18 per the absence of Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85 re not pre \$4 - Sand \$5 - Strip \$5 - Strip \$71 - Loarr \$72 - Loarr	pes, erou 10YR sent □ ly Gleyed ly Redox ly Redox ly Muck M ly Gleyed ly Gleyed ly Redox ly Muck M ly Gleyed	ded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type C s for Problen A16 - Coast S7 - Dark S1 T12 - Very	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E ₁ A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M	AdD2 Amanda silt I the depth needed to document the ind Horizon 1 Idicators (check he pipedon istic en Sulfide d Layers luck	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2 cators a	ercent slo findicators.) (Typ % 85	pes, eroce c=Concentral	led on, D=Depletion, RM=Reduced Matrix, CS=C Redot Color (Moist) 7/6	Section	Type C s for Problen A16 - Coast S7 - Dark S1 T12 - Very	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2 cators a	ercent slo f indicators.) (Typ % 85 re not pre 84 - Sand \$5 - Sand \$5 - Sand \$5 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo	pes, eroce c=Concentral 10YR	Gled on, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist) 7/6	Section	Type C s for Problen A16 - Coast S7 - Dark S1 T12 - Very	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric:	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic EJ A3 - Black Hi A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick E	AdD2 Amanda silt I the depth needed to document the ind Horizon 1 ndicators (check he pipedon istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2 cators a	ercent slo f indicators.) (Typ % 85 re not pre \$4 - Sand \$5 - Sand \$6 - Stripi F1 - Loarr F2 - Loarr F3 - Deple F6 - Redo F7 - Deple	pes, eroce c=concentral 10YR	Gled on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	Section	Type C s for Problen A16 - Coast S7 - Dark S1 T12 - Very	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2 cators a	ercent slo f indicators.) (Typ % 85 re not pre 84 - Sand \$5 - Sand \$5 - Sand \$5 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo	pes, eroce c=concentral 10YR	ded on D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type C 5 for Problen A16 - Coast S7 - Dark St F12 - Iron-M Other (Expla	Location M	(e.g. cla	ay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mt	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	pes, eroce c=concentral 10YR	ded on D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% Features % 15 Indicators Indicators of hydrophyl	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam ss disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2 cators a	ercent slo f indicators.) (Typ % 85 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	pes, eroce c=concentral 10YR	ded on D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% 15	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam ss disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mt	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	pes, eroce c=concentral 10YR	ded on D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% Features % 15 Indicators Indicators of hydrophyl	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam ss disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mt	AdD2 Amanda silt I the depth needed to document the ind Horizon 1	oam, 12 icator or confirm Color 10YR re if indice	to 18 per the absence of Matrix (Moist) 5/2	ercent slo f indicators.) (Typ % 85 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	pes, eroce c=concentral 10YR	ded on D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 7/6	% Features % 15 Indicators Indicators of hydrophyl	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam ss disturbed or problematic.



Sample Point: SP 1 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 1 **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: 3 (A) 3. 4. Total Number of Dominant Species Across All Strata: 3 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 5 10 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 =FACU spp. x 5= UPL spp. 0 2 3. **79** ____(A) Total 84 4. 5. Prevalence Index = B/A = 1.063 --6. 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 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 20 OBL Typha X glauca * Indicators of hydric soil and wetland hydrology must be Leersia oryzoides 20 OBL present, unless disturbed or problematic. 3. Eleocharis palustris 15 OBL Typha angustifolia N **Definitions of Vegetation Strata:** 5 5. N OBL Typha latifolia 6 OBL Carex frankii Ν Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Impatiens capensis 7. 3 Ν **FACW** 8. Persicaria hydropiper N OBL Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q OBL Lycopus americanus N ft. tall. 10. Ν **FACW** Solidago gigantea 11 Centaurea ssp. 5 Ν #N/A Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks: Additional Remarks:



Project/Site:	Mount Verr	non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/10/1	6
Applicant:	AEP									County:	Knox	
Investigator #1:					igator #2:	Corey C				State:	Ohio	
Soil Unit:		da silt loam, 12-18% sl	opes, ero				NWI Classification:	NA			Wetland	1 1
Landform:	Backslope				al Relief:					Sample Point:		
Slope (%):	4				ongitude:				NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumstar	nces present?	•	Township:		
		or Hydrology □ nat	turally pr	oblemat	ic?		✓ Yes	N⊎		Range:		Dir:
SUMMARY OF												
Hydrophytic Ve				□ Yes	☑ No			Hydric Soils				Yes ☑ No
Wetland Hydrol	logy Present	?		□ Yes	. ☑ No			Is This Samp	ling Point \	Within A Wetla	ınd? 📮	Yes No
Remarks:												
HYDROLOGY	YDROLOGY											
Wetland Hydr	ology Indic:	ators (Check here if	indicato	rs are n	ot presen	F⊠)•						
Primary		ators (Oncor nord	indicate	ns arc ii	ot presen				Secondary:			
<u> </u>	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface So	il Cracks	
	A2 - High Wa				B13 - Aqu					B10 - Drainage		
	A3 - Saturati	on			B14 - True	Aquatic I	Plants			C2 - Dry-Season	n Water T	able
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedime						spheres on Living Roots			C9 - Saturation		
	B3 - Drift De						educed Iron			D1 - Stunted or		
	B4 - Algal Ma B5 - Iron Der				Co - Rece		duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutra		
		on Visible on Aerial Ima	agery		D9 - Gaud					D3 - FAC-Neuli	ai i est	
		Vegetated Concave S			Other (Ex							
		, 0			` '		,					
Field Observat	tions:											
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)							
Water Table Pr		□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent?	Yes ☑	No
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)							
					. ,							
Describe Record	ed Data (stre	eam gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Remarks:												
SOILS												
Map Unit Name		AdD2- Amanda silt										
Profile Descrip	otion (Describe to	the depth needed to document the ind	icator or confirm	the absence o	f indicators.) (Typ	e: C=Concentrat	tion, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Gra	ns; Location: PL=Po	re Lining, M=Matrix)		
Тор	Bottom			Matrix			Redo	ox Features				Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. cla	ay, sand, loam)
0	16	1	10YR	4/4	100							silt
-		-							-	-		
							<u></u>					
					1							
-												
NRCS Hydric	Soil Field Ir	ndicators (check he	re if indi	cators a				Indicators	for Problen			
	A 4 111 - 4 1				S4 - Sand		Matrix			Prairie Redox		
	A1- Histosol				S5 - Sand	y Redox			S7 - Dark Si	ırface		
	A2 - Histic E							_				
	A2 - Histic E A3 - Black H	istic			S6 - Stripp					anganese Masse		
	A2 - Histic E ₁ A3 - Black Hi A4 - Hydroge	istic en Sulfide			S6 - Stripp F1 - Loam	y Muck M	ineral		TF12 - Very	anganese Masse Shallow Dark Su		
	A2 - Histic E ₁ A3 - Black Hi A4 - Hydroge A5 - Stratifie	istic en Sulfide d Layers			S6 - Strip F1 - Loam F2 - Loam	ıy Muck M ıy Gleyed	ineral Matrix		TF12 - Very	anganese Masse		
	A2 - Histic E _I A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	istic en Sulfide d Layers fluck			S6 - Strip F1 - Loam F2 - Loam F3 - Deple	y Muck M y Gleyed eted Matri:	ineral Matrix x		TF12 - Very	anganese Masse Shallow Dark Su		
	A2 - Histic E _I A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	istic en Sulfide d Layers fluck ed Below Dark Surface		_ _ _ _	S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo	y Muck M y Gleyed eted Matri x Dark Su	ineral Matrix x rface		TF12 - Very	anganese Masse Shallow Dark Su		
	A2 - Histic E ₁ A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm N A11 - Deplet	istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface			S6 - Strip F1 - Loam F2 - Loam F3 - Deple	ny Muck M ny Gleyed eted Matri: nx Dark Su eted Dark	ineral Matrix x rface Surface		TF12 - Very	anganese Masse Shallow Dark Su		
0 0 0 0	A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface			S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	ny Muck M ny Gleyed eted Matri: nx Dark Su eted Dark	ineral Matrix x rface Surface sions		TF12 - Very Other (Expla	anganese Masse Shallow Dark Su iin in Remarks)	ırface	s disturbed or problematic.
Restrictive Layer	A2 - Histic E ₁ A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M	istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat			S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ny Muck M ny Gleyed eted Matri: nx Dark Su eted Dark	ineral Matrix x rface Surface sions	1 Indicators of hydrophy	TF12 - Very Other (Expla	anganese Masse Shallow Dark Su in in Remarks)	present, unles	
	A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat			S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ny Muck M ny Gleyed eted Matri: nx Dark Su eted Dark	ineral Matrix x rface Surface sions		TF12 - Very Other (Expla	anganese Masse Shallow Dark Su in in Remarks)	ırface	
Restrictive Layer	A2 - Histic E ₁ A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M	istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat			S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ny Muck M ny Gleyed eted Matri: nx Dark Su eted Dark	ineral Matrix x rface Surface sions	1 Indicators of hydrophy	TF12 - Very Other (Expla	anganese Masse Shallow Dark Su in in Remarks)	present, unles	
Restrictive Layer (If Observed)	A2 - Histic E ₁ A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M	istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat			S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ny Muck M ny Gleyed eted Matri: nx Dark Su eted Dark	ineral Matrix x rface Surface sions	1 Indicators of hydrophy	TF12 - Very Other (Expla	anganese Masse Shallow Dark Su in in Remarks)	present, unles	



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 1 Sample Point: SP 2

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

VEGETATION	(Species identified in all uppercase are non-na	ative spec	ies.)		
Tree Stratum (Plo	t size: 30 ft radius)				
	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.	-				Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
3.					·,
4.					Total Number of Dominant Species Across All Strata: 1 (B)
5.					(D)
6.					Descent of Descinent Consider That Are ORL FACIAL on FAC. (A/D)
					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.	-				
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. $0 x 1 = 0$
	Total Cover =	0			FACW spp. $0 x 2 = 0$
					FAC spp. 20 x 3 = 60
Sanling/Shrub Stra	atum (Plot size: 15 ft radius)				FACU spp. 75 x 4 = 300
1.					UPL spp. 8 x 5 = 40
2.	-				Οι L 3ρρ X Ο
3.					T-1-1 400 (A) 400 (D)
					Total 103 (A) 400 (B)
4.	-				
5.					Prevalence Index = B/A = 3.883
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☐ No Dominance Test is > 50%
10.	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
	Total Covel =	U			
					☐ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Plo					☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Schedonorus arundinaceus	60	Υ	FACU	* Indicators of hydric soil and wetland hydrology must be
2.	Poa pratensis	20	N	FAC	present, unless disturbed or problematic.
3.	Ambrosia artemisiifolia	10	N	FACU	present, unless distarbed of problematic.
4.	Daucus carota	5	N	UPL	Definitions of Vegetation Strata:
5.	Trifolium pratense	5	N	FACU	
6	Centaurea biennis	3	N	UPL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.					it. tali.
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.					YVOOLY VIIIES - / 11350) VIIIES GIGARDI MAIT 0.20 IL III HOIGHE.
	Total Cover =	103			
Woody Vine Stratt	ım (Plot size: 30 ft radius)				
1.					
2.	-				
3.					Hydrophytic Vegetation Present □ Yes ☑ No
4.					
5.					
J.					
Damari	Total Cover =	0			
Remarks:					
Additional Ren	narks:				
aa.a.ana itel					

Additional Remarks:		



Project/Site:	Mount Verr	non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/10/16	6
Applicant:	AEP									County:	Knox	
Investigator #1:	Nate Nolar	nd		Investi	gator #2:	Corey C	ook			State:	Ohio	
Soil Unit:	CdC2- Centerb	urg silt loam, 6 to 12 percen	t slopes, er	oded			NWI Classification:			Wetland ID:	Wetland	12
Landform:	Floodplain			Loc	al Relief:	Convex				Sample Point:	SP 3	
Slope (%):	3	Latitude:						Datum:	NAD83	Community ID:	PEM	
		ditions on the site ty				(If no, expla	in in remarks)	Yes □	No	Section:		
Are Vegetation	□ , Soil □ ,	or Hydrology □ sig	nificantly	/ disturb	ed?		Are normal circumsta	nces present?	>	Township:		
Are Vegetation	□ , Soil □ ,	or Hydrology □ nat	turally pr	oblemat	ic?		Yes	N⊎		Range:		Dir:
SUMMARY OF	FINDINGS											
Hydrophytic Ve	getation Pre	sent?			□ No			Hydric Soils	Present?		✓	Yes □ No
Wetland Hydrol				Yes						Within A Wetla	ınd? ■	Yes ■ No
Remarks:	- 37											
HYDROLOGY												
	Wetland Hydrology Indicators (Check here if indicators are not present □):											
		ators (Check here if	indicato	rs are n	ot presen	t □):						
Primary:		*** *		_	DO 14/ /				Secondary:			
0 [A1 - Surface				B9 - Wate					B6 - Surface Soi		
□ A2 - High Water Table□ B13 - Aquatic Faur□ B14 - True Aquatic										B10 - Drainage I C2 - Dry-Seasor		abla
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		able
]	B2 - Sedime						spheres on Livina Roots			C9 - Saturation		Aerial Imagery
	B3 - Drift De						duced Iron			D1 - Stunted or		
	B4 - Algal Ma						duction in Tilled Soils		✓	D2 - Geomorphi		
	B5 - Iron Dep				C7 - Thin	Muck Surf	ace		☑	D5 - FAC-Neutra	al Test	
		on Visible on Aerial Ima			D9 - Gaug							
	B8 - Sparsel	y Vegetated Concave S	urface		Other (Ex	plain in Re	marks)					
Field Observat	ions:											
Surface Water	Present?	□ Yes ☑ No	Depth:	N/A	(in.)			Matland Ibe	dualant Du		V	Na
Water Table Pr	esent?	□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	arology Pr	esent? 🗵	Yes 🗆	INO
		□ Yes ☑ No		NI/A	. ,							
	aturation Present? ☐ Yes ☑ No Depth: N/A (in.)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A									NI/A			
	ed Data (stre		•		` '	s inspecti	ons), if available:		N/A			
Describe Record Remarks:	ed Data (stre		•		` '	s inspection	ons), if available:		N/A			
Remarks:	ed Data (stre		•		` '	s inspecti	ons), if available:		N/A			
Remarks: SOILS	,	eam gauge, monitoring	y well, ae	rial photo	s, previou	·			N/A			
Remarks: SOILS Map Unit Name	:	eam gauge, monitorino	y well, ae	rial photo	percent s	slopes, e	roded					
Remarks: SOILS Map Unit Name	:	eam gauge, monitorino	y well, ae	rial photo	percent s	slopes, e	roded	Covered/Coated Sand Gra		ore Lining, M=Matrix)		
Remarks: SOILS Map Unit Name	:	eam gauge, monitorino	y well, ae	rial photo	percent s	slopes, e	roded on, D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Gra		ore Lining, M=Matrix)		Texture
Remarks: SOILS Map Unit Name Profile Descrip Top	tion (Describe to	eam gauge, monitorino	g well, aed	, 6 to 12	percent s	slopes, e	roded on, D=Depletion, RM=Reduced Matrix, CS=C		ins; Location: PL=Pi	ı		Texture ay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	otion (Describe to Bottom Depth	cam gauge, monitoring CdC2- Centerburg the depth needed to document the ind	g well, ael	, 6 to 12 the absence of Matrix (Moist)	percent strindicators.) (Type	slopes, e	roded on, D=Depletion, RM=Reduced Matrix, CS=0	x Features		ore Lining, M=Matrix) Location		ay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	otion (Describe to Bottom Depth 2	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam color Color 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2	percent strindicators.) (Typ	Slopes, e	roded on, D=Depletion, RM=Reduced Matrix, CS=(Redo Color (Moist)	x Features % 	ins; Location: PL=Pr	Location		ay, sand, loam) loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	btion (Describe to Bottom Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	g well, aer	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators.) (Typ % 100 90	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6	% 10	Type	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	g well, aer	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators.) (Typ % 100 90	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6	% Features	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam cater or confirm Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent sindicators.) (Typ) % 100 90	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 6/6	x Features % 10 	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	g well, aer	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators.) (Typ % 100 90	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6	% Features	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam cater or confirm Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent sindicators.) (Typ) % 100 90	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 6/6	x Features % 10 	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg : the depth needed to document the ind Horizon 1 2	silt loam cater or confirm Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators.) (Typ % 100 90	slopes, e e. C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6	x Features % 10 	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg the depth needed to document the ind Horizon 1 2	silt loam Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators.) (Typ % 100 90	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 6/6	% 10	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 16	CdC2- Centerburg the depth needed to document the ind Horizon 1 2	silt loam. Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators) (Typ 96 100 90	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/6	% 10	Type C	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Bottom Depth 2 16 Soil Field In	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam. Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators) (Typ 96 100 90	slopes, e e c=concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6	% 10	Type C s for Problem	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Bottom Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2 ndicators (check he	silt loam. Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators al	percent s rindicators.) (Type 100 90 re not pre	slopes, e e: C=Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6	x Features	Type C s for Problem	Location M		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir	CdC2- Centerburg: the depth needed to document the Ind Horizon 1 2 ndicators (check he pipedon	silt loam. Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators all	percent s Indicators.) (Typ	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/6	Section	Type C 5 for Problem A16 - Coast S7 - Dark S	Location M	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2 ndicators (check he pipedon istic en Sulfide	silt loam. Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators al	percent s indicators) (Typ % 100 90 re not pre 84 - Sand \$5 - Sand	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/6 -	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifier	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2 ndicators (check he pipedon isitic en Sulfide d Layers	silt loam. Color 10YR 10YR	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators al	percent s Indicators.) (Typ 90 100 90 er not pre \$4 - Sand \$5 - Strip F1 - Loam F2 - Loam	slopes, e	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix	x Features % 10 Indicators	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A10 - 2 cm M	CdC2- Centerburg: the depth needed to document the Ind Horizon 1 2 ndicators (check he pipedon istic pipedon istic d Layers fluck	silt loam Color 10YR 10YR re if indic	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators al	percent s indicators) (Typ % 100 90 re not pre 84 - Sand \$5 - Sand \$6 - Strip F1 - Loarn F3 - Deple	slopes, e C=Concentrat 10YR	roded on, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist) 6/6): Matrix ineral Matrix	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet	CdC2- Centerburg the depth needed to document the ind Horizon 1 2	silt loam Color 10YR 10YR re if indic	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators al	percent s indicators) (Typ % 100 90 re not pre \$4 - Sand \$5 - Sand \$6 - Strip[F1 - Loarr F2 - Loarr F2 - Deple F6 - Red6	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/6	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2 ndicators (check he pipedon istic en Sulfide d Layers luck ed Below Dark Surface Dark Surface	silt loam Color 10YR 10YR re if indic	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s indicators.) (Type % 100 90 re not pre \$4 - Sand \$5 - Sand \$5 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redoc F7 - Deple	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix of face Surface Surface Surface	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick [S1 - Sandy N	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2 ndicators (check he pipedon istic en Sulfide d Layers Muck ed Below Dark Surface Muck Mineral	silt loam Color 10YR 10YR re if indic	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2 cators al	percent s indicators) (Typ % 100 90 re not pre \$4 - Sand \$5 - Sand \$6 - Strip[F1 - Loarr F2 - Loarr F2 - Deple F6 - Red6	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix of face Surface Surface Surface	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location M	es es	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mi	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam cator or confirm Color 10YR 10YR re if indid	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s Indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix of face Surface Surface Surface	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location M	e.g. cla	ay, sand, loam) loam s disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick [S1 - Sandy N	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam cator or confirm Color 10YR 10YR re if indid	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s Indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix of face Surface Surface Surface	Section Sect	Type C	Location M	es es	ay, sand, loam) loam s disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mi	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam cator or confirm Color 10YR 10YR re if indid	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s Indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix of face Surface Surface Surface	ox Features % 10 Indicators Indicators of hydrophy	Type C	Location M	e.g. cla	ay, sand, loam) loam s disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mi	CdC2- Centerburg: the depth needed to document the ind Horizon 1 2	silt loam cator or confirm Color 10YR 10YR re if indid	, 6 to 12 the absence of Matrix (Moist) 3/2 5/2	percent s Indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	slopes, e c-Concentrat	roded on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/6): Matrix ineral Matrix of face Surface Surface Surface	ox Features % 10 Indicators Indicators of hydrophy	Type C	Location M	e.g. cla	ay, sand, loam) loam s disturbed or problematic.



Sample Point: SP 3 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 2 **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: 4 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 50 100 FAC spp. x 3 = FACU spp. x 4 =Sapling/Shrub Stratum (Plot size: 15 ft radius) 0 10 **FACW** x 5= Salix interior UPL spp. 0 0 Rosa palustris 5 OBL 3. 115____(A) Total 175 4. Prevalence Index = B/A = 5. 1.522 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes ✓ No 10 ✓ Yes □ No Dominance Test is > 50% Total Cover = 15 ✓ Yes □ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * OBL 25 Leersia oryzoides * Indicators of hydric soil and wetland hydrology must be Agrimonia parviflora 10 Ν **FACW** present, unless disturbed or problematic. **FACW** 3. Solidago gigantea 25 OBL Juncus effusus N **Definitions of Vegetation Strata:** 5 5. N OBL Carex lurida 6 FACW Juncus dudleyi Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. Scirpus atrovirens 15 Ν OBL 8. Vernonia gigantea 5 N FAC Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q 5 OBL Persicaria sagittata Ν ft. tall. 10. 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks:

Additional Remarks:			
	 •		•



Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/10/16
Applicant:	AEP									County:	Knox
Investigator #1:	Nate Nolan	nd			igator #2:	Corey C				State:	Ohio
Soil Unit:		erburg silt loam, 6-12%	slopes, en				NWI Classification:	NA			
Landform:	Backslope		40.0700		cal Relief:			5 .		Sample Point:	
Slope (%):	4				ongitude:			Datum:		Community ID:	
		ditions on the site ty				(If no, expl		☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumstar	•		Township:	
		or Hydrology □ nat	urally pr	oblema	tic?		Yes	NŪ		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve					s ☑ No			Hydric Soils I			□ Yes ☑ No
Wetland Hydrol	ogy Present	?		□ Yes	s ☑ No			Is This Samp	oling Point \	Within A Wetla	and? ■ Yes © No
Remarks:											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicato	rs are n	ot presen	t ☑):					
Primary:		,			•	•			Secondary:		
	A1 - Surface									B6 - Surface So	
	A2 - High Wa									B10 - Drainage	
	A3 - Saturation B1 - Water M				B14 - True C1 - Hydr					C2 - Dry-Season C8 - Crayfish Bu	
]	B2 - Sedimer						spheres on Livina Roots				Visible on Aerial Imagery
	B3 - Drift Dep			_			educed Iron				Stressed Plants
	B4 - Algal Ma				C6 - Rece	ent Iron Re	duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	al Test
		on Visible on Aerial Ima									
	Bo - Sparsely	y Vegetated Concave S	urrace	Ц	Other (Ex	piain in Re	emarks)				
Field Observet	ionoi										
Field Observat					,, ,						
Surface Water		☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hyd	drology Pr	esent?	Yes ☑ No
Water Table Pr		☐ Yes ☑ No	Depth:	N/A	(in.)			•			
Saturation Pres	ent?	□ Yes ☑ No	Depth:	N/A	(in.)						
Describe Record	ed Data (stre	am gauge, monitoring	y well, aei	rial photo	os, previou	s inspecti	ons), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name	:	CdC2- Centerburg	silt loam,	, 6-12%	slopes, e	roded					
Profile Descrip	otion (Describe to	the depth needed to document the ind	icator or confirm	the absence of	f indicators.) (Typ	e: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Grai	ns; Location: PL=Po	ore Lining, M=Matrix)	
Тор	Bottom			Matrix				ox Features			Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	16	1	10YR	4/4	100						silt
					-						
					-						
					1						
											
_		ndicators (check he	re if indic	_					for Problem		
	A1- Histosol A2 - Histic E	ninadan			S4 - Sand		Matrix			Prairie Redox	
]	A3 - Black Hi				S5 - Sand S6 - Strip		,		S7 - Dark St	langanese Masse	22
, .	A4 - Hydroge				F1 - Loan					Shallow Dark Su	
	A5 - Stratified				F2 - Loan					ain in Remarks)	
	A10 - 2 cm M	1uck			F3 - Deple				, ,		
		ed Below Dark Surface			F6 - Redo	x Dark Su	ırface				
0 (A12 - Thick E				F7 - Deple						
	S1 - Sandy N				F8 - Redo	x Depress		1 to division of the second		and the standard and th	and the second control of the second control
Beetrietive Lever	53 - 5 CM ML	ıcky Peat or Peat						indicators of hydrophyt	ic vegetation and w	etiand hydrology must be	e present, unless disturbed or problematic.
Restrictive Layer (If Observed)	Type:	N/A		Depth:	N/A			Hydric Soil I	Present?		Yes ☑ No
Remarks:											
Remarks.											



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 4 Sample Point: SP 4

VEGETATION	(Species identified in all uppercase are non-na	ative spe	cies.)		
Tree Stratum (Plo	t size: 30 ft radius)				
	Species Name		Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.	-				Number of Dominant Species that are OBL, FACW, or FAC:1 (A)
3.					
4.					Total Number of Dominant Species Across All Strata:6 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:17% (A/B)
7.					
8.					Prevalence Index Worksheet
9.	-				Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
	Total Cover =	0			FACW spp. $\underline{15}$ $\times 2 = \underline{30}$
					FAC spp. 5 x 3 = 15
	atum (Plot size: 15 ft radius)				FACU spp. 70 x 4 = 280
1.					UPL spp. <u>15</u> x 5 = <u>75</u>
2.			-		T. I. (1) (1) (2) (5)
3.					Total(A)(B)
4.					Developed Index DIA 0040
5. 6.					Prevalence Index = B/A = 3.810
7.					
8.					Hydrophytic Vegetation Indicators:
9.					
9. 10.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation☐ Yes ☑ No Dominance Test is > 50%
10.	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
	Total Cover =	U			☐ Yes ☑ No Prevalence index is \$ 3.0 ☐ Yes ☑ No Morphological Adaptations (Explain) *
Llank Chrahima (Dla	tainer F ft redicts				1 0 1 1 ,
Herb Stratum (Plo 1.	Agrostis gigantea	15	Υ	FACW	☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
2.	Daucus carota	10	Y	UPL	* Indicators of hydric soil and wetland hydrology must be
3.	Centaurea cyanus	5	N	FACU	present, unless disturbed or problematic.
4.	Ambrosia artemisiifolia	5	N	FACU	Definitions of Vegetation Strata:
5.	Elaeagnus angustifolia	10	Y	FACU	Definitions of Vogetation official.
6	Agrimonia parviflora	5	N .	UPL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Apocynum cannabinum	5	N	FAC	breast height (DBH), regardless of height.
8.	Phleum pratense	5	N	FACU	
9.	Solidago canadensis	15	Y	FACU	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.	Symphyotrichum pilosum	10	Ÿ	FACU	ft. tall.
11.	Dactylis glomerata	15	Ÿ	FACU	
12.			<u>:</u>		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.
-	Total Cover =	100			
Woody Vine Strati	um (Plot size: 30 ft radius)				
1.	Rubus allegheniensis	5		FACU	
2.	-			-	
3.				-	Hydrophytic Vegetation Present □ Yes ☑ No
4.					
5.					
	Total Cover =	5	-		
Remarks:				·	

Additional Remarks:			
	 •		•



Project/Site:		non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/10/16	6
Applicant:	AEP									County:	Knox	
Investigator #1:				Investi	igator #2:	Michael	de Villiers			State:	Ohio	
Soil Unit:		on silt loam, 0-6% slopes					NWI Classification:				Wetland	13
Landform:	Depression		40.000		al Relief:			Б.	NADOO	Sample Point:		
Slope (%):	~1%	Latitude:							NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumstar	•	,	Township:		5:
		or Hydrology □ nat	urally pr	obiemat	IC?		Yes	NŪ		Range:	-	Dir:
SUMMARY OF		10							D 10			V = N
Hydrophytic Ve					□ No			Hydric Soils		A/'(' A \A/ (Yes □ No
Wetland Hydrol	ogy Present	?		☑ Yes	□ No			is This Samp	oling Point	Within A Wetla	ind? ■	Yes ■ No
Remarks:												
111/2201 001/												
HYDROLOGY												
Wetland Hydr	ology Indica	ators (Check here if	indicato	rs are n	ot presen	t □):						
Primary: Secondary												
	A1 - Surface				B9 - Wate					B6 - Surface So		
 □ A2 - High Water Table □ B13 - Aquatic Fauna ☑ A3 - Saturation ☑ B14 - True Aquatic Pauna 									B10 - Drainage C2 - Dry-Seasor		abla	
	B1 - Water M									C8 - Crayfish Bu		able
	B2 - Sedimer			_	. , .		spheres on Living Roots			C9 - Saturation		Aerial Imagery
	B3 - Drift Dep	posits			C4 - Pres	ence of Re	educed Iron			D1 - Stunted or		
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi		l
	B5 - Iron Dep				C7 - Thin				☑	D5 - FAC-Neutra	al Test	
		on Visible on Aerial Ima V Vegetated Concave S			D9 - Gaug Other (Ex							
	Do - Oparacij	y vegetated concave o	unacc	_	Other (EX	piaiii iii ik	markoj					
Field Observat	ione:											
Surface Water		U Vaa U Na	Danth.	NI/A	(in)							
		□ Yes ☑ No □ Yes ☑ No	Depth:	N/A N/A	(in.)			Wetland Hy	drology Pr	esent? ☑	Yes □	No
Water Table Pr			Depth:		(in.)							
Saturation Fies	CIIL!	E 163 E 140	saturation Present? ☑ Yes □ No Depth: 0 (in.)									
	ed Data (stre	eam gauge, monitoring	y well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Describe Record Remarks:	ed Data (stre	eam gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Remarks:	ed Data (stre	eam gauge, monitorinç	g well, ae	rial photo	os, previou	s inspecti	ons), if available:		N/A			
Remarks: SOILS	·			·		s inspecti	ons), if available:		N/A			
Remarks: SOILS Map Unit Name	:	BnB- Bennington si	It loam,	0-6% slo	opes	·	,					
Remarks: SOILS Map Unit Name Profile Descrip	:	BnB- Bennington si	It loam,	0-6% SIC	Opes f indicators.) (Typ	·	ons), if available:	Covered/Coated Sand Gra		ore Lining, M=Matrix)		
Remarks: SOILS Map Unit Name	:	BnB- Bennington si	It loam,	0-6% slo	OPES findicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=C RedC	overed/Coated Sand Gra		ore Lining, M=Matrix)		Texture
Remarks: SOILS Map Unit Name Profile Descrip	tion (Describe to	BnB- Bennington si	It loam,	0-6% SIC	Opes f indicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=0			ore Lining, M=Matrix) Location		Texture ay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top	tion (Describe to	BnB- Bennington si	It loam,	0-6% slo	OPES findicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=C RedC	x Features	ins; Location: PL=Pi	Location PL		
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	otion (Describe to) Bottom Depth	BnB- Bennington si the depth needed to document the ind Horizon	It loam,	0-6% slo n the absence of Matrix (Moist)	Opes findicators.) (Typ	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location		ay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to) Bottom Depth 4	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm	0-6% slo the absence of Matrix (Moist) 3/1	ppes findicators.) (Typ	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6	% 40	Type	Location PL		ay, sand, loam) loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	btion (Describe to Bottom Depth 4	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR 10YR	0-6% slo the absence of Matrix (Moist) 3/1 3/1	ppes f indicators.) (Typ % 60 90	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6	% 40 10	Type C C	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	Bottom Depth 4 16	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR 10YR	0-6% slo materix (Moist) 3/1 3/1	DPES f indicators.) (Typ % 60 90	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6	% Features % 40 10	Type C C	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	Bottom Depth 4 16	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1	% 60 90	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6	% Features % 40 10	Type C C	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	Bottom Depth 4 16	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1	% 60 90	5YR 5YR	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6	% 40 10	Type C C	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	Bottom Depth 4 16	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1	% 60 90	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6 	% 40 10	Type C C	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	Bottom Depth 4 16	BnB- Bennington si the depth needed to document the ind Horizon	Lt loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1	9% 60 90	5YR 5YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redc Color (Moist) 4/6 4/6	% 40 10	Type C C	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In	BnB- Bennington si the depth needed to document the ind Horizon	Lt loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	% 60 90 re not pre	SYR 5YR sent	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6);	% 40 10 Indicators	Type C C s for Problem	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4	Bottom Depth 4 16 Soil Field In	BnB- Bennington si the depth needed to document the ind Horizon	Lt loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	% 60 90 S4 - Sand	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 4/6 4/6);	% 40 10 Indicators	Type C C for Problem	Location PL PL		ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In	BnB- Bennington si the depth needed to document the ind Horizon	Lt loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	% 60 90 re not pre	5YR 5YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist) 4/6 4/6	% 40 10 Indicators	Type C C	Location PL PL	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic Ei	BnB- Bennington si the depth needed to document the Ind Horizon	Lt loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	% 60 90 re not pre \$4 - Sand \$5 - Sand	5YR 5YR	Redo Color (Moist) 4/6 4/6	% 40 10	Type C C C for Problem A16 - Coast S7 - Dark S F12 - Iron-N	Location PL PL	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier	BnB- Bennington si the depth needed to document the ind Horizon	Lt loam, icator or confirm Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators a	% 60 90 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loarr F2 - Loarr	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 4/6 4/6): Matrix ineral Matrix	% 40 10	Type C C	Location PL PL	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	0-6% slc the absence of Matrix (Moist) 3/1 cators al	90 90	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS= Redot Color (Moist) 4/6 4/6	% 40 10	Type C C	Location PL PL	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplete	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	O-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	90	e: C=Concentral	non, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist) 4/6 4/6	% 40 10	Type C C	Location PL PL	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic EJ A3 - Black Hi A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick E	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	% 60 90 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Stript F1 - Loarr F2 - Loarr F3 - Deple F6 - Redo F7 - Deple	e: C=Concentral	ron, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist) 4/6 4/6 Watrix ineral Matrix (rface Surface Surface	% 40 10	Type C C	Location PL PL	(e.g. cla	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	O-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	90	e: C=Concentral	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 4/6 4/6): Matrix Inneral Matrix Conface Surface Surface ions	% 40 10	Type C C	Location PL PL	es es	ay, sand, loam) loam loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	O-6% slc the absence of Matrix (Moist) 3/1 3/1 cators ar	% 60 90 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	e: C=Concentral	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 4/6 4/6): Matrix Inneral Matrix Conface Surface Surface ions	% 40 10 Indicators of hydrophyl	Type C C	Location PL PL	e.g. cla	ay, sand, loam) loam loam s disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	0-6% slc the absence of Matrix (Moist) 3/1 3/1 cators al	% 60 90 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	e: C=Concentral	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 4/6 4/6): Matrix Inneral Matrix Conface Surface Surface ions	% 40 10	Type C C	Location PL PL	es es	ay, sand, loam) loam loam s disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 4 NRCS Hydric	Bottom Depth 4 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M	BnB- Bennington si the depth needed to document the ind Horizon	It loam, icator or confirm Color 10YR re if indice	O-6% slc the absence of Matrix (Moist) 3/1 3/1 cators ar	% 60 90 re not pre \$4 - Sand \$5 - Sand \$5 - Sand \$6 - Strip \$1 - Loam \$7 - Deple \$6 - Redo \$7 - Deple \$7 - Redo	e: C=Concentral	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 4/6 4/6): Matrix Inneral Matrix Conface Surface Surface ions	% 40 10 Indicators of hydrophyl	Type C C	Location PL PL	e.g. cla	ay, sand, loam) loam s disturbed or problematic.



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 3 Sample Point: SP 5

VEGETATION	(Species identified in all uppercase are non-na	ative spe	cies.)		
Tree Stratum (Plo	ot size: 30 ft radius)				
	<u>Species Name</u>		Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:3(A)
3.					
4.					Total Number of Dominant Species Across All Strata:3(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.					OBL spp68 x 1 =68
	Total Cover =	0			FACW spp. 20 x 2 = 40
					FAC spp. $0 \times 3 = 0$
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. 0 x 4 = 0
1.	Sambucus nigra	1	N	FACW	UPL spp. $0 \times 5 = 0$
2.				-	
3.				-	Total 88 (A) 108 (B)
4.					· · · · · · · · · · · · · · · · · · ·
5.					Prevalence Index = B/A = 1.227
6.				-	
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.				-	✓ Yes ☐ No Dominance Test is > 50%
	Total Cover =	1			☑ Yes □ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t cize: 5 ft radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Impatiens capensis	5	N	FACW	Tes – No Problem Hydrophytic Vegetation (Explain)
2.	Eupatorium perfoliatum	5	N	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Carex Iurida	20	Y	OBL	present, unless disturbed or problematic.
4.	Onoclea sensibilis	5	N.	FACW	Definitions of Vegetation Strata:
5.	Acorus calamus	20	Y	OBL	Definitions of Fogetation official.
6	Leersia oryzoides	15	Y	OBL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Poa palustris	1	N	FACW	breast height (DBH), regardless of height.
8.	Lemna minor	3	N	OBL	
9.		8	N	FACW	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
	Agrimonia parviflora				ft. tall.
10.	Juncus effusus	5	N	OBL	
11.					Herb - All herbaceous (non-woody) plants, regardless of size,
12.					and woody plants less than 3.28 ft. tall.
13.					
14.					All woods with a control in the late.
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	87			
•	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
4.					
5.					
	Total Cover =	0			
Remarks:					

Additional Remarks:				
	_		•	



Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/10/1	6
Applicant:	AEP									County:	Knox	
Investigator #1				Investi	gator #2:	Michael	de Villiers			State:	Ohio	
Soil Unit:	_	on silt loam, 0-6% slopes				_	NWI Classification:				Wetland	d 3
Landform:	Depression		40.000		al Relief:			Б.	NADOO	Sample Point:		
Slope (%):	<1%	Latitude:							NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumsta	•	,	Township:		D.
SUMMARY OF		or Hydrology □ nat	urany pr	obiemai	IC?		✓ Yes	NŪ		Range:		Dir:
		10		- V	- N-			Llandria Osila	D			. V 🗆 N-
Hydrophytic Ve Wetland Hydro					□ No			Hydric Soils		Within A Wetla		Yes □ No Yes ■ No
Remarks:	ogy Present	, (Yes				is this same	Jilly Politi	Willim A Wella	iiu? ⊻	Tes - No
Remarks.												
LIVEROL OCY												
HYDROLOGY												
		ators (Check here if	indicato	rs are n	ot presen	t □):						
Primary		\\/ataa		_	DO W-1-	C4=:===	1		Secondary:	DC Comfort Co	il Canalia	
	A1 - Surface A2 - High Wa				B9 - Wate B13 - Agu					B6 - Surface Soi B10 - Drainage I		
	A3 - Saturation				B14 - True					C2 - Dry-Seasor		able
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedimer						spheres on Living Roots			C9 - Saturation '		
0.0	B3 - Drift De						educed Iron			D1 - Stunted or		
	B4 - Algal Ma B5 - Iron Der				Co - Rece		duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutra		1
]		on Visible on Aerial Ima	agery		D9 - Gaud				_	Do - 1 Ao-Neur	ai 103t	
✓		y Vegetated Concave S			Other (Ex							
Field Observa	tions:											
Surface Water	Present?	□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Dr	ocont?	Yes □	. No
Water Table Pr	esent?	☐ Yes ☑ No	Depth:	N/A	(in.)			welland my	urology Fi	esent: 🖭	163	INO
Saturation Pres	ont?	D Vac D Na	Dantle.	NI/A	/i \							
Oaturation i ica	CIIL!	□ Yes ☑ No	Depth:	N/A	(in.)							
			•		` '	s inspecti	ons), if available:		N/A			
Describe Record		eam gauge, monitoring	•		` '	s inspecti	ons), if available:		N/A			
			•		` '	s inspecti	ons), if available:		N/A			
Describe Record			•		` '	s inspection	ons), if available:		N/A			
Describe Record Remarks:	ed Data (stre	eam gauge, monitoring	y well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Describe Record Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino	y well, aed	rial photo	os, previous	·	,	Covered/Coated Sand Gra		ore Lining, M=Matrix)		
Describe Record Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino	y well, aed	rial photo	os, previous opes findicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Gra		ore Lining, M=Matrix)		Texture
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top	ed Data (stre	eam gauge, monitorino	g well, aed	0-6% slo	os, previous opes findicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=C		ins; Location: PL=Pi			Texture ay, sand, loam)
Describe Record Remarks: SOILS Map Unit Name Profile Descrip	ed Data (stre	BnB- Bennington si	lt loam, (cator or confirm	0-6% slo the absence of Matrix (Moist)	os, previous opes i indicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=0	x Features		ve Lining, M=Matrix) Location	(e.g. cla	ay, sand, loam)
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	ed Data (stre	BnB- Bennington si the depth needed to document the ind	It loam, (icator or confirm Color 10YR	0-6% slc the absence of Matrix (Moist) 4/2	opes Findicators.) (Typ	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=(Reduced Moist)	x Features % 	ins; Location: PL=Po	Location 	(e.g. cla	ay, sand, loam) silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth	ed Data (stre	BnB- Bennington si the depth needed to document the ind Horizon	lt loam, (cator or confirm	0-6% slo the absence of Matrix (Moist)	oppes indicators.) (Typ	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C	x Features %	Type		(e.g. cla	ay, sand, loam)
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	BnB- Bennington si the depth needed to document the ind Horizon	g well, aed	0-6% slotte absence of Matrix (Moist) 4/2 4/2	ppes indicators.) (Typ % 100 92	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/8	% Features % 8	ins; Location: PL=Pr	Location M	(e.g. cla	ay, sand, loam) silt loam silt loam
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Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	BnB- Bennington si the depth needed to document the ind Horizon	lt loam, leater or confirm Color 10YR 10YR re if indice	0-6% slc the absence of Matrix (Moist) 4/2 4/2	ppes indicators.) (Typ % 100 92 re not pre 84 - Sand 85 - Sand 86 - Stripi F1 - Loarr F3 - Deple	e: C=Concentrat	ron, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/8	x Features % 8 Indicators	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) silt loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	BnB- Bennington si the depth needed to document the ind Horizon	lt loam, leater or confirm Color 10YR 10YR re if indice	O-6% slc the absence of Matrix (Moist) 4/2 cators ar	ppes indicators) (Typ % 100 92 re not pre \$4 - Sand \$5 - Sand \$5 - Strip F1 - Loarr F2 - Loarr F3 - Deple F6 - Redoc F7 - Deple	e: C=Concentrat	ron, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/8	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location M	(e.g. cla	ay, sand, loam) silt loam silt loam
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Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	BnB- Bennington si the depth needed to document the ind Horizon	lt loam, icator or confirm Color 10YR 10YR re if indid	O-6% slc the absence of Matrix (Moist) 4/2 cators ar	ppes Indicators.) (Typ % 100 92	e: C=Concentrat	ron, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/8	Section Sect	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam silt loam ss disturbed or problematic.
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	bition (Describe to Depth 2 16	BnB- Bennington si the depth needed to document the ind Horizon	lt loam, icator or confirm Color 10YR 10YR re if indid	0-6% slc the absence of Matrix (Moist) 4/2 cators al	ppes Indicators.) (Typ % 100 92	e: C=Concentrat	ron, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/8	x Features % 8 Indicators Indicators of hydrophyty	Type C	Location M	(e.g. cla	ay, sand, loam) silt loam silt loam ss disturbed or problematic.



Sample Point: SP 6 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 3 **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** % Cover Dominant Ind.Status Species Name **FACW** Ulmus americana 5 2. 5 FACU Number of Dominant Species that are OBL, FACW, or FAC: 5 (A) Tilia americana 3. FAC Acer rubrum 3 FACW 4. Fraxinus pennsylvanica Ν Total Number of Dominant Species Across All Strata: 6 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10 OBL spp. Total Cover = 15 FACW spp. x 2 = 38 76 FAC spp. x 3 = x 4 =Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. **FACW** x 5= Ulmus americana N UPL spp. 0 Fraxinus americana N **FACU** 3. OBL 118____(A) Rosa palustris 1 N Total 210 4. 5. Prevalence Index = B/A = 1.780 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** 9. □ Yes □ No Rapid Test for Hydrophytic Vegetation 10 ☑ Yes □ No Dominance Test is > 50% Total Cover = 3 ✓ Yes □ No Prevalence Index is ≤ 3.0 * □ No □ Yes Morphological Adaptations (Explain) * □ Yes □ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 30 OBL Glyceria striata * Indicators of hydric soil and wetland hydrology must be Phalaris arundinacea 15 **FACW** present, unless disturbed or problematic. 3. Toxicodendron radicans 15 FAC Lobelia siphilitica N OBL **Definitions of Vegetation Strata:** 5. Eupatorium perfoliatum 5 N **OBL** 6 FACW Onoclea sensibilis Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. Carex frankii 5 Ν OBL 8. 5 N OBL Carex normalis Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 **FACW** q 5 Ν Agrimonia parviflora ft. tall. 10. Impatiens pallida Ν **FACW** 5 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks: Additional Remarks:



Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/10/16	
Applicant:	AEP									County:	Knox	
Investigator #1:				Investi	gator #2:	Michael	de Villiers			State:	Ohio	
Soil Unit:	_	on silt loam, 0-6% slopes					NWI Classification:				Wetland	3
Landform:	Side slope				al Relief:					Sample Point:		
Slope (%):	2%	Latitude:	40.3808	326°N L	ongitude:	-82.562	064°W		NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumstar	nces present?	•	Township:		
		or Hydrology □ nat	urally pr	oblemat	ic?		Yes	N⊎		Range:		Dir:
SUMMARY OF												
Hydrophytic Ve					☑ No			Hydric Soils				Yes ☑ No
Wetland Hydrol	ogy Present	?		□ Yes	□ No			Is This Samp	oling Point \	Within A Wetla	ınd? ■	Yes No
Remarks:												
HYDROLOGY												
Wetland Hydro	ology Indica	ators (Check here if	indicato	rs are n	ot presen	t 🖂)•						
Primary:		atoro (orioon noro ii	maioato	10 010 11	ot procorr	. – ,.			Secondary:			
	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface Soi	il Cracks	
	A2 - High Wa	ater Table			B13 - Aqu	atic Fauna	1			B10 - Drainage I	Patterns	
	A3 - Saturati				B14 - True					C2 - Dry-Seasor		ble
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedimer B3 - Drift Der						spheres on Living Roots			C9 - Saturation		
	B4 - Algal Ma						educed Iron duction in Tilled Soils		_	D1 - Stunted or S D2 - Geomorphi		iants
	B5 - Iron Der				C7 - Thin					D5 - FAC-Neutra		
		on Visible on Aerial Ima	agery		D9 - Gaud				_	20 .7.0	a	
	B8 - Sparsely	y Vegetated Concave S	urface		Other (Ex	plain in Re	emarks)					
Field Observat	ions:											
Surface Water	Present?	□ Yes ☑ No	Depth:	N/A	(in.)			Wetlered He	dualant Du		Yes ☑	Na
Water Table Pr	esent?	□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	arology Pr	esent?	res 🗵	INO
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)							
Describe Descri												
		am gauge monitoring	woll and	rial photo	e proviou	c incoacti	one) if available:		N/A			
	ed Data (stre	eam gauge, monitoring	y well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Remarks:	ed Data (stre	eam gauge, monitoring	y well, aei	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Remarks:	ed Data (stre	eam gauge, monitoring	g well, aei	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Remarks: SOILS	·			·		s inspecti	ons), if available:		N/A			
Remarks: SOILS Map Unit Name	:	BnB- Bennington si	It loam,	0-6% slo	ppes	·	,					
Remarks: SOILS Map Unit Name Profile Descrip	: tion (Describe to	BnB- Bennington si	It loam,	0-6% slo	Opes indicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=0			ore Lining, M=Matrix)	т	ovturo
Remarks: SOILS Map Unit Name Profile Descrip Top	: tion (Describe to Bottom	BnB- Bennington si	It Ioam, (0-6% slo	Opes indicators.) (Typ	·	ion, D=Depletion, RM=Reduced Matrix, CS=C RedC	x Features	ins; Location: PL=Po	ı		exture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	tion (Describe to Bottom Depth	BnB- Bennington si the depth needed to document the ind Horizon	It loam, (cator or confirm	0-6% slo the absence of Matrix (Moist)	opes indicators.) (Typ	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location		, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	tion (Describe to Bottom Depth 8	BnB- Bennington si the depth needed to document the ind Horizon	It loam, Color Color 10YR	0-6% slo the absence of Matrix (Moist) 4/3	opes indicators.) (Typ % 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	ins; Location: PL=Po	Location 		, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	tion (Describe to Bottom Depth	BnB- Bennington si the depth needed to document the ind Horizon	It loam, (cator or confirm	0-6% slo the absence of Matrix (Moist)	opes indicators.) (Typ	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location		, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	tion (Describe to Bottom Depth 8	BnB- Bennington si the depth needed to document the ind Horizon	It loam, Color Color 10YR	0-6% slo the absence of Matrix (Moist) 4/3	opes indicators.) (Typ % 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	ins; Location: PL=Po	Location 		, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8	Extion (Describe to Bottom Depth 8	BnB- Bennington si the depth needed to document the ind Horizon	It loam, (cator or confirmation or confirmatio	0-6% slo the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	Type	Location 		v, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8	Bottom Depth 8 16	BnB- Bennington si the depth needed to document the ind Horizon	It loam, Cator or confirm Color 10YR 10YR	0-6% slot the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	% Features	Type	Location 		v, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8	Bottom Depth 8 16	BnB- Bennington si the depth needed to document the ind Horizon	It loam, (cator or confirm	0-6% slc the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features	Type	Location 		v, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8	Bottom Depth 8 16	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 		Type	 		, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8	Bottom Depth 8 16	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	%	Type	Location		, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8	Bottom Depth 8 16	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4	% 100 100 100 100 100 100 100 100 100 10	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	%	Type	Location		/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16 Soil Field Ir	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	% 100 100 100 100 100 100 100 100 100 10	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)		Type	Location		/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	%	Type	Location		/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16 Soil Field Ir	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	% 100 100 100 100 100 100 100 100 100 10	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	Section	Type	Location	(e.g. clay	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E1 A3 - Black H A4 - Hydroge	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	% 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric:	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H 44 - Hydroge A5 - Stratifier	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	%	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A10 - 2 cm M	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4	% 100 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist)): Matrix inneral Matrix (x Features % Indicators	Type Type	Location	(e.g. clay	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	% 100	e: C=Concentral	non, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric:	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	90000000000000000000000000000000000000	e: C=Concentral	ron, D=Depletion, RM=Reduced Matrix, CS= Redc Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric:	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick [S1 - Sandy N	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	% 100	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	x Features % Indicators	Type Type	Location	es es erface	/, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mi	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR re if indid	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators ar	90000000000000000000000000000000000000	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	SX Features % Indicators Indicators of hydrophy	Type Type	Location	es es urface	/, sand, loam) silt disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric:	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick [S1 - Sandy N	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR re if indid	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators al	90000000000000000000000000000000000000	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	x Features % Indicators	Type Type	Location	es es erface	/, sand, loam) silt disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric:	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mi	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR re if indid	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators ar	90000000000000000000000000000000000000	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	SX Features % Indicators Indicators of hydrophy	Type Type	Location	es es urface	/, sand, loam) silt disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 8 NRCS Hydric Restrictive Layer (If Observed)	Bottom Depth 8 16 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm Mi	BnB- Bennington si the depth needed to document the ind Horizon	Color 10YR 10YR re if indid	0-6% slc the absence of Matrix (Moist) 4/3 4/4 cators ar	90000000000000000000000000000000000000	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	SX Features % Indicators Indicators of hydrophy	Type Type	Location	es es urface	/, sand, loam) silt disturbed or problematic.



Remarks:

WETLAND DETERMINATION DATA FORM Midwest Region

Sample Point: SP 7 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 3 **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 **FACU** Carya glabra 5 2. Ulmus americana 15 **FACW** Number of Dominant Species that are OBL, FACW, or FAC: 3 (A) 3. **FACU** Robinia pseudoacacia 10 4. Prunus serotina 5 Ν **FACU** Total Number of Dominant Species Across All Strata: 7 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 35 x 2 = 27 54 FAC spp. x 3 = FACU spp. x 4 =Sapling/Shrub Stratum (Plot size: 15 ft radius) 79 316 20 FACU x 5= Rosa multiflora UPL spp. 0 0 Lonicera morrowii **FACU** 3. 2 **FACW** 118____(A) Lindera benzoin N Total 406 4. Prevalence Index = B/A = 5. 3.441 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** 9. □ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10 Yes ☑ No Dominance Test is > 50% Total Cover = 42 Yes ✓ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * Toxicodendron radicans 2 Ν FAC * Indicators of hydric soil and wetland hydrology must be Ageratina altissima FACU present, unless disturbed or problematic. 10 FAC 3. Polygonum virginianum Parthenocissus quinquefolia **FACU Definitions of Vegetation Strata:** FACU 2 5. N Solidago altissima 6 Elymus virginicus 10 **FACW** Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q ft. tall. 10. 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5. Total Cover =

Additional Remarks:			



T											
Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1	: Aaron Kwo	lek		Investi	gator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:	BnA- Benningto	n silt loam, 0-2% slopes					NWI Classification:			Wetland ID:	Wetland 4
Landform:	Depression	1		Loc	al Relief:	Concav	Э			Sample Point:	SP 8
Slope (%):	~1%	Latitude:	40.3812					Datum:	NAD83	Community ID:	
		ditions on the site ty						☑ Yes □	No	Section:	
		or Hydrology □ sig				(,	Are normal circumsta			Township:	
		or Hydrology □ sig					✓ Yes	N⊎		Range:	Dir:
SUMMARY OF	FINDINGS	or riyurology = ria	turally pr	obicinat	10:		= 1es	IAA		range.	Bii
SUMMARY OF Hydrophytic Ve	FINDINGS			- V	- N-			Lludaia Osila	D		D Van D Na
Hydrophytic Ve	getation Pre	sent?		Yes				Hydric Soils			☑ Yes □ No
Wetland Hydro	logy Present	?		☑ Yes	□ No			Is This Samp	oling Point	Within A Wetla	and? □ Yes ■ No
Remarks:											
HYDROLOGY											
Wotland Hydr	ology Indica	ators (Check here if	indicato	re are n	ot precen	+ m \•					
Primary		itors (Check here ii	illulcato	is ale iii	ot presen	ι 🗆).			Socondan.		
	A1 - Surface	Water		П	B9 - Wate	r-Stained	Leaves		Secondary:	B6 - Surface So	ail Cracks
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation				B14 - True					C2 - Dry-Seaso	
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						educed Iron			D1 - Stunted or	
l	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
l -	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	
		on Visible on Aerial Ima	agery		D9 - Gaug						
		Vegetated Concave S			Other (Ex						
Field Observa	tions:										
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)						
Water Table Pi								Wetland Hyd	drology Pr	esent? ☑	Yes □ No
		☐ Yes ☑ No	Depth:	N/A	(in.)						
Saturation Pres	sent?	□ Yes ☑ No	Depth:	N/A	(in.)						
Describe Become	lad Data /ataa										
Describe Record	ied Data (stre	am gauge, monitoring	g well, aei	rial photo	s, previou	s inspecti	ons), if available:		N/A		
		am gauge, monitoring	g well, aei	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:		am gauge, monitoring raphic relief	g well, aei	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:			g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks: SOILS	microtopog	raphic relief				s inspecti	ons), if available:		N/A		
Remarks: SOILS Map Unit Name	microtopog e:	raphic relief BnA- Bennington si	ilt loam, (0-2% slo	ppes						
Remarks: SOILS Map Unit Name Profile Descri	microtopog : ption (Describe to	raphic relief BnA- Bennington si	ilt loam, (0-2% slo	Opes		ion, D=Depletion, RM=Reduced Matrix, CS=0			ore Lining, M=Matrix)	Tautura
Remarks: SOILS Map Unit Name Profile Descri Top	microtopog e: ption (Describe to	Raphic relief BnA- Bennington Sinte depth needed to document the indepth needed to document	ilt loam, (0-2% slo	Opes f indicators.) (Typ		ion, D=Depletion, RM=Reduced Matrix, CS=0 Red0	ox Features	ins; Location: PL=Pr	1	Texture
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Remarks: SOILS Map Unit Name Profile Descri Top Depth 0	microtopog ption (Describe to Depth 10	BnA- Bennington si the depth needed to document the ind Horizon	ilt loam, (icator or confirm Color 10YR	0-2% slo the absence of Matrix (Moist) 4/2	ppes indicators.) (Typ % 85	e: C=Concentrat 7.5YR	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 6/8	% Features	Type C	Location PL 	(e.g. clay, sand, loam) silty clay
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Remarks: SOILS Map Unit Name Profile Descri Top Depth NRCS Hydric	microtopog ption (Describe to Bottom Depth 10	BnA- Bennington si he depth needed to document the ind Horizon dicators (check he bipedon stic	Color 10YR	0-2% slc the absence of Matrix (Moist) 4/2 cators an	% % 85	7.5YR 7.5YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 6/8	% 15	Type C for Problem A16 - Coast S7 - Dark S F12 - Iron-M	Location PL	(e.g. clay, sand, loam) silty clay
Remarks: SOILS Map Unit Name Profile Descri Top Depth O NRCS Hydric	microtopog E: ption (Describe to Depth 10	BnA- Bennington si he depth needed to document the ind Horizon dicators (check he bipedon stic in Sulfide	Color 10YR	0-2% slc the absence of Matrix (Moist) 4/2	% 85 -	7.5YR	Redo Color (Moist) 6/8	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) silty clay
Remarks: SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	microtopog E: ption (Describe to Depth 10	BnA- Bennington si he depth needed to document the ind Horizon dicators (check he objeedon stic in Sulfide di Layers	Color 10YR	0-2% slc the absence of Matrix (Moist) 4/2 cators ar	% % 85	7.5YR sent □ ly Gleyed ly Redox py Muck My Gleyed Ny Gleyed ly Gleyed Ny Gleyed ly Redox py Muck My Gleyed	ion, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist) 6/8	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) silty clay
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Remarks: SOILS Map Unit Name Profile Descri Top Depth O	microtopog E: ption (Describe to Depth 10	BnA- Bennington si he depth needed to document the ind Horizon dicators (check he bipedon stic n Sulfide I Layers luck ed Below Dark Surface	ilt loam, icator or confirm	0-2% slc the absence of Matrix (Moist) 4/2 cators al	% 85	e: C=Concentrat 7.5YR	Redo Color (Moist) 6/8	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) silty clay
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Remarks: SOILS Map Unit Name Profile Descri Top Depth NRCS Hydric	microtopog E: ption (Describe to Depth 10	BnA- Bennington si he depth needed to document the ind Horizon dicators (check he bipedon stic in Sulfide d Layers luck de Below Dark Surface luck Mineral icky Peat or Peat	ilt loam, icator or confirm	0-2% slc the absence of Matrix (Moist) 4/2 cators ar	% 85 re not pre 84 - Sanc 85 - Sanc 85 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	e: C=Concentrat 7.5YR	Reduced Matrix, CS= Reduced Matrix, CS= Reduced Color (Moist) 6/8): Matrix Inneral Matrix Conface Surface Surface ions	ox Features % 15 Indicators Indicators of hydrophyty	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location PL	(e.g. clay, sand, loam) silty clay es urface



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 4 Sample Point: SP 8 **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: 3 (A) 3. 4. Total Number of Dominant Species Across All Strata: 3 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 92 184 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 =FACU spp. x 5= UPL spp. 0 0 2 3. 100 ____(A) Total 194 4. 5. Prevalence Index = B/A = 1.940 --6. 7. 8. **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes □ No 10 ✓ Yes □ No Dominance Test is > 50% Total Cover = 0 ✓ Yes □ No Prevalence Index is ≤ 3.0 * □ No □ Yes Morphological Adaptations (Explain) * □ Yes □ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 30 FACW Carex vulpinoidea * Indicators of hydric soil and wetland hydrology must be Poa palustris 30 **FACW** present, unless disturbed or problematic. **FACW** 3. Juncus brachycarpus 30 Asclepias incarnata N OBL **Definitions of Vegetation Strata:** FACW 2 5. N Solidago gigantea 6 FAC Apocynum cannabinum N Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Scirpus cyperinus Ν OBL 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q ft. tall. 10. 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks:

Additional Remarks:				
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Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16	
Applicant:	AEP									County:	Knox	
Investigator #1:				Investi	gator #2:	Michael	de Villiers			State:	Ohio	
Soil Unit:	_	on silt loam, 0-2% slopes					NWI Classification:				Wetland 4	
Landform:	Depression		40.0040		al Relief:			Б. (NADOO	Sample Point:		
Slope (%):	~1%	Latitude:	40.3813	332°N L	ongitude:	-82.565	531°W		NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumstar	•	,	Township:		
SUMMARY OF		or Hydrology □ nat	urany pr	obiemai	IC?		Yes	NŪ		Range:	Di	r:
		10		- V	- N-			Lhudria Oaila	D		- V	D N-
Hydrophytic Ve Wetland Hydrol				□ Yes	☑ No ☑ No			Hydric Soils		Within A Wetla		es ☑ No es ☑ No
Remarks:	ogy Present	, (□ res	□ INO			is this same	Jilly Politi	willin A wella	iliu? = Y	es M NO
Remarks.												
LIVEROLOGY												
HYDROLOGY												
		ators (Check here if	indicato	rs are n	ot presen	t ☑):						
Primary:				_	DO 14/ /				Secondary:			
	A1 - Surface A2 - High Wa				B9 - Wate B13 - Agu					B6 - Surface So B10 - Drainage		
]	A3 - Saturation				B14 - True					C2 - Dry-Season		<u>.</u>
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedimer						spheres on Living Roots			C9 - Saturation		
	B3 - Drift De						educed Iron			D1 - Stunted or		nts
	B4 - Algal Ma B5 - Iron Der				C6 - Rece		duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutra		
]		on Visible on Aerial Ima	agery		D9 - Gauc					D3 - FAC-Neuli	ai iest	
		y Vegetated Concave S			Other (Ex							
Field Observat	ions:											
Surface Water	Present?	□ Yes ☑ No	Depth:	N/A	(in.)			VA/ - 411 1 1	-l l D		V N	_
Water Table Pr		□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	arology Pr	esent?	Yes ☑ N	0
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)							
Describe Record	ed Data (etre	am gauge, monitoring	ו וופעי ד	rial photo	e previous	e inenacti	one) if available:		N/A			
Remarks:	ed Data (Sile	am gauge, monitoring	y well, aci	nai prioto	is, previou	3 III3pecti	ons), ii avallable.		14/7 (
ixciliaixs.												
SOII S												
SOILS	•	RnA Rennington s	It loam (0 2% eld	nes							
Map Unit Name		BnA- Bennington si				o: C=Concentrati	ion DuDoslation DMuDoduced Matrix CSuffice	Counted Costed Sand Cree	ins: Leastins: DL=D	ore Lining MaMatrix		
Map Unit Name Profile Descrip	otion (Describe to			the absence of	findicators.) (Typ	e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C		ins; Location: PL=Po	ore Lining, M=Matrix)	Tex	ture
Map Unit Name Profile Descrip Top	Bottom	the depth needed to document the ind	icator or confirm	the absence of Matrix	findicators.) (Typ	e: C=Concentral	Redo	x Features	1	ı		ture
Map Unit Name Profile Descrip Top Depth	Bottom Depth	the depth needed to document the ind	Color	Matrix (Moist)	f indicators.) (Typ		Color (Moist)	x Features %	Туре	Location	(e.g. clay,	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/3	f indicators.) (Typ		Color (Moist)	%	Type 	Location 	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	the depth needed to document the Ind Horizon	Color 10YR	Matrix (Moist) 4/3	% 100		Color (Moist)	%	Type 	Location 	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/3	% 100	 	Redo Color (Moist)	% Features	Type 	Location 	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom (Describe to Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/3	% 100	 	Redo Color (Moist)	%	Type	Location 	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/3	9/6 100 		Redo Color (Moist)	x Features % 	Type	 	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	Depth (Describe to Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/3	% 100		Redo Color (Moist)	%	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	Matrix (Moist) 4/3	% 100	 	Redo Color (Moist)	%	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Bottom Depth 6	the depth needed to document the ind Horizon	Color 10YR	the absence of Matrix (Moist) 4/3	% 100		Redo Color (Moist)	%	Type	Location	(e.g. clay, s	sand, loam)
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Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to Bottom Depth 6 Soil Field In A1- Histosol	Horizon	Color 10YR	wheelsheese of Matrix (Moist) 4/3	% 100 S4 - Sand	 sent ☑ y Gleyed	Redo Color (Moist)	Section	Type for Problen	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to Bottom Depth 6 Soil Field Ir A1- Histosol A2 - Histic E	Horizon	Color 10YR	the absence of Matrix (Moist) 4/3 cators al	% 100 S4 - Sand S5 - Sand	sent ☑ y Gleyed y Redox	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Detion (Describe to Bottom Depth 6	Horizon	Color 10YR	wheelsheese of Matrix (Moist) 4/3	% 100		Redo Color (Moist)	Section	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to Bottom Depth 6 Soil Field Ir A1- Histosol A2 - Histic E	Horizon	Color 10YR	the absence of Matrix (Moist) 4/3 Cators al	% 100 S4 - Sand S5 - Sand		Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, s	sand, loam)
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Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field Ir A1- Histosol A2 - Histic E A3- Black H A4- Hydroge A5 - Stratifier A11 - Deplet	Horizon	Color 10YR re if indic	the absence of Matrix (Moist) 4/3	% 100 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Red6	sent y Gleyed y Redox y Redox y Muck M y Gleyed datrix y Muck M y Gleyed eted Matrix x Dark Su	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Potion (Describe to Bottom Depth 6	Horizon	Color 10YR re if indic	the absence of Matrix (Moist) 4/3	% 100	sent ☑ y Gleyed y Redox oed Matrix y Muck M y Gleyed teted Matrix x Dark Su eted Dark	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Potion (Describe to Bottom Depth 6 6	Horizon	Color 10YR re if indic	the absence of Matrix (Moist) 4/3	% 100 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Red6	sent ☑ y Gleyed y Redox oed Matrix y Muck M y Gleyed teted Matrix x Dark Su eted Dark	Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, s	sand, loam)
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Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric :	Potion (Describe to Bottom Depth 6 6	Horizon	Color 10YR re if indic	the absence of Matrix (Moist) 4/3	%	sent ☑ y Gleyed y Redox oed Matrix y Muck M y Gleyed teted Matrix x Dark Su eted Dark	Redo Color (Moist)	ox Features % Indicators Indicators of hydrophy	Type	Location	(e.g. clay, s	sand, loam)
Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Potion (Describe to Bottom Depth 6 6	Horizon	Color 10YR re if indic	the absence of Matrix (Moist) 4/3	%	sent ☑ y Gleyed y Redox oed Matrix y Muck M y Gleyed teted Matrix x Dark Su eted Dark	Redo Color (Moist)	ox Features % Indicators Indicators of hydrophy	Type	Location	(e.g. clay, s	sand, loam)



Sample Point: SP 9 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 4 **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: 1 (A) 3. 4. Total Number of Dominant Species Across All Strata: 2 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 30 60 FAC spp. x 3 = 135 Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 =FACU spp. 42 168 x 5= UPL spp. 0 0 2 3. 117____(A) Total 363 4. Prevalence Index = B/A = 5. 3.103 --6. 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 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 30 FAC Poa pratensis * Indicators of hydric soil and wetland hydrology must be Cirsium vulgare 5 Ν FACU present, unless disturbed or problematic. FACU 3. Dipsacus fullonum 5 Ν FACU Asclepias syriaca **Definitions of Vegetation Strata:** 30 FACU 5. Solidago altissima 6 FAC Apocynum cannabinum 10 Tree - Woody plants 3 in. (7.6cm) or more in diameter at **FACW** breast height (DBH), regardless of height. 7. Carex vulpinoidea 5 Ν 8. Euthamia graminifolia 5 N **FACW** Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 **FACW** q 20 Ν Elymus virginicus ft. tall. 10. Ν FAC Vernonia gigantea 5 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5. Total Cover = Remarks: Additional Remarks:



Project/Site:	Mount Verr	non - Hedding 138 k	V Line R	ebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:				Investi	gator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		silt loam, 18-40% slopes, e	roded				NWI Classification	:			Wetland 5
Landform:	Side slope				al Relief:			5 .		Sample Point:	
Slope (%):	~18%				ongitude:			Datum:		Community ID:	
		ditions on the site ty				(If no, expla	·	☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumsta	•	,	Township:	
		or Hydrology □ nat	turally pro	blemat	IC?		Yes	NŪ		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve				☑ Yes				Hydric Soils I			
Wetland Hydro	ogy Present	?		☑ Yes	□ No			Is This Samp	oling Point '	Within A Wetla	and? □ Yes ■ No
Remarks:											
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicator	s are n	ot presen	t □):					
Primary					•	•			Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface So	
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
⊻ □	A3 - Saturation B1 - Water M				B14 - True C1 - Hydr					C2 - Dry-Season C8 - Crayfish Bu	
	B2 - Sedimer			☑			spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Der						duced Iron			D1 - Stunted or	
	B4 - Algal Ma	at or Crust			C6 - Rece	nt Iron Re	duction in Tilled Soils			D2 - Geomorphi	c Position
	B5 - Iron Dep				C7 - Thin				☑	D5 - FAC-Neutra	al Test
		on Visible on Aerial Ima			D9 - Gaug						
	Bo - Sparsely	Vegetated Concave S	urrace		Other (Ex	piain in Re	marks)				
Field Observat	longi										
				N1/A	/: \						
Surface Water		□ Yes ☑ No	Depth:	N/A N/A	(in.) (in.)			Wetland Hyd	drology Pr	esent? ☑	Yes □ No
Water Table Pr	esent?	☐ Yes ☑ No	Depth:								
Coturation Drop					` '						
Saturation Pres	ent?	☑ Yes □ No	Depth:	10	(in.)						
	ent?		Depth:	10	(in.)	s inspection	ons), if available:		N/A		
	ent?	☑ Yes □ No	Depth:	10	(in.)	s inspection	ons), if available:		N/A		
Describe Record Remarks:	ent?	☑ Yes □ No	Depth:	10	(in.)	s inspectio	ons), if available:		N/A		
Describe Record	ent?	☑ Yes □ No	Depth:	10	(in.)	s inspection	ons), if available:		N/A		
Describe Record Remarks: SOILS Map Unit Name	ent? ed Data (stre	☑ Yes □ No nam gauge, monitoring AdF2- Amanda silt	Depth: g well, aer	10 ial photo	(in.) os, previous opes, ero	ded	,				
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Describe Record Remarks: SOILS Map Unit Name	ent? ed Data (stre	☑ Yes □ No nam gauge, monitoring AdF2- Amanda silt	Depth: g well, aer	10 ial photo	(in.) os, previous opes, ero rindicators.) (Typ	ded	on, D=Depletion, RM=Reduced Matrix, CS=			ore Lining, M=Matrix)	Texture
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Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top	ed Data (stre	✓ Yes ☐ No sam gauge, monitoring AdF2- Amanda silt the depth needed to document the indepth of the same of the sa	Depth: g well, aer	10 ial photo -40% sl the absence of	(in.) os, previous opes, ero indicators.) (Typ	ded	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grail OX Features	ns; Location: PL=Po	ı	
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Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	ent? ed Data (stre	AdF2- Amanda silt the depth needed to document the ind Horizon	Depth: g well, aeri loam, 18- licator or confirm Color (10YR	10 ial photo -40% sl the absence of Matrix Moist) 3/2	opes, ero indicators) (Typ	ded e: C=Concentrati	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist)	Covered/Coated Sand Grail OX Features %	ns; Location: PL=Po	Location 	(e.g. clay, sand, loam)
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Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stre bition (Describe to 1) Bottom Depth 6 16 Soil Field In A1- Histosol A2 - Histic Eq. A3 - Black Hi A4 - Hydroge	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he object on Sulfide	Depth: g well, aer loam, 18- licator or confirmi Color (10YR 10YR	-40% sl he absence of Matrix Moist) 3/2 3/1 ators al	(in.) opes, ero indicators) (Typ % 100 95 re not pre S4 - Sand S5 - Sand S6 - Stripp F1 - Loar	ded	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6 Watrix	Covered/Coaled Sand Grai OX Features % 5 Indicators	Type C for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (strest properties to the strest properties the st	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he objeedon stic en Sulfide d Layers	Depth: g well, aer loam, 18- licator or confirmi Color (10YR 10YR	-40% sl the absence of Matrix Moist) -3/2 -3/1 ators al	(in.) opes, ero indicators) (Typ % 100 95	ded 10YR y Gleyed I y Redox only Muck Mily Gleyed I y Gleyed I y Rush Will y Gleyed I y Gleyed I y Rush Wily Gleyed I y Gleyed I y Rush Wily Gleyed I y Gleyed I y Rush Wily Gleyed I will y	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Matrix neral Matrix	Covered/Coaled Sand Grai OX Features % 5 Indicators	Type C for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stree bition (Describe to Depth General Control Contro	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he objecton stic en Sulfide d Layers luck	Depth: g well, aer loam, 18 licator or confirm! Color (10YR 10YR	40% sl he absence of Matrix Moist) 3/2 3/1	opes, ero indicators) (Typ % 100 95 en ot pre 84 - Sand 85 - Sand 66 - Stripp F1 - Loarr F3 - Depit	ded	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Matrix meral Matrix	Covered/Coaled Sand Grai OX Features % 5 Indicators	Type C for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stree bition (Describe to 1) Bottom Depth 6 16 Soil Field In A1- Histosol A2- Histic Ep A3- Black Hi A4- Hydroge A5- Stratifier A10- 2 cm M A11- Deplete	AdF2- Amanda silt the depth needed to document the ind Horizon	Depth: g well, aer loam, 18 licator or confirm! Color (10YR 10YR	10 ial photo -40% sl the absence of Matrix Moist) 3/2 3/1 ators al	(in.) s, previous opes, ero indicators) (Typ % 100 95 er not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F2 - Bed F6 - Redo	ded	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Matrix Indicate Matrix Inface	Covered/Coaled Sand Grai OX Features % 5 Indicators	Type C for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stree bition (Describe to 1) Bottom Depth 6 16 Soil Field In A1- Histosol A2 - Histic Eq. A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplete A12 - Thick E	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he bipedon stic en Sulfide d Layers luck ed Below Dark Surface Dark Surface	Depth: g well, aer loam, 18 licator or confirm! Color (10YR 10YR	40% sl he absence of Matrix Moist) 3/2 3/1	(in.) opes, ero opes, ero indicators) (Typ % 100 95 re not pre \$4 - Sand \$5 - Strip \$7 - Loam \$7 - Deple	ded	con, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Watrix Ineral Matrix Inface Surface Surface	Covered/Coaled Sand Grai OX Features % 5 Indicators	Type C for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam
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Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stree bition (Describe to 1) Bottom Depth 6 16 Soil Field In A1- Histosol A2- Histic Eq. A3- Black Hi A4- Hydroge A5- Stratified A10- 2 cm M A11- Deplete A12- Thick E S1- Sandy M S3- 5 cm ML	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he bipedon stic en Sulfide d Layers luck duck Mineral ucky Peat or Peat	Depth: g well, aer loam, 18- licator or confirm Color (10YR 10YR re if indic	10 ial photo 40% sl the absence of Matrix Moist) 3/2 3/1 ators al	(in.) opes, ero opes, ero indicators) (Typ % 100 95 re not pre 84 - Sand \$5 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ded	con, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Watrix Ineral Matrix Inface Surface Surface	Covered/Coaled Sand Grai OX Features % 5 Indicators Indicators 1 Indicators of hydrophylit	Type C for Problen A16 - Coast S7 - Dark S7 - Dark S7 TF12 - Ivon-M TF12 - Very Other (Explain	Location PL	(e.g. clay, sand, loam) clay loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stre btion (Describe to 1) Bottom Depth 6 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he bipedon stic en Sulfide d Layers luck duck Mineral ucky Peat or Peat	Depth: g well, aer loam, 18- licator or confirm Color (10YR 10YR re if indic	10 ial photo 40% sl the absence of Matrix Moist) 3/2 3/1 ators al	(in.) opes, ero opes, ero indicators) (Typ % 100 95 re not pre \$4 - Sand \$5 - Strip \$7 - Loam \$7 - Deple	ded	con, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Watrix Ineral Matrix Inface Surface Surface	Covered/Coaled Sand Grain OX Features % 5 Indicators	Type C for Problen A16 - Coast S7 - Dark S7 - Dark S7 TF12 - Ivon-M TF12 - Very Other (Explain	Location PL	(e.g. clay, sand, loam) clay loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 6 NRCS Hydric	ent? ed Data (stree bition (Describe to 1) Bottom Depth 6 16 Soil Field In A1- Histosol A2- Histic Eq. A3- Black Hi A4- Hydroge A5- Stratified A10- 2 cm M A11- Deplete A12- Thick E S1- Sandy M S3- 5 cm ML	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he bipedon stic en Sulfide d Layers luck duck Mineral ucky Peat or Peat	Depth: g well, aer loam, 18- licator or confirm Color (10YR 10YR re if indic	10 ial photo 40% sl the absence of Matrix Moist) 3/2 3/1 ators al	(in.) opes, ero opes, ero indicators) (Typ % 100 95 re not pre 84 - Sand \$5 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ded	con, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 3/6): Watrix Ineral Matrix Inface Surface Surface	Covered/Coaled Sand Grai OX Features % 5 Indicators Indicators 1 Indicators of hydrophylit	Type C for Problen A16 - Coast S7 - Dark S7 - Dark S7 TF12 - Ivon-M TF12 - Very Other (Explain	Location PL	(e.g. clay, sand, loam) clay loam



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 5 Sample Point: SP 10 **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: 2 (A) 3. 4. Total Number of Dominant Species Across All Strata: 2 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 102 204 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 =x 5= UPL spp. 0 2 3. 109 ____(A) Total 211 4. Prevalence Index = B/A = 5. 1.936 --6. 7. 8. **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes □ No 10 ✓ Yes □ No Dominance Test is > 50% Total Cover = 0 ✓ Yes □ No Prevalence Index is ≤ 3.0 * □ No □ Yes Morphological Adaptations (Explain) * □ Yes □ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 30 FACW Onoclea sensibilis * Indicators of hydric soil and wetland hydrology must be Leersia virginica 60 ٧ **FACW** present, unless disturbed or problematic. **FACW** 3. Impatiens capensis Ν Persicaria sagittata OBL **Definitions of Vegetation Strata:** 5 5. Eupatorium perfoliatum N OBL 6 Euthamia graminifolia 10 Ν **FACW** Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q ft. tall. 10. 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks:

Additional Remarks:			



Project/Site:		non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/11/16	
Applicant:	AEP									County:	Knox	
Investigator #1:				Invest	igator #2:	Michael	de Villiers			State:	Ohio	
Soil Unit:		silt loam, 18-40% slopes, e	roded				NWI Classification:			Wetland ID:		
Landform:	Side slope				al Relief:					Sample Point:		
Slope (%):	~18%	Latitude:	40.3839	955°N L	ongitude:	-82.573	648°W		NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumstar	nces present?	•	Township:		
		or Hydrology □ nat	turally pr	oblemat	ic?		✓ Yes	N⊎		Range:	Dir:	
SUMMARY OF												
Hydrophytic Ve					☑ No			Hydric Soils			□ Yes □	
Wetland Hydrol	logy Present	:?		□ Yes	. ☑ No			Is This Samp	oling Point \	Within A Wetla	nd? Yes	⊠ No
Remarks:												
HYDROLOGY												
Wetland Hydr	ology Indic	ators (Check here if	indicato	rs are n	ot presen	t 🖂)•						
Primary		ators (Oncor norch	indicate	no aic ii	ot presen				Secondary:			
<u> </u>	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface So	I Cracks	
	A2 - High Wa				B13 - Aqu					B10 - Drainage		
	A3 - Saturati	on			B14 - True	e Aquatic I	Plants			C2 - Dry-Season	Water Table	
	B1 - Water N				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedime						spheres on Living Roots				/isible on Aerial In	nagery
	B3 - Drift De						educed Iron duction in Tilled Soils			D1 - Stunted or D2 - Geomorphi		
	B4 - Algal Ma B5 - Iron Der				C6 - Rece					D5 - FAC-Neutra		
		on Visible on Aerial Ima	agery		D9 - Gaud					D3 - FAC-Neuli	11 1651	
		v Vegetated Concave S			Other (Ex							
	•	, 0			` '		,					
Field Observat	tions:											
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)							
Water Table Pr		□ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pr	esent?	Yes ☑ No	
Saturation Pres		□ Yes ☑ No	Depth:		(in.)							
					. ,							
	ed Data (stre	eam gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A			
Remarks:												
SOILS												
Map Unit Name		AdF2- Amanda silt										
Profile Descrip	otion (Describe to	the depth needed to document the ind	licator or confirm	the absence o	f indicators.) (Typ	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C	overed/Coated Sand Gra	ins; Location: PL=Po	ore Lining, M=Matrix)		
Тор	Bottom			Matrix			Redo	x Features			Texture	
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand	l, loam)
0	16		10YR	4/3	100						silt	
-								-				
					1							
-												
												
	l e	ndicators (check he	re if indi	cators a				Indicators	for Problen			
NRCS Hydric	Soil Field Ir A1- Histosol	ndicators (check he	re if indi		S4 - Sand	y Gleyed			A16 - Coast	Prairie Redox		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E	ndicators (check he	re if indi		S4 - Sand S5 - Sand	y Gleyed y Redox	Matrix		A16 - Coast S7 - Dark Si	Prairie Redox urface		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H	ndicators (check he pipedon istic	re if indi		S4 - Sand S5 - Sand S6 - Strip	y Gleyed y Redox ped Matrix	Matrix		A16 - Coast S7 - Dark Sı F12 - Iron-M	Prairie Redox urface langanese Masse		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	pipedon istic en Sulfide	re if indi	_ _ _	S4 - Sand S5 - Sand S6 - Strip F1 - Loam	y Gleyed y Redox ped Matrix ny Muck M	Matrix : ineral		A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Prairie Redox urface langanese Masse Shallow Dark Su		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie	pipedon istic en Sulfide d Layers	re if indi	_ _ _ _	S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed	Matrix : ineral Matrix		A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Prairie Redox urface langanese Masse		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N	pipedon istic suffide d Layers fuck		_ _ _ _	S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple	y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix	Matrix : ineral Matrix <		A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Prairie Redox urface langanese Masse Shallow Dark Su		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N	pipedon istic en Sulfide d Layers fluck ed Below Dark Surface			S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	y Gleyed ly Redox ped Matrix ny Muck M ny Gleyed eted Matrix nx Dark Su	Matrix : ineral Matrix K rface		A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Prairie Redox urface langanese Masse Shallow Dark Su		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet	pipedon istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface		_ _ _ _	S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix ineral Matrix		A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Prairie Redox urface langanese Masse Shallow Dark Su		
NRCS Hydric	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N	pipedon istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface			S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix ineral Matrix < rriface Surface ions	0	A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla	Prairie Redox urface langanese Masse Shallow Dark Su ain in Remarks)		r problematic.
NRCS Hydric	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	pipedon istic sn Sulfide d Layers luck ed Below Dark Surface Dark Surface Juck Mineral ucky Peat or Peat			S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix ineral Matrix < rriface Surface ions	Indicators of hydrophy	A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla	Prairie Redox urface langanese Masse Shallow Dark Su ain in Remarks)	rface	r problematic.
NRCS Hydric	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N	pipedon istic sn Sulfide d Layers luck ed Below Dark Surface Dark Surface Juck Mineral ucky Peat or Peat			S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix ineral Matrix < rriface Surface ions	0	A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla	Prairie Redox urface langanese Masse Shallow Dark Su ain in Remarks)	rface	r problematic.
NRCS Hydric	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	price (check he pipedon istic en Sulfide d Layers luck ed Below Dark Surface Jark Surface Juck Mineral ucky Peat or Peat			S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix ineral Matrix < rriface Surface ions	Indicators of hydrophy	A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla	Prairie Redox urface langanese Masse Shallow Dark Su ain in Remarks)	rface	r problematic.
NRCS Hydric	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	price (check he pipedon istic en Sulfide d Layers luck ed Below Dark Surface Jark Surface Juck Mineral ucky Peat or Peat			S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Gleyed y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix ineral Matrix < rriface Surface ions	Indicators of hydrophy	A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla	Prairie Redox urface langanese Masse Shallow Dark Su ain in Remarks)	rface	r problematic.



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 5 Sample Point: SP 11 **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** % Cover Dominant Ind.Status Species Name **FACU** Acer nigrum 2 N 2. Ν **FACU** Number of Dominant Species that are OBL, FACW, or FAC: 1 (A) Prunus serotina 3. FAC Acer rubrum 2 Ν 4. Total Number of Dominant Species Across All Strata: 3 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 6 x 2 = 20 40 FAC spp. x 3 = x 4 =Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. 248 62 FACU x 5= Fraxinus americana Ν UPL spp. 25 3. Total 111 (A) 381 4. Prevalence Index = B/A = 5. 3.432 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** 9. □ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10 Yes ☑ No Dominance Test is > 50% Total Cover = Yes ✓ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * FACU Rubus allegheniensis 10 Ν * Indicators of hydric soil and wetland hydrology must be Solidago canadensis 20 FACU present, unless disturbed or problematic. **FACW** 3. Ribes americanum 5 Ν Lonicera morrowii **FACU Definitions of Vegetation Strata:** 10 FAC 5. Symphyotrichum lanceolatum N 6 OBL Eupatorium perfoliatum Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Rosa multiflora 25 7. **FACU** 8. Euthamia graminifolia 15 **FACW** Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 HPI q 5 Verbascum thapsus N ft. tall. 10. Acer rubrum 10 FAC Ν 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5. Total Cover = Remarks:

Additional Remarks:			



Project/Site:	Mount Verr	non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:				Invest	igator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		silt loam, 18-40% slopes, e	roded			_	NWI Classification:			Wetland ID:	Wetland 6
Landform:	Side slope				cal Relief:			5 .		Sample Point:	
Slope (%):	~18%				ongitude:				NAD83	Community ID:	
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumstar	•	,	Township:	
		or Hydrology □ na	turally pr	oblemat	tic?		✓ Yes	NŪ		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve				Yes				Hydric Soils			
Wetland Hydrol	ogy Present	?		☑ Yes	s □ No			Is This Samp	oling Point	Within A Wetla	and? □ Yes ■ No
Remarks:											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here it	indicato	rs are n	ot presen	t □):					
Primary:		•			•	•			Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface So	
	A2 - High Wa					atic Fauna				B10 - Drainage	
	A3 - Saturation B1 - Water M				B14 - True C1 - Hydr					C2 - Dry-Seaso C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Der			✓			educed Iron		_	D1 - Stunted or	
	B4 - Algal Ma	at or Crust			C6 - Rece	ent Iron Re	duction in Tilled Soils			D2 - Geomorphi	ic Position
	B5 - Iron Dep					Muck Surf			☑	D5 - FAC-Neutr	al Test
		on Visible on Aerial Ima			D9 - Gaug						
	B8 - Sparsely	y Vegetated Concave S	ипасе		Other (Ex	piain in Re	emarks)				
Field Observed											
Field Observat											
Surface Water		☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	droloav Pr	esent? ☑	Yes □ No
Water Table Pr		☐ Yes ☑ No	Depth:	N/A	(in.)			-	0,		
Saturation Pres	ent?	□ Yes ☑ No	Depth:	N/A	(in.)						
Describe Record	ed Data (stre	am gauge, monitoring	g well, aei	rial photo	os, previou	s inspecti	ons), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name	:	AdF2- Amanda silt	loam, 18	-40% sl	lopes, ero	ded					
Profile Descrip	otion (Describe to	the depth needed to document the inc	icator or confirm	the absence o	f indicators.) (Typ	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Gra	ins; Location: PL=P	ore Lining, M=Matrix)	
Top	Bottom			Matrix				ox Features			Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	6		10YR	4/4	100						sandy silt
6	16	-	10YR	3/2	90	10YR	5/8	10	CS	M	sandy silt
				-							
				-							
											
											
									l	·	
•		ndicators (check he	re it inaid): 		for Probler		
	A1- Histosol A2 - Histic E	ninedon			S5 - Sand	ly Gleyed	viatrix		S7 - Dark S	Prairie Redox	
]	A3 - Black Hi					ped Matrix				langanese Mass	es
	A4 - Hydroge					ny Muck M				Shallow Dark Su	
	A5 - Stratified					ny Gleyed				ain in Remarks)	
	A10 - 2 cm N					eted Matrix					
		ed Below Dark Surface				x Dark Su					
	A12 - Thick D					eted Dark					
		iuck iviineral			rŏ - Redo	x Depress					
	S1 - Sandy N							1 Indicators of hudrenbur			procent unlace dieturhad ar problematic
	S3 - 5 cm Mu	ucky Peat or Peat		_							e present, unless disturbed or problematic.
		ucky Peat or Peat		Depth:	N/A			Hydric Soil			Yes No
Restrictive Layer (If Observed)	S3 - 5 cm Mu	ucky Peat or Peat		Depth:	N/A						
Restrictive Layer	S3 - 5 cm Mu	ucky Peat or Peat		Depth:	N/A						



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 6 Sample Point: SP 12

VEGETATION	(Species identified in all uppercase are non-n	ative spe	cies.)		
Tree Stratum (P	lot 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:5(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: 100% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 37 $x 1 = 37$
	Total Cover =	0			FACW spp. 60 x 2 = 120
					FAC spp. 10 $\times 3 = 30$
	ratum (Plot size: 15 ft radius)				FACU spp. 0 x 4 = 0
1.					UPL spp. $0 x 5 = 0$
2.					-
3.					Total(A)(B)
4.				-	Developed Index DIA 4740
5.					Prevalence Index = B/A = 1.748
6. 7.					
8.					Hudranhutia Vagatatian Indicatora
9.					Hydrophytic Vegetation Indicators: ☐ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					 ☐ Yes ☐ No Rapid Test for Hydrophytic Vegetation ☑ Yes ☐ No Dominance Test is > 50%
10.	Total Cover =				✓ Yes □ No Prevalence Index is ≤ 3.0 *
	Total Cover =	U			
Literate Otto-Arrows (DI	at almost 5 th and in a				
1.	ot size: 5 ft radius) Leersia virginica	20	Υ	FACW	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
2.	Scirpus cyperinus	5	N N	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Impatiens capensis	5	N	FACW	present, unless disturbed or problematic.
4.	Glyceria striata	5	N	OBL	Definitions of Vegetation Strata:
5.	Onoclea sensibilis	20	Y	FACW	Deminions of Vegetation Strata.
6	Schoenoplectus americanus	2	N	OBL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Eupatorium perfoliatum	10	Y	OBL	breast height (DBH), regardless of height.
8.	Agrimonia parviflora	15	Ÿ	FACW	
9.	Verbena urticifolia	10	N	FAC	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.	Carex normalis	15	Y	OBL	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.
	Total Cover =				
	10141 00701 -	.01			
Woody Vine Stra	tum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes □ No
4.					,
5.					
<u> </u>	Total Cover =				
Remarks:	1000 0000				
Additional Re	marke:				
Additional Ne	muno.				



Project/Site:	Mount Verr	non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:	: Aaron Kwo	lek		Invest	igator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		silt loam, 18-40% slopes, e	roded		gene		NWI Classification			4	Wetland 6
Landform:	Side slope		.0000	Loc	al Relief:	Linear		•		Sample Point:	
Slope (%):	~18%		10 384		ongitude:		327°\\/	Datum:	NAD83	Community ID:	
	drologio con	ditions on the site ty	nical for	thic time	origitude.	-02.07.0)21 VV	☑ Yes □	No	1 '	
						(if no, expia				Section:	
		or Hydrology □ sig					Are normal circumsta	•	,	Township:	
		or Hydrology □ nat	urally pr	oblemat	IC?		Yes	NŪ		Range:	Dir:
SUMMARY OF	FINDINGS										
Hydrophytic Ve	getation Pre	sent?		□ Yes	. ☑ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydrol	logy Present	:?		□ Yes	. ☑ No			Is This Samp	oling Point	Within A Wetla	nd? ■ Yes ■ No
Remarks:								•			
HYDROLOGY											
HIDROLOGI											
Wetland Hydr	ology Indica	ators (Check here if	indicato	ors are n	ot presen	t ☑):					
Primary	<u>:</u>	·			-				Secondary:		
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface Soi	il Cracks
	A2 - High Wa	ater Table			B13 - Aqu	atic Fauna	l			B10 - Drainage I	Patterns
	A3 - Saturati				B14 - Tru					C2 - Dry-Seasor	
	B1 - Water M									C8 - Crayfish Bu	
	B2 - Sedime						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutra	al lest
		on Visible on Aerial Ima			D9 - Gaug						
	Bo - Sparser	y Vegetated Concave S	urrace		Other (Ex	piain in Re	marks)				
Field Observat											
Surface Water	Present?	☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	osont?	Yes ☑ No
Water Table Pr	esent?	□ Yes ☑ No	Depth:	N/A	(in.)			Wettand Hy	urology i i	esent: 🗆	TC3 E NO
Saturation Pres	sent?	☐ Yes ☑ No	Depth:	N/A	(in.)						
Describe Descri	lad Data (atra	om sausa manitarin		rial phate		o inonosti	ana) if available.		N/A		
	ied Data (stre	eam gauge, monitoring	j weii, ae	riai prioto	os, previou	s inspecti	ons), if available:		IN/A		
Remarks:											
SOILS											
Map Unit Name		AdF2- Amanda silt									
Profile Descrip	otion (Describe to	the depth needed to document the ind	icator or confirm	n the absence of	f indicators.) (Typ	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Gra	ins; Location: PL=Po	ore Lining, M=Matrix)	
Top	Bottom			Matrix				ox Features			
Depth	Depth	11						ux realules			Texture
0		I HOTIZON	Color		%			1	Tyne	Location	
U		Horizon	+	(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam
	4		10YR	(Moist) 4/4	100		Color (Moist)	% 			(e.g. clay, sand, loam silt
-	4		+	(Moist)			Color (Moist)	%			(e.g. clay, sand, loam
	1		10YR	(Moist) 4/4	100		Color (Moist)	% 			(e.g. clay, sand, loam silt
			10YR 	(Moist) 4/4 	100		Color (Moist)	% 			(e.g. clay, sand, loam silt
			10YR 	(Moist) 4/4 	100 		Color (Moist)	% 		 	(e.g. clay, sand, loam silt
 			10YR 	(Moist) 4/4 	100 		Color (Moist)	% 	 		(e.g. clay, sand, loam silt
			10YR 	(Moist) 4/4 	100 	 	Color (Moist)	% 	 		(e.g. clay, sand, loam silt
 			10YR 	(Moist) 4/4	100 	 	Color (Moist)	%	 		(e.g. clay, sand, loam silt
			10YR 	(Moist) 4/4 	100 	 	Color (Moist)	% 	 		(e.g. clay, sand, loam silt
 			10YR	(Moist) 4/4 -	100 	 	Color (Moist)	%	 		(e.g. clay, sand, loam silt
 NRCS Hydric			10YR	(Moist) 4/4 -	100 	 sent 🗹	Color (Moist)	% Indicators	 for Problem		(e.g. clay, sand, loam silt
 NRCS Hydric	 Soil Field Ir	 ndicators (check he	10YR	(Moist) 4/4 cators as	100 re not pre	 sent ☑ y Gleyed l	Color (Moist)	%	 for Problem		(e.g. clay, sand, loam silt
NRCS Hydric	 Soil Field Ir A1- Histosol	ndicators (check he	10YR	(Moist) 4/4 cators as	100 re not pre \$4 - Sand \$5 - Sand \$6 - Strip	sent ☑ y Gleyed y Redox oed Matrix	Color (Moist)	% Indicators			(e.g. clay, sand, loam silt
NRCS Hydric			10YR	(Moist) 4/4 cators al	100 re not pre S4 - Sand S5 - Sand	sent ☑ y Gleyed y Redox oed Matrix	Color (Moist)	%			(e.g. clay, sand, loam silt
			10YR	(Moist) 4/4 cators al	100	sent ☑ y Gleyed ly Redox y Redox y Muck M	Color (Moist)	%			(e.g. clay, sand, loam silt
	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M	ndicators (check he pipedon istic en Sulfide d Layers	10YR	(Moist) 4/4 cators al	100 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple	sent Ø gleyed y Redox oed Matrix y Muck M by Gleyed eted Matrix	Color (Moist)	%			(e.g. clay, sand, loam silt
			10YR	(Moist) 4/4 cators ar	100	sent 🗹 y Gleyed y Redox oed Matrix y Muck M y Gleyed deted Matrix x Dark Su	Color (Moist)	%			(e.g. clay, sand, loam silt
			10YR	(Moist) 4/4	100		Color (Moist)	%			(e.g. clay, sand, loam silt
			10YR	(Moist) 4/4 cators ar	100		Color (Moist)	% Indicators	for Problem A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla		(e.g. clay, sand, loam silt
			10YR	(Moist) 4/4	100		Color (Moist)	% Indicators	for Problem A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla		(e.g. clay, sand, loam silt
NRCS Hydric			10YR	(Moist) 4/4	100		Color (Moist)	% Indicators	for Problem A16 - Coast S7 - Dark Si F12 - Iron-M Other (Explain		(e.g. clay, sand, loam silt
NRCS Hydric			10YR	(Moist)	100		Color (Moist)	% Indicators Indicators of hydrophyd	for Problem A16 - Coast S7 - Dark Si F12 - Iron-M Other (Explain		(e.g. clay, sand, loam silt
NRCS Hydric			10YR	(Moist)	100		Color (Moist)	% Indicators Indicators of hydrophyd	for Problem A16 - Coast S7 - Dark Si F12 - Iron-M Other (Explain		(e.g. clay, sand, loam silt
NRCS Hydric			10YR	(Moist)	100		Color (Moist)	% Indicators Indicators of hydrophyd	for Problem A16 - Coast S7 - Dark Si F12 - Iron-M Other (Explain		(e.g. clay, sand, loam silt



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 6 Sample Point: SP 13

	(Species identified in all uppercase are non-na	ative spe	cies.)		
Tree Stratum (Plo	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: 1 (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: 25% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
10.	Total Cover =	0			FACW spp. 2 x 2 = 4
	Total Gover	· ·			FAC spp. 35 x 3 = 105
Canling/Chruh Ctr	atum (Plot size: 15 ft radius)				FACU spp. 82 x 4 = 328
1.	Rubus allegheniensis	2	N	FACU	· · · · · · · · · · · · · · · · · · ·
2.	Fraxinus pennsylvanica	2	N	FACW	UPL spp. <u>5</u> x 5 = <u>25</u>
3.					Tatal 404 (A) 400 (B)
3. 4.					Total <u>124</u> (A) <u>462</u> (B)
					Developed Index DIA 0.700
5.					Prevalence Index = B/A = 3.726
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
	Total Cover =	4			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 5 ft radius)				☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Rosa multiflora	25	Υ	FACU	
2.	Solidago canadensis	15	Υ	FACU	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	Rubus allegheniensis	25	Υ	FACU	present, unless disturbed of problematic.
4.	Rumex crispus	10	N	FAC	Definitions of Vegetation Strata:
5.	Xanthium strumarium	5	N	FAC	· ·
6	Convolvulus arvensis	10	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Symphyotrichum lanceolatum	5	N	FAC	breast height (DBH), regardless of height.
8.	Ageratina altissima	5	N	FACU	
9.	Fragaria vesca	5	N	UPL	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.	Persicaria virginiana	15	Y	FAC	ft. tall.
11.			<u> </u>		
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
12.					and woody plants less than 3.28 ft. tall.
				-	••
14.					All woods vince greater than 2.20 ft in height
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	120			
	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present □ Yes ☑ No
4.					
5.					
	Total Cover =	0			
Remarks:				<u> </u>	
Additional Re	narke:				

Additional Remarks:			
	 •		•



Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16	6
Applicant:	AEP									County:	Knox	
Investigator #1:				Investi	gator #2:	Michael	de Villiers			State:	Ohio	
Soil Unit:		loam, 0-2% occasionally floo	oded				NWI Classification:				Wetland	17
Landform:	Side slope				al Relief:					Sample Point:		
Slope (%):	~1%	Latitude:							NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology \square sig					Are normal circumstar	nces present?	•	Township:		
		or Hydrology □ nat	urally pr	oblemat	ic?		Yes	N⊎		Range:		Dir:
SUMMARY OF												
Hydrophytic Ve				Yes	□ No			Hydric Soils				Yes □ No
Wetland Hydro	ogy Present	:?		☑ Yes	□ No			Is This Samp	oling Point '	Within A Wetla	ınd?	Yes ■ No
Remarks:												
HYDROLOGY												
Wetland Hydr	ology Indic:	ators (Check here if	indicato	rs are n	ot presen	t 🗆)•						
Primary		ators (Oncor norch	indicato	is aic in	ot presen				Secondary:			
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface Soi	il Cracks	
	A2 - High Wa				B13 - Aqu					B10 - Drainage I		
	A3 - Saturati	on			B14 - True	e Aquatic F	Plants			C2 - Dry-Seasor	n Water Ta	able
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedime						spheres on Living Roots			C9 - Saturation '		
	B3 - Drift De			☑			educed Iron			D1 - Stunted or		
	B4 - Algal Ma B5 - Iron Der						duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutra		l
		on Visible on Aerial Ima	nan/		C7 - Thin D9 - Gaud				· ·	D5 - FAC-Neuli	ai rest	
		v Vegetated Concave S			Other (Ex							
_		,		_	(,	,					
Field Observat	ions:											
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)							
Water Table Pr		☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent? ☑	Yes □	No
Saturation Pres					. ,							
Saturation Fres	ent?	□ Yes ☑ No	Depth:	N/A	(in.)							
		eam gauge, monitoring			` '	s inspection	ons), if available:		N/A			
					` '	s inspecti	ons), if available:		N/A			
Describe Record Remarks:					` '	s inspection	ons), if available:		N/A			
Describe Record					` '	s inspection	ons), if available:		N/A			
Describe Record Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino Sh- Shoals silt loan	y well, ae	rial photo	nally flood	led	,					
Describe Record Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino Sh- Shoals silt loan	y well, ae	rial photo	nally flood	led	,	Covered/Coated Sand Gra		ore Lining, M=Matrix)		
Describe Record Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino Sh- Shoals silt loan	y well, ae	rial photo	nally flood	led	ion, D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Gra		ore Lining, M=Matrix)		Texture
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top	ed Data (stre	eam gauge, monitorino Sh- Shoals silt loan	y well, ael	occasion	nally flood	led	ion, D=Depletion, RM=Reduced Matrix, CS=C RedC		ins; Location: PL=Pi			Texture ay, sand, loam)
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind	g well, ael	occasion the absence of Matrix (Moist)	nally flood	led	ion, D=Depletion, RM=Reduced Matrix, CS=0	x Features		ve Lining, M=Matrix) Location		ay, sand, loam)
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	g well, aed	occasion the absence of Matrix (Moist) 3/2	nally flood indicators.) (Typ	ed e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % 	ins; Location: PL=Pr	Location 	(e.g. cla	ay, sand, loam) loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	g well, aed on the second of t	occasior the absence of Matrix (Moist) 3/2 4/1	nally flood indicators.) (Typ % 100 90	ed e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6	% 10	Type	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	g well, aed on the second of t	occasion the absence of Matrix (Moist) 3/2 4/1	nally flood indicators.) (Typ % 100 90	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6 	% Features	Type C	Location M 	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	g well, aed on the second of t	occasion the absence of Matrix (Moist) 3/2 4/1	mally flood indicators.) (Typ) % 100 90	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6	x Features	Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	g well, aed on the confirmation of the confirm	occasion the absence of Matrix (Moist) 3/2 4/1	nally flood indicators.) (Typ % 100 90	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6 	% Features	Type C	Location M 	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	g well, aed on the second of t	occasion the absence of Matrix (Moist) 3/2 4/1	mally flood indicators.) (Typ) % 100 90	e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6	x Features	Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1	nally flood indicators.) (Typ	ed e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	x Features % 10 	Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	0, 0-2% confirm Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1	nally flood indicators.) (Typ	ed e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6	% 10	Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1	ss, previous	ed 10YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redc Color (Moist) 5/6	% 10	Type Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1	ss, previous	ed 10YR sent □	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist) 5/6	% 10	Type C s for Problem	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	ed Data (stre	Sh- Shoals silt loan the depth needed to document the Ind Horizon ndicators (check he pipedon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators al	nally flood indicators) (Typ % 100 90 e not pre \$4 - Sand \$5 - Sand	ed 10YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist) 5/6	x Features	Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators al	s, previous nally flood indicators) (Typ % 100 90 re not pre \$4 - Sand \$5 - Sand \$6 - Stripi	ed 10YR y Gleyed I y Redox ped Matrix	ion, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist) 5/6	x Features % 10 Indicators	Type Type C for Problem A16 - Coast S7 - Dark S F12 - Iron-N	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators an	nally flood indicators) (Type % 100 90	ed 10YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators all	mally flood (indicators.) (Typ % 100 90	ed e. C=Concentrat 10YR 10YR y Gleyed I by Redox pyed Matrix by Muck M watrix by Muck M watry N y Gleyed I by N y Gleyed W y Gleyed	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6): Matrix ineral Matrix	x Features % 10 Indicators	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	ed Data (stre	Sh- Shoals silt loan the depth needed to document the Ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators an	nally flood indicators) (Typ % 100 90 re not pre 84 - Sand 85 - Sard 86 - Stripi F1 - Loarr F3 - Deple	ed	ion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist) 5/6): Matrix inneral Matrix	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	ed Data (stre	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion The absence of Matrix (Moist) 3/2 4/1 cators al	mally flood indicators) (Typ % 100 90 re not pre \$4 - Sand \$5 - Sand \$6 - Strip[F1 - Loarr F2 - Loarr F2 - Deple F6 - Red6	ec C=Concentrat	non, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist) 5/6	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	bition (Describe to Depth 1 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators an	mally flood indicators.) (Type % 100 90 re not pre \$4 - Sand \$5 - Sand \$5 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redoc F7 - Deple	ed	ron, D=Depletion, RM=Reduced Matrix, CS= Redct Color (Moist) 5/6 Watrix ineral Matrix (rface Surface Surface Surface	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	bition (Describe to Depth 1 16	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color 10YR 10YR	occasion the absence of Matrix (Moist) 3/2 4/1 cators ar	mally flood indicators) (Typ % 100 90 re not pre \$4 - Sand \$5 - Sand \$6 - Strip[F1 - Loarr F2 - Loarr F2 - Deple F6 - Red6	ed	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6): Matrix Inneral Matrix Conface Surface ions	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location M	(e.g. cla	ay, sand, loam) loam silt loam
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	bition (Describe to Depth 16	Sh- Shoals silt loan the depth needed to document the ind Horizon	color confirmation of the color	occasion the absence of Matrix (Moist) 3/2 4/1 cators an	mally flood indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ed	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6): Matrix Inneral Matrix Conface Surface ions	ox Features % 10 Indicators Indicators of hydrophy	Type C	Location M	e.g. class	ay, sand, loam) loam silt loam s disturbed or problematic.
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	bition (Describe to Depth 1 16	Sh- Shoals silt loan the depth needed to document the ind Horizon	color confirmation of the color	occasion the absence of Matrix (Moist) 3/2 4/1 cators ar	mally flood indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ed	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6): Matrix Inneral Matrix Conface Surface ions	Section Sect	Type C	Location M	(e.g. cla	ay, sand, loam) loam silt loam s disturbed or problematic.
Describe Record Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 1 NRCS Hydric	bition (Describe to Depth 16	Sh- Shoals silt loan the depth needed to document the ind Horizon	color confirmation of the color	occasion the absence of Matrix (Moist) 3/2 4/1 cators an	mally flood indicators.) (Typ % 100 90 er not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ed	non, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6): Matrix Inneral Matrix Conface Surface ions	ox Features % 10 Indicators Indicators of hydrophy	Type C	Location M	e.g. class	ay, sand, loam) loam silt loam s disturbed or problematic.



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 7 Sample Point: SP 14

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

VEGETATION	(Species identified in all uppercase are non-na	ative spec	cies.)		
Tree Stratum (Plo	t size: 30 ft radius)			1	
	<u>Species Name</u>		Dominant	Ind.Status	Dominance Test Worksheet
1.					
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% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.	<u></u>				OBL spp87
	Total Cover =	0			FACW spp 38
					FAC spp. 12 $x 3 = 36$
	atum (Plot size: 15 ft radius)				FACU spp 0
1.	Rosa palustris	10	Υ	OBL	UPL spp x 5 = 50
2.	Rhus glabra	10	Y	UPL	
3.	-				Total(A)(B)
4.					
5.					Prevalence Index = B/A = 1.694
6.	-				
7.					
8.					Hydrophytic Vegetation Indicators:
9.	-				☐ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes □ No Dominance Test is > 50%
	Total Cover =	20			
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plot					☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Leersia virginica	15	N	FACW	* Indicators of hydric soil and wetland hydrology must be
2.	Phalaris arundinacea	3	N	FACW	present, unless disturbed or problematic.
3.	Impatiens capensis	20	Υ	FACW	
4.	Eupatorium perfoliatum	7	N	OBL	Definitions of Vegetation Strata:
5.	Vernonia gigantea	2	N	FAC	
6	Carex Iurida	20	Υ	OBL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Carex normalis	5	N	OBL	breast height (DBH), regardless of height.
8.	Glyceria striata	15	N	OBL	
9.	Verbena urticifolia	10	N	FAC	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.	Carex frankii	30	Υ	OBL	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.
	Total Cover =	127			
Woody Vine Stratu	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes □ No
4.					
5.					
	Total Cover =	0			
Remarks:					
Additional Ren	narke:				

Additional Remarks:				
	_		•	



Project/Site:	Mount Verr	non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1	Aaron Kwo	lek		Investi	igator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:	Sh- Shoals silt I	loam, 0-2% occasionally floo	oded				NWI Classification:			Wetland ID:	Wetland 7
Landform:	Side slope			Loc	al Relief:	Linear				Sample Point:	SP 15
Slope (%):	~1%	Latitude:	40.3851				707°W	Datum:	NAD83	Community ID:	
		ditions on the site ty						☑ Yes □	No	Section:	
		or Hydrology □ sig				(11 110, 020)	Are normal circumstar			Township:	
		or Hydrology □ nat					✓ Yes	N U		Range:	Dir:
		or riyurology - riai	urally pro	oblemat	.10 :		E fes	IN⊖		Range.	bii
SUMMARY OF		10		- \	_ N				D 10		- V N
Hydrophytic Ve				□ Yes				Hydric Soils			□ Yes ☑ No
Wetland Hydro	logy Present	?		□ Yes	. ☑ No			Is This Samp	oling Point \	Within A Wetla	and? ■ Yes ■ No
Remarks:											
HYDROLOGY											
Watland Hydr	ology Indio	store (Chack hara if	indicato	re are n	ot procon	+ 121 /•					
		ators (Check here if	indicato	is are ii	ot presen	(₪).			Cocondon		
Primary	A1 - Surface	Mator			B9 - Wate	r Stainad	Logyon		Secondary:	B6 - Surface So	il Cracks
	A1 - Surface A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation				B13 - Aqu					C2 - Dry-Season	
	B1 - Water M									C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Der						duced Iron			D1 - Stunted or	
	B4 - Algal Ma			_			duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutra	
		on Visible on Aerial Ima	agery		D9 - Gaug						
		y Vegetated Concave S			Other (Ex						
Field Observa	tions:										
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)						
Water Table Pr		□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent?	Yes ☑ No
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)						
Saturation Fres	Bent?	□ 162 □ 140	Deptii.		(111.7						
					. ,						
Describe Record	ed Data (stre	eam gauge, monitoring	y well, aer		. ,	s inspecti	ons), if available:		N/A		
Describe Record Remarks:	ed Data (stre	eam gauge, monitoring	y well, aer		. ,	s inspecti	ons), if available:		N/A		
	ed Data (stre	eam gauge, monitoring	y well, aer		. ,	s inspecti	ons), if available:		N/A		
	ed Data (stre	eam gauge, monitorino	y well, aer		. ,	s inspecti	ons), if available:		N/A		
Remarks: SOILS				rial photo	os, previou		ons), if available:		N/A		
Remarks: SOILS Map Unit Name	9:	Sh- Shoals silt loan	າ, 0-2% ເ	rial photo	nally flood	led		Owered/Costed Sand Gra		ora Lining M=Matrix)	
Remarks: SOILS Map Unit Name Profile Descrip	e: Otion (Describe to	Sh- Shoals silt loan	າ, 0-2% ເ	occasior	nally flood	led	on, D=Depletion, RM=Reduced Matrix, CS=C			ore Lining, M=Matrix)	Taytura
Remarks: SOILS Map Unit Name Profile Descrip Top	e: otion (Describe to Bottom	Sh- Shoals silt loan the depth needed to document the ind	1, 0-2% (occasior the absence of	nally flood	led	on, D=Depletion, RM=Reduced Matrix, CS=C RedC	x Features	ins; Location: PL=Po		Texture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: otion (Describe to Bottom Depth	Sh- Shoals silt loan	1, 0-2% (icator or confirm Color (occasior the absence of Matrix (Moist)	nally flood findicators.) (Type	led	on, D=Depletion, RM=Reduced Matrix, CS=C			ore Lining, M=Matrix) Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top	e: otion (Describe to Bottom	Sh- Shoals silt loan the depth needed to document the ind	1, 0-2% (occasior the absence of	nally flood	led	on, D=Depletion, RM=Reduced Matrix, CS=C RedC	x Features	ins; Location: PL=Po		
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: otion (Describe to Bottom Depth	Sh- Shoals silt loan the depth needed to document the ind Horizon	1, 0-2% (icator or confirm Color (occasior the absence of Matrix (Moist)	nally flood findicators.) (Type	ed e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: otion (Describe to Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	n, 0-2% (cicator or confirm	occasion the absence of Matrix (Moist) 4/4	nally flood findicators.) (Typ	e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features % 	ins; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	n, 0-2% (cicator or confirm Color (10YR)	occasior the absence of Matrix (Moist) 4/4	nally flood findicators.) (Typ % 100	ed e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features %	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (occasion the absence of Matrix (Moist) 4/4	mally flood indicators.) (Typ	e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	% Features	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (occasior the absence of Matrix (Moist) 4/4	nally flood findicators.) (Typ	ed e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	% Features	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (occasion the absence of Matrix (Moist) 4/4	mally flood indicators.) (Typ	e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	% Features	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (occasion the absence of Matrix (Moist) 4/4	mally flood findicators.) (Typ	ed e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR)	occasion the absence of Matrix (Moist) 4/4	nally flood if indicators.) (Typ	ed e: C=Concentral	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	%	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	occasion the absence of Matrix (Moist) 4/4	mally flood findicators.) (Typ % 100	ed	on, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	%	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field In	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	occasion the absence of Matrix (Moist) 4/4	mally flood findicators.) (Typ % 100	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	% Indicators	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	Doccasion the absence of Matrix (Moist) 4/4 cators all	mally flood (indicators.) (Typ % 100 re not pre	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	% Indicators	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field In	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	Doccasion the absence of Matrix (Moist) 4/4 cators all	mally flood findicators.) (Type 100	ed	on, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	Doccasion the absence of Matrix (Moist) 4/4 cators al	mally flood indicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand	ed	on, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic E, A3 - Black Hi	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	occasion the absence of Matrix (Moist) 4/4 cators an	mally flood (indicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripl	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A10 - 2 cm M	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	Doccasion the absence of Matrix (Moist) 4/4 cators al	mally flood indicators.) (Type % 100 re not pre S4 - Sand S5 - Sand S6 - Stripe F1 - Loam F2 - Loam F3 - Deple	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redoc Color (Moist)): Matrix ineral Matrix	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histo E A3 - Black H A4 - Hydroge A5 - Stratifiee A10 - 2 cm N A11 - Deplete	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	occasion the absence of Matrix (Moist) 4/4 cators al	mally flood findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic SI A4 - Hydroge A5 - Stratifie A41 - Deplet A12 - Thick E	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	Decasion The absence of Matrix (Moist) 4/4 cators ar	mally flood findicators.) (Type % 100 -	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	occasion the absence of Matrix (Moist) 4/4 cators al	mally flood findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR	Decasion The absence of Matrix (Moist) 4/4 cators ar	mally flood findicators.) (Type % 100 -	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR re if indic	Decasion The absence of Matrix (Moist) 4/4 Cators al	mally flood findicators.) (Type % 100	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	y Features % Indicators Indicators of hydrophyty	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 6 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR re if indic	Decasion The absence of Matrix (Moist) 4/4 cators ar	mally flood findicators.) (Type % 100 -	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 6	Sh- Shoals silt loan the depth needed to document the ind Horizon	Color (10YR re if indic	Decasion The absence of Matrix (Moist) 4/4 Cators al	mally flood findicators.) (Type % 100	ed	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	y Features % Indicators Indicators of hydrophyty	Type Type	Location	(e.g. clay, sand, loam) silt



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 7 Sample Point: SP 15

VEGETATION	(Species identified in all uppercase are non-n	ative spe	cies)		
	ot size: 30 ft radius)	auro opo	5.00.7		
(1)	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Acer saccharum	60	Y	FACU	
2.	Ulmus rubra	20	Υ	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
3.	Fraxinus americana	10	N	FACU	(/
4.					Total Number of Dominant Species Across All Strata: 6 (B)
5.					Total Number of Boliminant openies Across All Citata.
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
7.					reicent of Dominant Species That Are OBL, FACW, of FAC
8.					Prevalence Index Worksheet
9.					
					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
	Total Cover =	90			FACW spp. 25 x 2 = 50
					FAC spp. 60 x 3 = 180
	atum (Plot size: 15 ft radius)	- 10		E4.011	FACU spp. 145 $x = 4 = 580$
1.	Rosa multiflora	10	Y	FACU	UPL spp. $0 x 5 = 0$
2.	Lindera benzoin	10	Y	FACW	
3.					Total <u>230</u> (A) <u>810</u> (B)
4.					
5.					Prevalence Index = B/A = 3.522
6.					
7.				-	
8.				-	Hydrophytic Vegetation Indicators:
9.				-	☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
	Total Cover =	20			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☑ No Morphological Adaptations (Explain) *
Herh Stratum (Plo	ot size: 5 ft radius)				☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Rosa multiflora	35	Υ	FACU	Tes – No Problem Hydrophytic Vegetation (Explain)
2.	Rubus allegheniensis	10	N .	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Persicaria virginiana	25	Y	FAC	present, unless disturbed or problematic.
4.	Impatiens pallida	5	N	FACW	Definitions of Vegetation Strata:
5.		5	N	FACU	Deminitions of Vegetation Strata.
	Solidago canadensis				T
6	Ageratina altissima	5	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
7.	Elymus virginicus	10	N	FACW	breast neight (DBH), regardless of neight.
8.	Fraxinus americana	5	N	FACU	
9.	Acer saccharum	5	N	FACU	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.	Toxicodendron radicans	15	N	FAC	is wii.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.				-	and woody plants less than 3.28 π. táll.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	120			
Woody Vine Strat	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present □ Yes ☑ No
4.					Tiyuropiiyuo vegetation Fresent 🗀 165 🖭 110
5.					
J.					
Domarko:	Total Cover =	U			
Remarks:					

Additional Remarks:				
	_		•	



Project/Site:	Mount Verr	non - Hedding 138 k	V Line Re	ebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:				Investi	igator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		oam, 0-2% occasionally flo	oded				NWI Classification:	:			Wetland 8
Landform:	Side slope				al Relief:			5.		Sample Point:	
Slope (%):	~1%				ongitude:			Datum:		Community ID:	
		litions on the site ty				(If no, expla	·	☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumsta		1	Township:	
		or Hydrology □ nat	turally pro	biemat	IC?		✓ Yes	NŪ		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve				☑ Yes				Hydric Soils I			☑ Yes □ No
Wetland Hydrol	ogy Present	?		☑ Yes	□ No			Is This Samp	oling Point	Within A Wetla	and? □ Yes ■ No
Remarks:											
11)/2224											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicator	s are n	ot presen	t □):					
Primary:									Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface So	
	A2 - High Wa A3 - Saturation				B13 - Aqu B14 - True					B10 - Drainage C2 - Dry-Season	
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Dep			✓			duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep	osits on Visible on Aerial Ima	agon/		C7 - Thin D9 - Gaud				☑	D5 - FAC-Neutr	al lest
		Vegetated Concave S			Other (Ex						
_	,			_	(,	,				
Field Observat	ions:										
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)						
Water Table Pr		☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hyd	drology Pr	esent? ☑	Yes □ No
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)						
					. ,		·		N.//A		
	ed Data (stre	am gauge, monitoring	g well, aeri	iai photo	s, previou	s inspection	ons), if available:		N/A		
Domarke:				-			-,,,				
Remarks:			,	·							
			,	•		·					
SOILS											
SOILS Map Unit Name		Sh- Shoals silt loan	n, 0-2% o				,				
SOILS Map Unit Name Profile Descrip	otion (Describe to t		n, 0-2% o	the absence of	f indicators.) (Typ		on, D=Depletion, RM=Reduced Matrix, CS=		ns; Location: PL=Po	ore Lining, M=Matrix)	
SOILS Map Unit Name Profile Descrip Top	Bottom (Describe to t	the depth needed to document the ind	n, 0-2% o	the absence of Matrix	f indicators.) (Typ		on, D=Depletion, RM=Reduced Matrix, CS=	ox Features		ı	Texture
SOILS Map Unit Name Profile Descrip Top Depth	Bottom (Describe to to the Bottom) Depth	he depth needed to document the ind	n, 0-2% o	he absence of Matrix Moist)	f indicators.) (Typ	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redi Color (Moist)	ox Features %	Туре	Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top	Bottom (Describe to t	the depth needed to document the ind	n, 0-2% o	the absence of Matrix	f indicators.) (Typ		on, D=Depletion, RM=Reduced Matrix, CS=	ox Features		ı	
SOILS Map Unit Name Profile Descrip Top Depth	Bottom (Describe to to the Bottom) Depth	he depth needed to document the ind	n, 0-2% o	he absence of Matrix Moist)	f indicators.) (Typ	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redi Color (Moist)	ox Features %	Туре	Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 12	the depth needed to document the ind Horizon	n, 0-2% o licator or confirm t Color (Matrix Moist) 4/2	f indicators.) (Typ	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/6	ox Features % 20	Type C	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 12	he depth needed to document the ind Horizon	n, 0-2% o licator or confirm to Color (10YR	Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features % 20	Type C	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 12	he depth needed to document the ind Horizon	n, 0-2% o licator or confirm t Color (10YR	Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduction (Moist) 4/6	0x Features	Type C 	Location M 	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 12	he depth needed to document the ind Horizon	n, 0-2% o licator or confirm t Color (10YR	Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features	Type C 	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 12	he depth needed to document the ind Horizon	n, 0-2% o dicator or confirm to Color (10YR	Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features	Type C 	Location M 	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	Depth 12	he depth needed to document the ind Horizon	n, 0-2% 0 ilicator or confirm to	Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features % 20	Type C 	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Depth Depth 12	He depth needed to document the ind Horizon	n, 0-2% o licator or confirm t Color (10YR	he absence of Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features % 20	Type C	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Depth Depth 12	He depth needed to document the ind Horizon	n, 0-2% o licator or confirm t Color (10YR	he absence of Matrix Moist) 4/2	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6	ox Features	Type	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to the Depth Depth 12 Soil Field In	Horizon	n, 0-2% o licator or confirm t Color (10YR	Matrix Moist) 4/2 ators al	% 80 re not pre S4 - Sand S5 - Sand S5 - Sand	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Redi Color (Moist) 4/6): Matrix	ox Features	Type	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Potion (Describe to Describe to Depth 12	Horizon	n, 0-2% o licator or confirm t Color (10YR	he absence of Matrix Moist) 4/2 ators al	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features % 20 Indicators	Type C for Problen A16 - Coast S7 - Dark St F12 - Iron-M	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to to Describe to De	Horizon	n, 0-2% o licator or confirm t Color (10YR	he absence of Matrix Moist) 4/2 ators al	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 Watrix neral	ox Features	Type C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to to Describe to to Describe to to Describe to Table 12	Horizon	n, 0-2% o licator or confirm t Color (10YR	he absence of Matrix Moist) 4/2 ators al	% 80	10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist) 4/6	ox Features	Type C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to ID Bottom Depth 12	Horizon	n, 0-2% o licator or confirm to Color (10 YR	the absence of Matrix Moist) 4/2	% 80 S4 - Sand S5 - Sand S6 - Stripl F1 - Loam F3 - Deple F3 - Deple F3 - Deple	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Redi Color (Moist) 4/6): Matrix meral Matrix	ox Features	Type C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to ID Bottom Depth 12	Horizon	n, 0-2% o licator or confirm to Color (10 YR	he absence of Matrix Moist) 4/2 ators al	% 80 S4 - Sand S5 - Sand S6 - Stripl F1 - Loam F3 - Deple F3 - Deple F3 - Deple	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Motivation (Moist) 4/6	ox Features	Type C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 12 Soil Field In A1- Histosol A2 - Histic E _I A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplett	Horizon	n, 0-2% o licator or confirm to Color (10 YR	the absence of Matrix Moist) 4/2	% 80	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 Watrix Ineral Matrix Iface Surface Surface Surface	ox Features	Type C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M TF12 - Very	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Partial Properties to the Control of	Horizon	n, 0-2% o licator or confirm to Color (10 YR	the absence of Matrix Moist) 4/2	% 80	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 Watrix Ineral Matrix Iface Surface Surface Surface	ox Features	Type C for Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location M	(e.g. clay, sand, loam) silty clay
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Partial Properties to the Control of	Horizon	n, 0-2% o licator or confirm to Color (10YR	the absence of Matrix Moist) 4/2	% 80	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 Watrix Ineral Matrix Iface Surface Surface Surface	ox Features % 20 Indicators Indicators of hydrophyte	Type C for Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very Other (Explain	Location M	(e.g. clay, sand, loam) silty clay es
SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric Restrictive Layer (If Observed)	btion (Describe to to Describe to De	Horizon	n, 0-2% o licator or confirm to Color (10YR	he absence of Matrix Moist) 4/2	% 80	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 Watrix Ineral Matrix Iface Surface Surface Surface	ox Features	Type C for Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very Other (Explain	Location M	(e.g. clay, sand, loam) silty clay es urface
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	btion (Describe to to Describe to De	Horizon	n, 0-2% o licator or confirm to Color (10YR	he absence of Matrix Moist) 4/2	% 80	e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red Color (Moist) 4/6 Watrix Ineral Matrix Iface Surface Surface Surface	ox Features % 20 Indicators Indicators of hydrophyte	Type C for Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very Other (Explain	Location M	(e.g. clay, sand, loam) silty clay es urface



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 8 Sample Point: SP 16 **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: 2 (A) 3. 4. Total Number of Dominant Species Across All Strata: 2 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 70 140 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 =x 5= UPL spp. 0 0 2 3. 101 ____(A) Total 195 4. Prevalence Index = B/A = 5. 1.931 --6. 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 * □ No □ Yes Morphological Adaptations (Explain) * □ Yes □ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 40 FACW Leersia virginica * Indicators of hydric soil and wetland hydrology must be Onoclea sensibilis 20 ٧ **FACW** present, unless disturbed or problematic. FACU 3. Solidago altissima 5 Ν Carex lupuliformis OBL **Definitions of Vegetation Strata:** 5 5. N **OBL** Carex scoparia 6 FACW Carex normalis Tree - Woody plants 3 in. (7.6cm) or more in diameter at Eupatorium perfoliatum breast height (DBH), regardless of height. 7. 3 Ν OBL 8. Rubus flagellaris 3 N FACU Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 **FACW** q Ν Poa palustris ft. tall. 10. Impatiens capensis 5 Ν **FACW** 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks:

Additional Remarks:		



Project/Site:		non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP						1 200			County:	Knox
Investigator #1				Investi	igator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		silt loam, 18-40% slopes, e	roded	امما	al Daliafi	Canada	NWI Classification:			Wetland ID:	
Landform: Slope (%):	Side slope ~18%	Latitude:	10 2005		al Relief:			Datum:	NAD83	Sample Point:	
		ditions on the site ty						✓ Yes □	No	Community ID: Section:	
		or Hydrology □ sig				(II IIO, expir	Are normal circumstar			Township:	
Are Vegetation	□ ,Soll□ ,	or Hydrology □ sig	turally nr	oblemat	ic?		✓ Yes	N □	1	Range:	Dir:
SUMMARY OF	FINDINGS	or riyarology = mai	draily pr	obicinat			<u> </u>	INA		range.	DII.
Hydrophytic Ve	getation Pre	sent?		□ Yes	. ☑ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydro				□ Yes						Within A Wetla	
Remarks:	g _j	•									
HYDROLOGY											
	ology Indica	ators (Check here if	indicato	re are n	ot presen	t 🖂).					
Primary		ators (Check here ii	iiiuicato	ns ale ii	ot presen	. E).			Secondary:		
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	oil Cracks
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation				B14 - True					C2 - Dry-Season	
	B1 - Water M B2 - Sedimer				C1 - Hydr		spheres on Living Roots			C8 - Crayfish Bu	Visible on Aerial Imagery
	B3 - Drift De						educed Iron		= =	D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	ic Position
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	al Test
		on Visible on Aerial Ima Vegetated Concave S			D9 - Gaug Other (Ex						
	Bo - Sparser	vegetated Concave 3	ullace		Other (EX	piaiii iii Ne	iliaiks)				
Field Observa	tions:										
Surface Water		□ Yes ☑ No	Donth	N/A	(in.)						
Water Table Pr		☐ Yes ☑ No	Depth: Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent?	Yes ☑ No
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)						
Outuration 1 100	ociic:										
					. ,		\		NI/A		
	led Data (stre	am gauge, monitoring	g well, aei	rial photo	. ,	s inspecti	ons), if available:		N/A		
Describe Record Remarks:	led Data (stre	am gauge, monitorinç	g well, aei	rial photo	. ,	s inspecti	ons), if available:		N/A		
Remarks:	led Data (stre	am gauge, monitorino	g well, ae	rial photo	. ,	s inspecti	ons), if available:		N/A		
Remarks:	,			·	os, previou	·	ons), if available:		N/A		
Remarks: SOILS Map Unit Name	e:	AdF2- Amanda silt	loam, 18	8-40% sl	os, previous	ded	,	overed/Coated Sand Gra		ore Linion M=Matriy)	
Remarks: SOILS Map Unit Name Profile Descrip	e: otion (Describe to	AdF2- Amanda silt	loam, 18	3-40% sI	opes, ero	ded	ion, D=Depletion, RM=Reduced Matrix, CS=C			ore Lining, M=Matrix)	Texture
Remarks: SOILS Map Unit Name Profile Descrip Top	e: ption (Describe to Bottom	AdF2- Amanda silt the depth needed to document the ind	loam, 18	3-40% sl on the absence of Matrix	opes, ero	ded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo	x Features	ins; Location: PL=Po	1	Texture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: ption (Describe to Bottom Depth	AdF2- Amanda silt the depth needed to document the ind	loam, 18	3-40% sl the absence of Matrix (Moist)	opes, ero	ded e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ins; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	3-40% sl the absence of Matrix (Moist) 4/4	opes, ero indicators.) (Typ	ded e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	3-40% sl h the absence of Matrix (Moist) 4/4	opes, ero findicators.) (Typ % 100	ded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features % 	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	3-40% sl h the absence of Matrix (Moist) 4/4	opes, ero indicators.) (Typ % 100	ded e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	% Features % 	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	3-40% sl hthe absence of Matrix (Moist) 4/4 	opes, ero rindicators.) (Typ % 100	ded e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	 	Type	Location 	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	8-40% sl the absence of Matrix (Moist) 4/4	opes, ero rindicators.) (Typ % 100	ded e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features % 	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	3-40% sl the absence of Matrix (Moist) 4/4	opes, ero i indicators.) (Typ % 100	ded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom (Describe to Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR	8-40% sl the absence of Matrix (Moist) 4/4	opes, ero rindicators.) (Typ % 100	ded e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=CCOlor (Moist)	x Features %	Type		(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	Color 10YR	B-40% sl the absence of Matrix (Moist) 4/4	opes, ero indicators.) (Typ % 100	ded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	Type		(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In	AdF2- Amanda silt the depth needed to document the ind Horizon	Color 10YR	B-40% sl the absence of Matrix (Moist) 4/4	opes, ero indicators.) (Typ % 100 re not pre	ded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	AdF2- Amanda silt the depth needed to document the ind Horizon	Color 10YR	B-40% sl the absence of Matrix (Moist) 4/4	opes, ero indicators.) (Typ % 100	ded e: C=Concentral sent ☑ y Gleyed	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic El A3 - Black Histosol	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he objeedon stic	Color 10YR	B-40% sl the absence of Matrix (Moist) 4/4 cators al	opes, ero indicators.) (Typ % 100 re not pre S4 - Sand	ded	ion, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	x Features %	Type for Problen S7 - Dark St F12 - Iron-M	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge	AdF2- Amanda silt the depth needed to document the ind Horizon dicators (check he objector) stic an Sulfide	Color 10YR	B-40% sl the absence of Matrix (Moist) 4/4 cators al	opes, ero findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loarr	ded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redoc Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifler	AdF2- Amanda silt the depth needed to document the ind Horizon	Color 10YR	B-40% sl the absence of Matrix (Moist) 4/4 cators al	opes, ero indicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam	ded e: C=Concentral sent ☑ Iy Gleyed Iy Redox Iy Redox Iy Muck Matrix Iy M	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom (Describe to Depth 16 Soil Field In A1 - Histosol A2 - Histic E ₁ A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	AdF2- Amanda silt the depth needed to document the ind Horizon Idicators (check he objection sticum Stilfide di Layers luck	loam, 18 icator or confirm Color 10YR re if indid	3-40% sl the absence of Matrix (Moist) 4/4	opes, ero indicators.) (Type % 100 re not pre S4 - Sand S5 - Sand S6 - Stripe F1 - Loam F2 - Loam F3 - Deple	ded	ion, D=Depletion, RM=Reduced Matrix, CS=CReduced Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom (Describe to Depth 16 Soil Field In A1 - Histosol A2 - Histic E ₁ A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR re if indid	B-40% sl the absence of Matrix (Moist) 4/4 cators al	opes, ero indicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	ded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16 A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplete	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR re if indid	Matrix (Moist) 4/4 cators al	opes, ero indicators.) (Type % 100 re not pre S4 - Sand S5 - Sand S6 - Stripe F1 - Loam F2 - Loam F3 - Deple	ded	ron, D=Depletion, RM=Reduced Matrix, CS=C Redor Color (Moist)	x Features % Indicators	Type Type s for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR re if indid	B-40% sl the absence of Matrix (Moist) 4/4	opes, ero findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	ded	ion. D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR re if indid	B-40% sl the absence of Matrix (Moist) 4/4	opes, ero findicators.) (Type % 100	ded	ion. D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M S3 - 5 cm M	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR re if indid	B-40% sl the absence of Matrix (Moist) 4/4 cators al	opes, ero findicators.) (Type % 100	ded	ion. D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	es present, unless disturbed or problematic.
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M S3 - 5 cm M S3 - 5 cm M	AdF2- Amanda silt the depth needed to document the ind Horizon	loam, 18 icator or confirm Color 10YR re if indid	B-40% sl the absence of Matrix (Moist) 4/4 cators al	opes, ero findicators.) (Type % 100	ded	ion. D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type Type	Location	es present, unless disturbed or problematic.



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 8 Sample Point: SP 17 **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: 2 (A) 3. 4. Total Number of Dominant Species Across All Strata: 7 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 10 20 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 =60 240 UPI x 5= Rhus glabra N UPL spp. 17 85 Nyssa sylvatica Ν 3. 119____(A) Total 441 4. Prevalence Index = B/A = 5. 3.706 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** 9. □ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10 Yes ☑ No Dominance Test is > 50% Total Cover = 4 Yes ✓ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * UPL Rubus occidentalis 15 * Indicators of hydric soil and wetland hydrology must be Bromus inermis 10 ٧ FACU present, unless disturbed or problematic. FACU 3. Lactuca serriola 15 Ν Poa pratensis FAC **Definitions of Vegetation Strata:** 5 **FACW** 5. Agrimonia parviflora N 6 FACU Galium aparine 15 Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. Nyssa sylvatica 10 FAC 8. 5 N **FACW** Impatiens capensis Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 FACU q 10 Erigeron annuus ft. tall. 10. Tussilago farfara 10 FACU 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5. Total Cover = Remarks:

Additional Remarks:		



Project/Site:	Mount Vernon - Hedding 138 kV Line Rebuild						Stantec Project #: 193704281			Date:	08/11/16	6
Applicant:	AEP									County: State:	Knox Ohio	
	: Aaron Kwolek Investigator #2: Michael de \											
Soil Unit:		urg silt loam, 6-12% slopes,	eroded				NWI Classification:				Wetland	19
Landform:	Side slope				al Relief:					Sample Point:		
Slope (%):	~6%	Latitude:							NAD83	Community ID:		
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:		
		or Hydrology □ sig					Are normal circumsta	nces present?	•	Township:		
		or Hydrology □ nat	turally pr	oblemat	ic?		Yes	NŪ		Range:		Dir:
SUMMARY OF												
Hydrophytic Ve				Yes	□ No			Hydric Soils				Yes □ No
Wetland Hydrol	ogy Present	?		☑ Yes	□ No			Is This Samp	oling Point '	Within A Wetla	ınd?	Yes ■ No
Remarks:												
HYDROLOGY												
Wetland Hydro	ology Indic:	ators (Check here if	indicato	rs are n	ot presen	t 🗆)•						
Primary:		ators (Oncor nord	indicato	is aic ii	ot presen				Secondary:			
<u>a. ,</u> .	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	il Cracks	
	A2 - High Wa				B13 - Aqu					B10 - Drainage		
	A3 - Saturati	on			B14 - True	e Aquatic F	Plants			C2 - Dry-Seasor	n Water Ta	able
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu		
	B2 - Sedime						spheres on Living Roots			C9 - Saturation		
	B3 - Drift De			☑			duced Iron			D1 - Stunted or		
	B4 - Algal Ma B5 - Iron Der				C6 - Rece		duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutra		
		on Visible on Aerial Ima	nan/		D9 - Gaud				· ·	D5 - FAC-Neuli	ai rest	
		v Vegetated Concave S			Other (Ex							
_		,		_	(,	,					
Field Observat	ions:											
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)							
Water Table Pr		☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent? ☑	Yes □	No
Saturation Pres		☐ Yes ☑ No	Depth:	N/A	(in.)							
Saturation Fres	ent?											
			Вории.	14/74	()							
Describe Record		eam gauge, monitoring	•		` '	s inspecti	ons), if available:		N/A			
Describe Record			•		` '	s inspecti	ons), if available:		N/A			
Remarks:			•		` '	s inspecti	ons), if available:		N/A			
			•		` '	s inspection	ons), if available:		N/A			
Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino	y well, ae	rial photo	s, previous	roded	,					
Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino	y well, ae	rial photo	s, previous	roded	,	Covered/Coated Sand Gra		ore Lining, M=Matrix)		
Remarks: SOILS Map Unit Name	ed Data (stre	eam gauge, monitorino	y well, ae	rial photo	slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Gra		ore Lining, M=Matrix)	1	Texture
Remarks: SOILS Map Unit Name Profile Descrip Top	ed Data (stre	eam gauge, monitorino	g well, aed	, 6-12%	slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS=C		ins; Location: PL=Pi	ı		Texture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	ed Data (stre	cam gauge, monitoring CdC2- Centerburg the depth needed to document the indepth needed to do	g well, ael	, 6-12% the absence of Matrix (Moist)	slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS=0	x Features		ore Lining, M=Matrix) Location		y, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	ed Data (stre	CdC2- Centerburg the depth needed to document the ind	silt loam color Color 10YR	, 6-12% the absence of Matrix (Moist) 4/2	slopes, e	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=(Redo Color (Moist)	x Features % 	ins; Location: PL=Pr	Location	(e.g. cla	ny, sand, loam) silt
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg the depth needed to document the ind	g well, aer	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators.) (Typ	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% 4	Type	Location M	(e.g. cla	silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	g well, aer	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators.) (Typ % 100 96	roded e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% Features	Type C	Location M	(e.g. cla	silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam cater or confirm Color 10YR 10YR	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators.) (Typ	roded e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS=(Redo Color (Moist) 5/6	x Features	Type C	Location M	(e.g. cla	silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	g well, aer	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators.) (Typ % 100 96	roded e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% Features	Type C	Location M	(e.g. cla	silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam cater or confirm Color 10YR 10YR	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators.) (Typ	roded e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS=(Redo Color (Moist) 5/6	x Features	Type C	Location M	(e.g. cla	ay, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg: the depth needed to document the ind Horizon	silt loam Color 10YR 10YR	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators) (Typ	roded e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS= Red of Color (Moist) 5/6	x Features % 4 	Type C	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam Color 10YR 10YR	inial photo 6-12% the absence of Matrix (Moist) 4/2 4/2 	slopes, e indicators.) (Typ % 100 96	roded e: C=Concentrat 10YR	on, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6	% 4	Type C	Location M	(e.g. cla	sy, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2	ed Data (stre	CdC2- Centerburg: the depth needed to document the ind Horizon	silt loam. Color 10YR 10YR	inial photo 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators) (Typ	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	% 4	Type Type C	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam. Color 10YR 10YR	inial photo 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators) (Typ	roded e: C=Concentrat 10YR sent □	on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% 4	Type C s for Problem	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon ndicators (check he pipedon	silt loam. Color 10YR 10YR	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators) (Typ % 100 96 re not pre	roded	on, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist) 5/6	x Features	Type C	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	CdC2- Centerburg of the depth needed to document the ind Horizon	silt loam. Color 10YR 10YR	inial photo 6-12% the absence of Matrix (Moist) 4/2 4/2 cators al	slopes, e indicators) (Typ % 100 96 er not pre S4 - Sand S6 - Stripi	roded	on, D=Depletion, RM=Reduced Matrix, CS= Red of Color (Moist) 5/6	x Features % 4 Indicators	Type Type C for Problem A16 - Coast S7 - Dark S F12 - Iron-N	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam. Color 10YR 10YR	the absence of Matrix (Moist) 4/2 4/2	slopes, e (indicators) (Type 96	roded	on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6 Watrix	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	ed Data (stre	CdC2- Centerburg: the depth needed to document the ind Horizon	silt loam. Color 10YR 10YR	mial photo 6-12% the absence of Matrix (Moist) 4/2 4/2 cators al	slopes, e (indicators.) (Typ % 100 96 e not pre \$4 - Sand \$5 - Strip F1 - Loam F2 - Loam	roded e. C=Concentrat 10YR sent □ ly Gleyed I ly Red Matrix ny Muck M ny Gleyed Ny Gleyed Ny Gleyed	on, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6): Matrix ineral Matrix	x Features % 4 Indicators	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam Color 10YR 10YR re if indic	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e indicators) (Typ % 100 96 re not pre 84 - Sand 85 - Sard 86 - Stripi F1 - Loarr F3 - Deple	roded	on, D=Depletion, RM=Reduced Matrix, CS= Red of Color (Moist) 5/6 Watrix ineral Matrix	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam Color 10YR 10YR re if indic	he absence of Matrix (Moist) 4/2 4/2	slopes, e indicators) (Typ % 100 96 re not pre S4 - Sand S5 - Strip[F1 - Loarr F2 - Loarr F2 - Deple F6 - Red6	roded	on, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	ed Data (stre	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam Color 10YR 10YR re if indic	, 6-12% the absence of Matrix (Moist) 4/2 4/2	slopes, e findicators.) (Type 100 96	roded	con, D=Depletion, RM=Reduced Matrix, CS=COLOR (Moist)	Section Sect	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	bition (Describe to Depth 2 16	CdC2- Centerburg : the depth needed to document the ind Horizon	silt loam Color 10YR 10YR re if indic	inial photo inial	slopes, e indicators) (Typ % 100 96 re not pre S4 - Sand S5 - Strip[F1 - Loarr F2 - Loarr F2 - Deple F6 - Red6	roded	con, D=Depletion, RM=Reduced Matrix, CS=COLOR (Moist)	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location M	(e.g. cla	y, sand, loam) silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	bition (Describe to Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon	silt loam cator or confirm Color 10YR 10YR re if indid	mial photo 6-12% the absence of Matrix (Moist) 4/2 4/2	Slopes, e	roded	con, D=Depletion, RM=Reduced Matrix, CS=COLOR (Moist)	x Features % 4 Indicators Indicators of hydrophy	Type C	Location M	(e.g. cla	silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	bition (Describe to Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon	silt loam cator or confirm Color 10YR 10YR re if indid	inial photo inial	Slopes, e	roded	con, D=Depletion, RM=Reduced Matrix, CS=COLOR (Moist)	Section Sect	Type C	Location M	(e.g. cla	silt silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric:	bition (Describe to Depth 2 16	CdC2- Centerburg: the depth needed to document the ind Horizon	silt loam cator or confirm Color 10YR 10YR re if indid	mial photo 6-12% the absence of Matrix (Moist) 4/2 4/2	Slopes, e	roded	con, D=Depletion, RM=Reduced Matrix, CS=COLOR (Moist)	x Features % 4 Indicators Indicators of hydrophy	Type C	Location M	(e.g. cla	silt silt loam



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 9 Sample Point: SP 18 **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: 3 (A) 3. 4. Total Number of Dominant Species Across All Strata: 3 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = 0 FACW spp. x 2 = 15 30 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 =FACU spp. x 5= UPL spp. 0 2 3. 100 ____(A) Total 179 4. 5. Prevalence Index = B/A = 1.790 --6. 7. 8. **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes □ No 10 ✓ Yes □ No Dominance Test is > 50% Total Cover = 0 ✓ Yes □ No Prevalence Index is ≤ 3.0 * □ No □ Yes Morphological Adaptations (Explain) * □ Yes □ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * OBL 25 Scirpus cyperinus * Indicators of hydric soil and wetland hydrology must be Impatiens capensis 15 **FACW** present, unless disturbed or problematic. 3. Verbena urticifolia 15 FAC Carex frankii N OBL **Definitions of Vegetation Strata:** 5. 10 N OBL Carex lurida 6 Eupatorium perfoliatum 10 Ν **OBL** Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. Populus deltoides 5 Ν FAC 8. 5 N FACU Erigeron annuus Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q OBL Glyceria striata N ft. tall. 10. Galium aparine 3 Ν **FACU** 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks:

Additional Remarks:				
	_		•	



Project/Site:	Mount Verr	non - Hedding 138 k	V Line Re	build			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:				Investi	gator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		urg silt loam, 6-12% slopes,	eroded				NWI Classification:	:			Wetland 9
Landform:	Side slope				al Relief:			5.		Sample Point:	
Slope (%):	~6%		40.38869					Datum:		Community ID:	
		litions on the site ty				(If no, expla		☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumsta	•	,	Township:	
		or Hydrology □ nat	turally prob	olemati	C?		✓ Yes	NŪ		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve				□ Yes				Hydric Soils I		A ()	□ Yes ☑ No
Wetland Hydrol	ogy Present	?	L	□ Yes	☑ No			Is This Samp	oling Point	Within A Wetla	and? ■ Yes ⊠ No
Remarks:											
11)/2224											
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here if	indicators	are no	ot present	t ☑):					
Primary:									Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface So	
	A2 - High Wa A3 - Saturation				B13 - Aqu B14 - True					B10 - Drainage C2 - Dry-Seasor	
	B1 - Water M				C1 - Hydro					C8 - Crayfish Bu	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Dep						duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep	osits on Visible on Aerial Ima	agon/		C7 - Thin D9 - Gauc					D5 - FAC-Neutra	al l'est
		Vegetated Concave S			Other (Ex						
_	,					,	,				
Field Observat	ions:										
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)						
Water Table Pr		☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hyd	drology Pr	esent?	Yes ☑ No
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)						
	*****		Ворин.	1477	()						
Liescribe Record							\		NI/A		
	ed Data (stre	am gauge, monitoring	g well, aeria	al photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:	ed Data (stre	am gauge, monitoring	g well, aeria	al photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:	ed Data (stre	am gauge, monitorinç	g well, aeria	al photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks: SOILS	,		-	·		·	ons), if available:		N/A		
Remarks: SOILS Map Unit Name	:	CdC2- Centerburg	silt loam, 6	6-12%	slopes, e	roded	,				
Remarks: SOILS Map Unit Name Profile Descrip	tion (Describe to	CdC2- Centerburg	silt loam, 6	6-12% e absence of	slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grai		ore Lining, M=Matrix)	
Remarks: SOILS Map Unit Name Profile Descrip Top	: otion (Describe to large)	CdC2- Centerburg the depth needed to document the ind	silt loam, 6	6-12% e absence of Matrix	slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grai	ns; Location: PL=Po		Texture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	tion (Describe to Depth	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (N	6-12% e absence of Matrix Moist)	slopes, e indicators.) (Type	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai	ns; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	: otion (Describe to) Bottom	CdC2- Centerburg the depth needed to document the ind	silt loam, 6	6-12% e absence of Matrix	slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grai	ns; Location: PL=Po		
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	tion (Describe to Depth	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (N	6-12% e absence of Matrix Moist)	slopes, e	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai	ns; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to a Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (N	6-12% e absence of Matrix Moist) 4/4	slopes, e indicators.) (Type %	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai	ns; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (N 10YR	6-12% e absence of Matrix Moist) 4/4	slopes, e indicators.) (Type %	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist) 	Covered/Coated Sand Grai OX Features %	Type	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (N 10YR	6-12% e absence of Matrix Noist) 4/4	slopes, e indicators.) (Type % 100	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist) 	Covered/Coated Sand Grai OX Features %	ns; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	Silt loam, 6 icator or confirm the Color (N 10YR	6-12% e absence of Matrix Moist) 4/4	slopes, e indicators.) (Type % 100	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist) 	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	Silt loam, 6 icator or confirm the Color (N 10YR	6-12% e absence of Matrix Moist) 4/4	slopes, e indicators.) (Type % 100	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist) 	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	Silt loam, 6 icator or confirm the	6-12% e absence of Matrix Moist) 4/4	Slopes, e indicators) (Typi	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grail OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 5	CdC2- Centerburg the depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (M 10YR	6-12% e absence of Matrix Moist) 4/4	% 100	roded e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In	CdC2- Centerburg he depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (M 10YR	6-12% e absence of Matrix Moist) 4/4	slopes, e indicators) (Type % 100 e not pre S4 - Sand	roded e. C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problem A16 - Coast	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he	silt loam, 6 icator or confirm the Color (M 10YR	6-12% e absence of Matrix Moist) 4/4 attors ar	Slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problem A16 - Coast S7 - Dark Si	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 5 Soil Field In A1- Histosol A3 - Black Hi	CdC2- Centerburg he depth needed to document the ind Horizon	silt loam, 6 icator or confirm the Color (M 10YR	6-12% e absence of Matrix Moist) 4/4 itors an	% 100	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark St F12 - Iron-M	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Eq. A3 - Black Hi A4 - Hydroge	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he objedon stic in Sulfide	silt loam, 6 icator or confirm the Color (M 10YR	6-12% e absence of Matrix Moist) 4/4 tors ar	slopes, e indicators) (Type % 100 e not pre \$4 - Sand \$55 - Sand \$56 - Stripp F1 - Loam	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he objeedon stic in Sulfide di Layers	silt loam, 6 icator or confirm the Color (M 10YR	6-12% e absence of Matrix Moist) 4/4 tors ar	slopes, e indicators) (Type % 100 e not pre \$4 - Sand \$5 - Sarting \$5 - Sarting \$7 - Loarm \$7 - Lo	roded e. C=Concentrat sent ☑ ly Gleyed I ly Red Matrix ny Muck M ly Gleyed	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm N	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he objeedon stic in Sulfide di Layers	silt loam, 6 icator or confirm the Color (M 10YR re if indica	6-12% e absence of Matrix Moist) 4/4 tors ar	slopes, e indicators) (Type % 100 e not pre \$4 - Sand \$55 - Sand \$56 - Stripp F1 - Loam	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm N	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he objecton stic en Sulfide d Layers luck bed Below Dark Surface	silt loam, 6 icator or confirm the Color (M 10YR re if indica	6-12% e absence of Matrix Moist) 4/4 attors ar	Slopes, e	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark S1 F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he objecton stic en Sulfide d Layers luck ed Below Dark Surface bark Surface fluck Mineral	silt loam, 6 icator or confirm the Color (M 10YR re if indica	6-12% e absence of Matrix Moist) 4/4 itors ar	% 100	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark St F12 - Iron-M Other (Expla	Location	(e.g. clay, sand, loam) silt loam es
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	CdC2- Centerburg he depth needed to document the ind Horizon dicators (check he bipedon stic an Sulfide 1 Layers luck ad Below Dark Surface bark Surface	silt loam, 6 icator or confirm the Color (M 10YR re if indica	6-12% e absence of Matrix Moist) 4/4 attors ar	% 100 e not pre \$4 - Sand \$5 - Sand \$5 - Satipp F1 - Loam F2 - Loam F2 - Deple F6 - Redo F7 - Deple	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type for Problen A16 - Coast S7 - Dark St F12 - Iron-M Other (Expla	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	CdC2- Centerburg he depth needed to document the ind Horizon	color (N	6-12% e absence of Matrix Moist) 4/4 attors ar	% 100 e not pre \$4 - Sand \$5 - Sand \$5 - Satipp F1 - Loam F2 - Loam F2 - Deple F6 - Redo F7 - Deple	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type Type for Problen A16 - Coast S7 - Dark	Location	(e.g. clay, sand, loam) silt loam es
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Eg A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm W A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	CdC2- Centerburg he depth needed to document the ind Horizon	color (N	6-12% e absence of Matrix Moist) 4/4 attors ar	% 100 e not pre 84 - Sand \$55 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators Indicators of hydrophyte	Type Type for Problen A16 - Coast S7 - Dark	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric:	Bottom Depth 5 Soil Field In A1- Histosol A2 - Histic Eg A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm W A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	CdC2- Centerburg he depth needed to document the ind Horizon	color (N	6-12% e absence of Matrix Moist) 4/4 attors ar	% 100 e not pre 84 - Sand \$55 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	roded	on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % Indicators Indicators of hydrophyte	Type Type for Problen A16 - Coast S7 - Dark	Location	(e.g. clay, sand, loam) silt loam



Sample Point: SP 19 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 9 **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: 0 (A) 3. 4. Total Number of Dominant Species Across All Strata: 4 5 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 0 0 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 =110 440 UPI x 5= Rubus occidentalis 5 UPL spp. 10 50 Rhus glabra UPI 3. 2 FAC 144 ____(A) Nyssa sylvatica Ν Total 558 4. Prevalence Index = B/A = 5. 3.875 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes ✓ No 10 Yes ☑ No Dominance Test is > 50% Total Cover = 12 Yes ✓ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * FACU 40 Setaria faberi * Indicators of hydric soil and wetland hydrology must be Erigeron annuus 40 FACU present, unless disturbed or problematic. FACU 3. Ageratina altissima 10 Ν Galium aparine **FACU Definitions of Vegetation Strata:** 5 FAC 5. N Toxicodendron radicans 6 OBL Eupatorium perfoliatum Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Parthenocissus quinquefolia 10 Ν **FACU** 8. Symphyotrichum lanceolatum 15 N FAC Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q **FACU** Hackelia virginiana 5 Ν ft. tall. 10. 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5. Total Cover = Remarks:

Additional Remarks:



Project/Site:		non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/11/1	6	
Applicant:	AEP									County:	Knox		
Investigator #1:				Investi	gator #2:	Michael	de Villiers			State:	Ohio		
Soil Unit:		urg silt loam, 6-12% slopes	eroded				NWI Classification:			Wetland ID:	Wetlan	d 10	
Landform:	Side slope				al Relief:					Sample Point:			
Slope (%):	~6%	Latitude:						Datum:		Community ID:	PSS		
		ditions on the site ty				(If no, expla		☑ Yes □		Section:			
		or Hydrology □ sig					Are normal circumsta		•	Township:			
Are Vegetation	□ , Soil □,	or Hydrology □ na	turally pr	oblemat	ic?			N□		Range:		Dir:	
SUMMARY OF													
Hydrophytic Ve				Yes	□ No			Hydric Soils				☑ Yes	□ No
Wetland Hydro	logy Present	?		Yes	□ No			Is This Samp	oling Point '	Within A Wetla	and? I	Yes	■ No
Remarks:													
HYDROLOGY													
	ology Indica	ators (Check here it	indicato	re are n	nt nresen	+ □ \·							
Primary		ators (Check here i	illulcate	ns ale iii	ot presen	ı ⊔ <i>)</i> .			Secondary:				
	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface Sc	oil Cracks		
	A2 - High Wa	ater Table			B13 - Aqu	atic Fauna	1			B10 - Drainage	Patterns		
☑	A3 - Saturation				B14 - True					C2 - Dry-Seaso		able	
					C1 - Hydr					C8 - Crayfish B			
	B2 - Sedimer B3 - Drift Der						spheres on Living Roots educed Iron			C9 - Saturation D1 - Stunted or			nagery
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph			
	B5 - Iron Dep				C7 - Thin				$\overline{\mathbf{z}}$	D5 - FAC-Neutr	al Test		
		on Visible on Aerial Ima			D9 - Gaug	je or Well	Data						
	B8 - Sparsely	y Vegetated Concave S	Surface		Other (Ex	olain in Re	emarks)						
Field Observat	tions:												
Surface Water	Present?	☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Dr	ocont?	Yes [⊒ No	
Water Table Pr	esent?	☐ Yes ☑ No	Depth:	N/A	(in.)			welland ny	urology Fi	esent:	165	_ INO	
Saturation Pres	sent?	☑ Yes ☐ No	Depth:	Surface	(in.)								
Describe Record	ed Data (etre	eam gauge, monitoring	ם וופער	rial nhoto	e previous	e inenacti	one) if available:		N/A				
Describe Necord	eu Dala (Sile												
Domarka:		3	j, e.e	nai prioto	o, p. o o a	3 III3pccti	orio), ii avallabic.		14/74				
Remarks:		<u> </u>	y,	nai prioto	o, p.oou	з порссы	ons), ii avallasie.		TVZ				
			<i>y</i> ,	nai prioto	o, p.oou	з порсоп	ons), ii availabie.		IV/A				
SOILS				•	•	·	ons), ii avaliable.		IVA				
SOILS Map Unit Name		CdC2- Centerburg	silt loam	, 6-12%	slopes, e	roded							
SOILS Map Unit Name Profile Descrip	otion (Describe to	CdC2- Centerburg	silt loam	, 6-12%	slopes, e	roded	ion, D=Depletion, RM=Reduced Malrix, CS=0			ore Lining, M=Matrix)	ı	Toyturo	
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SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Dotton (Describe to Bottom Depth 2 16 Soil Field Ir A1- Histosol A2 - Histic E4 A3 - Black H A4 - Hydroge	CdC2- Centerburg the depth needed to document the inc Horizon	silt loam licator or confirm Color 10YR 10YR	, 6-12% the absence of Matrix (Moist) 4/2 4/2 cators al	Slopes, e indicators.) (Typ % 100 96 e not pre \$4 - \$and \$5 - \$snd \$56 - \$trip F1 - Loan	roded 10YR y Gleyed ly Redox y Redox y Muck M	ion, D=Depletion, RM=Reduced Matrix, CS= Redor Color (Moist) 5/6	% 4	Type C for Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M	es	ay, sand silt silt loam 	d, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Dition (Describe to Bottom Depth 2 16	CdC2- Centerburg the depth needed to document the inc Horizon	silt loam licator or confirm Color 10YR 10YR	, 6-12% the absence of Matrix (Moist) 4/2 4/2 cators al	% 100 96	roded 10YR y Gleyed I y Redox y Redox y Ruck Marty y Muck May Gleyed Marty by Muck May Gleyed	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6); Matrix ineral Matrix	% 4	Type C for Problen A16 - Coast S7 - Dark S7 F12 - Iron-M TF12 - Very	Location M	es	ay, sand silt silt loam 	d, loam)
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SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Dition (Describe to Bottom Depth 2 16	CdC2- Centerburg the depth needed to document the inc Horizon	Silt loam licator or confirm Color 10YR 10YR	, 6-12% In the absence of Matrix (Moist) 4/2 4/2 cators ar	Slopes, e indicators.) (Typ % 100 96	roded 10YR sent y Gleyed ly Redox y Redox y Redox y Muck M My Gleyed ded Matrix by Muck M My Gleyed ded Matrix by Muck M Steled Dark	ion, D=Depletion, RM=Reduced Matrix, CS= Redor (Moist) 5/6): Matrix ineral Matrix (rface Surface ions	x Features % 4 Indicators Indicators of hydrophyl	Type C for Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location M	es urface	ay, sand silt silt loam ss disturbed on	1, loam)
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SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Dition (Describe to Bottom Depth 2 16	CdC2- Centerburg the depth needed to document the inc Horizon	Silt loam licator or confirm Color 10YR 10YR	, 6-12% In the absence of Matrix (Moist) 4/2 4/2 cators ar	Slopes, e indicators.) (Typ % 100 96	roded 10YR sent y Gleyed ly Redox y Redox y Redox y Muck M My Gleyed ded Matrix by Muck M My Gleyed ded Matrix by Muck M Steled Dark	ion, D=Depletion, RM=Reduced Matrix, CS= Redor (Moist) 5/6): Matrix ineral Matrix (rface Surface ions	x Features % 4 Indicators Indicators of hydrophyl	Type C for Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location M	es urface	ay, sand silt silt loam ss disturbed on	1, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 NRCS Hydric	Dition (Describe to Bottom Depth 2 16	CdC2- Centerburg the depth needed to document the inc Horizon	Silt loam licator or confirm Color 10YR 10YR	, 6-12% In the absence of Matrix (Moist) 4/2 4/2 cators ar	Slopes, e indicators.) (Typ % 100 96	roded 10YR sent y Gleyed ly Redox y Redox y Redox y Muck M My Gleyed ded Matrix by Muck M My Gleyed ded Matrix by Muck M Steled Dark	ion, D=Depletion, RM=Reduced Matrix, CS= Redor (Moist) 5/6): Matrix ineral Matrix (rface Surface ions	x Features % 4 Indicators Indicators of hydrophyl	Type C for Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location M	es urface	ay, sand silt silt loam ss disturbed on	n



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 10 Sample Point: SP 20 **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: 5 (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: 100% (A/B) 7. **Prevalence Index Worksheet** 8. --9 Total % Cover of: --Multiply by: 10 OBL spp. x 1 = 100 Total Cover = 0 FACW spp. x 2 = FAC spp. x 3 = x 4 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. 0 Salix nigra 25 OBL UPL spp. x 5 = 2. 20 V **FACW** Salix interior 3. Cephalanthus occidentalis Ν OBL Total _____(A) 5 170___(B) 4. Prevalence Index = B/A = 5. 6. 7. 8. **Hydrophytic Vegetation Indicators:** 9. Yes ☐ No Rapid Test for Hydrophytic Vegetation 10. □ No Yes Dominance Test is > 50% ----Total Cover = ✓ Yes □ No Prevalence Index is ≤ 3.0 * ☐ Yes □ No Morphological Adaptations (Explain) * □ No Herb Stratum (Plot size: 5 ft radius) ☐ Yes Problem Hydrophytic Vegetation (Explain) * 25 OBL Scirpus cyperinus * Indicators of hydric soil and wetland hydrology must be 2. Impatiens capensis 15 **FACW** present, unless disturbed or problematic. 3. OBL Carex normalis 15 Υ **Definitions of Vegetation Strata:** 4. Carex frankii 10 Ν OBL 10 Ν OBL 5. Carex Iurida 6 Eupatorium perfoliatum 10 Ν **OBL** Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9. 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 = 85 Woody Vine Stratum (Plot size: 30 ft radius) 2. Hydrophytic Vegetation Present ☑ Yes ☐ No 3. __ 4. 5. Total Cover = 0 Remarks: Additional Remarks:



Project/Site:		non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:					igator #2:	Michael	de Villiers			State:	Ohio
Soil Unit:		loam 0-2 % slopes, occasio	nally floode				NWI Classification:			Wetland ID:	
Landform:	Side slope				al Relief:					Sample Point:	
Slope (%):	~1%	Latitude:							NAD83	Community ID:	
		ditions on the site ty				(If no, expla		☑ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumstar	nces present?	•	Township:	
		or Hydrology □ nat	turally pr	oblemat	ic?		Yes	N⊎		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve					☑ No			Hydric Soils			□ Yes ☑ No
Wetland Hydrol	logy Present	:?		□ Yes	⊠ No			Is This Samp	oling Point \	Within A Wetla	and? 🔳 Yes 🗷 No
Remarks:											
HYDROLOGY											
Wetland Hydro	ology Indic:	ators (Check here if	indicato	rs are n	ot presen	t 🖂 🕦					
Primary:		ators (Oncor norch	indicate	no aic ii	ot presen				Secondary:		
<u>a. ,</u> .	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface So	il Cracks
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturati	on			B14 - True	e Aquatic I	Plants			C2 - Dry-Season	า Water Table
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu	
	B2 - Sedime						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						duced Iron			D1 - Stunted or	
	B4 - Algal Ma B5 - Iron Der				Co - Rece		duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutra	
]		on Visible on Aerial Ima	agery		D9 - Gaud					D3 - FAC-Neuli	31 1651
		v Vegetated Concave S			Other (Ex						
		, 0			` '		,				
Field Observat	tions:										
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)						
Water Table Pr		□ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pr	esent?	Yes ☑ No
Saturation Pres		□ Yes ☑ No	Depth:		(in.)						
					. ,						
	ed Data (stre	eam gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name		Sh- Shoals silt loan									
Profile Descrip	otion (Describe to	the depth needed to document the ind	licator or confirm	n the absence o	f indicators.) (Typ	e: C=Concentrat	on, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Gra	ns; Location: PL=Po	ore Lining, M=Matrix)	
Top	Bottom			Matrix				ox Features			Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loar
0	5		10YR	4/4	100						silt loam
							-				
											
											
 NRCS Hydric	 					 sent ☑):		 for Problen		
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E	 ndicators (check he		 cators a	 re not pre S4 - Sand S5 - Sand	 sent ☑ ly Gleyed ly Redox): Matrix	Indicators	for Problem A16 - Coast S7 - Dark St	natic Soils ¹ Prairie Redox	
	 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H	ndicators (check he		cators a	re not pre S4 - Sand S5 - Sand S6 - Strip	 sent ☑ ly Gleyed l ly Redox ped Matrix): Matrix	Indicators	F12 - Iron-M	natic Soils ¹ Prairie Redox urface langanese Masse	
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	ndicators (check he pipedon istic en Sulfide		cators a	re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam	sent sent y Gleyed y Redox bed Matrix y Muck M): Matrix ineral	Indicators	F12 - Iron-M	natic Soils ¹ Prairie Redox urface langanese Masse Shallow Dark Su	
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier			cators a	re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam	sent ☑ y Gleyed I y Redox oed Matrix ny Muck M ny Gleyed): Matrix ineral Matrix	Indicators	F12 - Iron-M	natic Soils ¹ Prairie Redox urface langanese Masse	
 NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stratifiel A10 - 2 cm M		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple	sent ☑ y Gleyed I y Redox ped Matrix ny Muck M ny Gleyed eted Matrix): Matrix ineral Matrix	Indicators	F12 - Iron-M	natic Soils ¹ Prairie Redox urface langanese Masse Shallow Dark Su	
NRCS Hydric			 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	sent y Gleyed y Redox bed Matrix y Muck M y Gleyed eted Matrix x Dark Su): Matrix ineral Matrix c rface	Indicators	F12 - Iron-M	natic Soils ¹ Prairie Redox urface langanese Masse Shallow Dark Su	
 NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stratifiel A10 - 2 cm M		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple	sent y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix x Dark Su eted Dark): Matrix ineral Matrix c frace Surface	Indicators	F12 - Iron-M	natic Soils ¹ Prairie Redox urface langanese Masse Shallow Dark Su	
NRCS Hydric	Soil Field Ir A1- Histosol A2- Histic E A3- Black H A4- Hydroge A5- Stratifie A10-2 cm M A11- Deplet A12- Thick I S1- Sandy N		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	sent y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix x Dark Su eted Dark): Matrix ineral Matrix c frace Surface ions	Indicators	For Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	natic Soils ¹ Prairie Redox urface langanese Masse Shallow Dark Su ain in Remarks)	
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	sent y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix x Dark Su eted Dark): Matrix ineral Matrix c frace Surface ions	Indicators Indicators	for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla		es urface
NRCS Hydric	Soil Field Ir A1- Histosol A2- Histic E A3- Black H A4- Hydroge A5- Stratifie A10-2 cm M A11- Deplet A12- Thick I S1- Sandy N		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	sent y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix x Dark Su eted Dark): Matrix ineral Matrix c frace Surface ions	Indicators	for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla		 es urface
NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	sent y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix x Dark Su eted Dark): Matrix ineral Matrix c frace Surface ions	Indicators Indicators	for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla		es urface
NRCS Hydric :	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M		 re if indi	cators a	re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	sent y Gleyed y Redox oed Matrix ny Muck M ny Gleyed eted Matrix x Dark Su eted Dark): Matrix ineral Matrix c frace Surface ions	Indicators Indicators	for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla		es urface



Sample Point: SP 21 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 10 **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: 0 (A) 3. 4. Total Number of Dominant Species Across All Strata: 4 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 0 0 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 =110 440 UPI x 5= Rubus occidentalis 5 UPL spp. 10 50 Rhus glabra UPI 3. 2 FAC 144 ____(A) Nyssa sylvatica Ν Total 558 4. Prevalence Index = B/A = 5. 3.875 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes ✓ No 10 Yes ☑ No Dominance Test is > 50% Total Cover = 12 Yes ✓ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * FACU 40 Setaria faberi * Indicators of hydric soil and wetland hydrology must be Erigeron annuus 40 FACU present, unless disturbed or problematic. FACU 3. Ageratina altissima 10 Ν Galium aparine **FACU Definitions of Vegetation Strata:** FAC 5. 5 N Toxicodendron radicans 6 OBL Eupatorium perfoliatum Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Parthenocissus quinquefolia 10 Ν **FACU** 8. Symphyotrichum lanceolatum 15 N FAC Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 q **FACU** Hackelia virginiana 5 Ν ft. tall. 10. 11 Herb - All herbaceous (non-woody) plants, regardless of size, 12 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5.

A	Additional Remarks:			

Total Cover =

Remarks:



Project/Site:		non - Hedding 138 k	V Line R	ebuild	<u> </u>		Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1					igator #2:	Corey C				State:	Ohio
Soil Unit:	CdC2- Cente	rburg silt loam, 6-12%	slopes, er	oded			NWI Classification:			Wetland ID:	Wetland 11
Landform:	Depression				al Relief:					Sample Point:	SP 22
Slope (%):	1	Latitude:	40.3985	62°N L	ongitude:	-82.619	452°W	Datum:	NAD83	Community ID:	PEM
Are climatic/hyd	drologic cond	litions on the site ty	pical for	this time	of year?	(If no, expla	nin in remarks)	□ Yes □	No	Section:	
		or Hydrology □ sig					Are normal circumsta	nces present?)	Township:	
		or Hydrology □ nat					✓ Yes			Range:	Dir:
SUMMARY OF	FINDINGS	o	tarany pr	obioinat			_ 165	110		range.	5
SUMMARY OF Hydrophytic Ve	agetation Pre	cent?			. □ No			Hydric Soils	Drecent?		
Wetland Hydro	logy Procent	2		☑ Yes						Mithin A Motle	and? ✓ Yes ■ No
	logy Fresent	·		<u> 168</u>	i ino			is this same	ing Font	vviuiiii A vveud	and! • res • NO
Remarks:											
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicato	rs are n	ot presen	t 🗆):					
Primary					o. p. 000	. – ,.			Secondary:		
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface Sc	oil Cracks
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation	on			B14 - True	e Aquatic I	Plants			C2 - Dry-Seaso	n Water Table
	B1 - Water M	larks			C1 - Hydr					C8 - Crayfish B	
	B2 - Sedimer	nt Deposits					spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Dep						educed Iron				Stressed Plants
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin				☑	D5 - FAC-Neutr	al Test
		on Visible on Aerial Ima			D9 - Gaug Other (Ex						
	bo - Sparsery	Vegetated Concave S	buriace		Other (Ex	piaiii iii Re	illarks)				
Field Observation	4!										
Field Observa											
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hyd	drology Pr	esent?	Yes ☑ No
Water Table Pr	resent?	□ Yes ☑ No	Depth:	N/A	(in.)			Trodaila ily	ar crogy		100 = 110
Saturation Pres	sent?	☐ Yes ☑ No	Depth:	N/A	(in.)						
Describe Record	led Data (stre										
Doddino i toddia		am dalide monitoring	r well aer	rial photo	s previous	s inspecti	ons) if available:		N/A		
Domarke:	ioa Data (otro	am gauge, monitoring	g well, aer	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:	iod Bata (otro	am gauge, monitoring	g well, aer	rial photo	s, previou	s inspecti	ons), if available:		N/A		
	iou Buta (otto	am gauge, monitorinç	g well, aer	rial photo	os, previou	s inspecti	ons), if available:		N/A		
SOILS	,			·		·	ons), if available:		N/A		
SOILS Map Unit Name	e:	CdC2- Centerburg	silt loam,	6-12%	slopes, e	roded	,				
SOILS Map Unit Name Profile Descrip	etion (Describe to	CdC2- Centerburg	silt loam,	6-12% the absence of	slopes, e	roded	ion, D=Depletion, RM=Reduced Matrix, CS=0			ore Lining, M=Matrix)	
SOILS Map Unit Name	e:	CdC2- Centerburg	silt loam,	6-12%	slopes, e	roded	ion, D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Grai		ore Lining, M=Matrix)	Texture
SOILS Map Unit Name Profile Descrip	etion (Describe to	CdC2- Centerburg	silt loam,	6-12% the absence of	slopes, e	roded	ion, D=Depletion, RM=Reduced Matrix, CS=0			ore Lining, M=Matrix) Location	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top	e: ption (Describe to Bottom	CdC2- Centerburg the depth needed to document the ind	silt loam,	6-12% the absence of	Slopes, e	roded	ion, D=Depletion, RM=Reduced Matrix, CS=0	ox Features	ins; Location: PL=Pr	1	
SOILS Map Unit Name Profile Descrip Top Depth	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam,	6-12% the absence of Matrix (Moist) 4/2	slopes, e	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist)	% 20	ins; Location: PL=Po	Location PL	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% 20	Type C	Location PL 	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam,	the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80	roded e: C=Concentrat 10YR	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% Features	Type C	Location PL 	(e.g. clay, sand, loam) loam loam
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SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam,	the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80	roded e: C=Concentrat 10YR	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	% Features	Type C	Location PL 	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80	roded e: C=Concentrat 10YR	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6 	20	Type C	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	Silt loam,	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80	roded e. C=Concentrat 10YR	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	20	Type C	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	Silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80	roded e: C=Concentrat 10YR	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 5/6	%	Type C	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e indicators.) (Typ	roded 10YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	% 20	Type C	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	e: Bottom Depth 16 Soil Field In	CdC2- Centerburg the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e indicators.) (Typ % 80 re not pre	roded 10YR 10YR sent	non, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	% 20	Type C for Problem	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16 Soil Field In A1- Histosol	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	Slopes, e findicators.) (Typ % 80 re not pre S4 - Sand	10YR sent □	non, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	Section Sect	Type C for Problem	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	e: Bottom Depth 16 Soil Field In	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators al	slopes, e findicators.) (Typ % 80 re not pre 84 - Sand \$5 - Sand	roded 10YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist) 5/6	Section Sect	Type C for Problem A16 - Coast S7 - Dark S	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he objeedon stic	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators al	Slopes, e findicators.) (Typ % 80 re not pre S4 - Sand	10YR 10YR	non, D=Depletion, RM=Reduced Matrix, CS= Reduction (Moist) 5/6	x Features % 20 Indicators	Type C for Problem A16 - Coast S7 - Dark S F12 - Iron-M	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	e: Potion (Describe to Depth 16	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he objedon stic in Sulfide	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators al	slopes, e indicators.) (Typ % 80	roded 10YR y Gleyed ly Redox ped Matrix y Muck M	Color (Moist) 5/6	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	e: Potion (Describe to Depth 16	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he objeedon stic in Sulfide di Layers	silt loam, icator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators al	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loarr	roded e. C=Concentral 10YR sent □ ly Gleyed ly Redox ped Matrix by Muck M hy Gleyed hy No Gleyed hy No Gleyed hy Gleyed	ion, D=Depletion, RM=Reduced Matrix, CS=0 Redo Color (Moist) 5/6	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom (Describe to Bottom Depth 16	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he objeedon stic in Sulfide di Layers	silt loam, icator or confirm Color of 10YR	6-12% the absence of Matrix (Moist) 4/2 cators al	slopes, e findicators.) (Typ % 80	roded 10YR 10YR	ion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E _I A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Depletd A12 - Thick I	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide 1 Layers luck ad Below Dark Surface bark Surface	silt loam, icator or confirm Color of 10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stripi F1 - Loarr F2 - Loarr F3 - Deple F6 - Redo F7 - Deple	roded 10YR	ron, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 5/6	Section Sect	Type C for Probler A16 - Coast S7 - Dark S T12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck ed Below Dark Surface lark Surface luck Mineral	silt loam, icator or confirm Color of 10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e slopes, e % 80 style="border-color: grange;">	roded 10YR	Redo Color (Moist) 5/6	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide 1 Layers luck ad Below Dark Surface bark Surface	silt loam, icator or confirm Color of 10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stripi F1 - Loarr F2 - Loarr F3 - Deple F6 - Redo F7 - Deple	roded 10YR	Redo Color (Moist) 5/6	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N Other (Expla	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick I S1 - Sandy M S3 - 5 cm ML	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic in Sulfide d Layers luck de Below Dark Surface fuck Mineral icky Peat or Peat	Silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators ar	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F8 - Redo	roded 10YR	Redo Color (Moist) 5/6	ox Features % 20 Indicators Indicators of hydrophyty	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location PL	(e.g. clay, sand, loam) loam loam es
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic in Sulfide d Layers luck de Below Dark Surface fuck Mineral icky Peat or Peat	Silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stripi F1 - Loarr F2 - Loarr F3 - Deple F6 - Redo F7 - Deple	roded 10YR	Redo Color (Moist) 5/6	Section Sect	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location PL	(e.g. clay, sand, loam) loam loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick I S1 - Sandy M S3 - 5 cm ML	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic in Sulfide d Layers luck ed Below Dark Surface fuck Mineral icky Peat or Peat	Silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators ar	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F8 - Redo	roded 10YR	Redo Color (Moist) 5/6	ox Features % 20 Indicators Indicators of hydrophyty	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location PL	(e.g. clay, sand, loam) loam loam es
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Be: Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick I S1 - Sandy M S3 - 5 cm ML	CdC2- Centerburg he depth needed to document the ind Horizon 1 dicators (check he bipedon stic in Sulfide d Layers luck ed Below Dark Surface fuck Mineral icky Peat or Peat	Silt loam, licator or confirm Color (10YR	6-12% the absence of Matrix (Moist) 4/2 cators ar	slopes, e findicators.) (Typ % 80 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F8 - Redo	roded 10YR	Redo Color (Moist) 5/6	ox Features % 20 Indicators Indicators of hydrophyty	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location PL	(e.g. clay, sand, loam) loam loam es



Sample Point: SP 22 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 11 **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: 2 (A) 3. 4. Total Number of Dominant Species Across All Strata: 3 (B) 5 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = 0 FACW spp. x 2 = 22 44 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 =13 FACU x 5= Rubus allegheniensis 5 UPL spp. 0 3. 105 ____(A) Total 186 4. Prevalence Index = B/A = 5. 1.771 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes ✓ No 10 ✓ Yes □ No Dominance Test is > 50% Total Cover = 5 ✓ Yes □ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 35 OBL Leersia oryzoides * Indicators of hydric soil and wetland hydrology must be Carex Iurida 15 ٧ OBL present, unless disturbed or problematic. 3. Apocynum cannabinum 10 Ν FAC Dichanthelium clandestinum **FACW Definitions of Vegetation Strata:** 5. 10 N OBL Scirpus cyperinus 6 Onoclea sensibilis **FACW** Tree - Woody plants 3 in. (7.6cm) or more in diameter at FACU breast height (DBH), regardless of height. 7. Lolium perenne 3 Ν 8. Solidago canadensis 3 N FACU Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 **FACW** q Agrimonia parviflora N ft. tall. 10. Ν **FACU** Phleum pratense 11 Ν **FACW** Impatiens capensis Cinna latifolia Herb - All herbaceous (non-woody) plants, regardless of size, 12 3 Ν **FACW** 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present ☑ Yes □ No 4. 5. Total Cover = Remarks:

	Additional Remarks:
Γ	



Project/Site:	Mount Verr	non - Hedding 138 k	V Line R	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:	Nate Nolan	d		Invest	igator #2:	Corey C	ook			State:	Ohio
Soil Unit:	CdC2- Cente	rburg silt loam, 6-12%	slopes, er	oded			NWI Classification:	NA		Wetland ID:	Wetland 11
Landform:	Backslope			Loc	al Relief:	Convex				Sample Point:	SP 23
Slope (%):	4	Latitude:			ongitude:			Datum:	NAD83	Community ID:	
		ditions on the site ty					nin in remarks)	□ Yes □	No	Section:	
		or Hydrology □ sig				(11 110, 04010	Are normal circumstar			Township:	
		or Hydrology □ sig						•		Range:	Dir:
		or riyurology = riai	urally pro	oblemat	.10 :		Yes	NŪ		Range.	DII
SUMMARY OF		10		- \	_ N						- V N
Hydrophytic Ve				□ Yes				Hydric Soils			□ Yes ☑ No
Wetland Hydro	logy Present	?		□ Yes	. ☑ No			Is This Samp	oling Point \	Within A Wetla	and? ■ Yes ⊠ No
Remarks:											
HYDROLOGY											
Watland Hydr	ology Indio	store (Chack hara if	indicato	re are n	ot procon	+ m /•					
		ators (Check here if	indicato	is ale ii	ot presen	(≥).			Cd		
Primary		Motor		_	DO Moto	r Ctainad	Laguas		Secondary:	DG Curfoss Co	il Craeke
	A1 - Surface				B9 - Wate					B6 - Surface So	
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation B1 - Water M				B14 - True					C2 - Dry-Season C8 - Crayfish Bu	
					C1 - Hydr		spheres on Living Roots				
	B2 - Sedimer B3 - Drift Der						educed Iron			D1 - Stunted or	Visible on Aerial Imagery
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutra	
		on Visible on Aerial Ima	nany		D9 - Gaug				_	DO - 1 AC-Neull	ai iest
		Vegetated Concave S			Other (Ex						
1	20 opa.00.	, regulated compare c		_	0 ti 101 (EX	p.a	amo,				
Field Observat	lianai										
Surface Water	Present?	☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent?	Yes ☑ No
Water Table Pr	esent?	□ Yes ☑ No	Depth:	N/A	(in.)			Trottana ny		_	100 = 110
Saturation Pres	ent?	☐ Yes ☑ No	Depth:	N/A	(in.)						
Describe Descard	od Data (etro	am gauge monitoring	. woll aor		. ,	e inenacti	one) if available:		N/Δ		
	ed Data (stre	am gauge, monitoring	y well, aer		. ,	s inspecti	ons), if available:		N/A		
Describe Record Remarks:	ed Data (stre	am gauge, monitoring	y well, aer		. ,	s inspecti	ons), if available:		N/A		
Remarks:	ed Data (stre	am gauge, monitorino	y well, aer		. ,	s inspecti	ons), if available:		N/A		
Remarks: SOILS	·			rial photo	os, previou		ons), if available:		N/A		
Remarks: SOILS Map Unit Name	e:	CdC2- Centerburg	silt loam,	rial photo	slopes, e	roded					
Remarks: SOILS Map Unit Name	e:	CdC2- Centerburg	silt loam,	rial photo	slopes, e	roded		Covered/Coated Sand Gra		ore Lining, M=Matrix)	
Remarks: SOILS Map Unit Name Profile Descrip	e:	CdC2- Centerburg	silt loam,	, 6-12% the absence of	slopes, e	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C			ore Lining, M=Matrix)	Texture
Remarks: SOILS Map Unit Name Profile Descrip Top	e: btion (Describe to Bottom	CdC2- Centerburg	silt loam,	, 6-12% the absence or	slopes, e	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C RedC	x Features	ns; Location: PL=Pc		
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: otion (Describe to Bottom Depth	CdC2- Centerburg the depth needed to document the ind	silt loam,	, 6-12% the absence of Matrix (Moist)	slopes, e findicators.) (Type	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ns; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (, 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Typ % 100	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features % 	ns; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: otion (Describe to Bottom Depth	CdC2- Centerburg the depth needed to document the ind	silt loam,	, 6-12% the absence of Matrix (Moist)	slopes, e findicators.) (Type	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features %	ns; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (, 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Typ % 100	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features % 	ns; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	CdC2- Centerburg : the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Typ	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	x Features %	ns; Location: PL=Pc Type	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	b: Stion (Describe to Bottom Depth 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e rindicators.) (Typ	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	ns; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1	silt loam, icator or confirm Color (10YR	the absence of Matrix (Moist) 4/3	slopes, e rindicators.) (Typ	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	ns; Location: PL=Po	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e f indicators.) (Typ % 100	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	Bottom Depth 16	CdC2- Centerburg : the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	the absence of Matrix (Moist) 4/3	slopes, e rindicators.) (Typ	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	%	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	CdC2- Centerburg: the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e f indicators.) (Typ % 100	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist) 	%	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	CdC2- Centerburg : the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	inial photo 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Typ % 100	roded	ion, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	%	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In	CdC2- Centerburg the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	inial photo 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Typ % 100	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	% Indicators	Type for Problem	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	CdC2- Centerburg the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	mial photo 6-12% the absence of Matrix (Moist) 4/3 cators a	slopes, e findicators.) (Type 100	roded e: C=Concentrat	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	% Indicators	Type for Problem	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In	CdC2- Centerburg of the depth needed to document the ind Horizon 1	Silt loam, icator or confirm Color (10YR	mial photo 6-12% the absence of Matrix (Moist) 4/3 cators a	slopes, e indicators.) (Typ % 100 re not pre S4 - Sand S5 - Sand	roded	ion, D=Depletion, RM=Reduced Matrix, CS=CCOlor (Moist)	% Indicators	Type for Problem A16 - Coast S7 - Dark St	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E	CdC2- Centerburg the depth needed to document the ind Horizon 1 dicators (check he objedon stic	Silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Type 100	roded	ion, D=Depletion, RM=Reduced Matrix, CS=COlor (Moist)	%	Type for Problen A16 - Coast S 7 - Dark S F12 - Iron-M	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Int A1- Histosol A2 - Histic E, A3 - Black Hi	CdC2- Centerburg: the depth needed to document the ind Horizon 1 dicators (check he objedon stic an Sulfide	Silt loam, icator or confirm Color (10YR	inial photo 6-12% the absence of Matrix (Moist) 4/3 cators a	slopes, e findicators.) (Typ % 100 re not pre S4 - Sand S5 - Sand S6 - Stripl	roded	non, D=Depletion, RM=Reduced Matrix, CS=CRedcCOlor (Moist)	x Features % Indicators	Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E1 A3 - Black Hi A4 - Hydroge	CdC2- Centerburg: the depth needed to document the ind Horizon 1 dicators (check he objection stice in Sulfide di Layers	Silt loam, icator or confirm Color (10YR	the absence of Matrix (Moist)	Slopes, e Indicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loarr	roded e: C=Concentral sent ☑ ly Gleyed ly Redox py Muck M trix by Muck M try Mucy M try Gleyed	ion, D=Depletion, RM=Reduced Matrix, CS=C Redo Color (Moist)	x Features % Indicators	Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A10 - 2 cm M	CdC2- Centerburg: the depth needed to document the ind Horizon 1 dicators (check he objection stice in Sulfide di Layers	Silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Stripp F1 - Loarn F2 - Loarn	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redoc Color (Moist)): Matrix ineral Matrix	x Features % Indicators	Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A10 - 2 cm M	CdC2- Centerburg the depth needed to document the ind Horizon 1 dicators (check he objecton stic strong Sulfide d Layers luck luck led Below Dark Surface	Silt loam, icator or confirm Color (10YR	, 6-12% the absence of Matrix (Moist) 4/3	slopes, e rindicators.) (Type % 100 re not pre S4 - Sand S5 - Sand S6 - Stripi F1 - Loam F2 - Loam F3 - Deple	roded	non, D=Depletion, RM=Reduced Matrix, CS=C Redoc Color (Moist)	x Features % Indicators	Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histo E A3 - Btack H A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplete	CdC2- Centerburg : the depth needed to document the ind Horizon 1 dicators (check he beipedon stic en Sulfide d Layers luck Below Dark Surface Dark Surface Dark Surface	Silt loam, icator or confirm Color (10YR	Matrix (Moist) 4/3 cators a	slopes, e findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	roded	ron, D=Depletion, RM=Reduced Matrix, CS=C Redct Color (Moist)	x Features % Indicators	Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	CdC2- Centerburg : the depth needed to document the ind Horizon 1 dicators (check he beipedon stic en Sulfide d Layers luck Below Dark Surface Dark Surface Dark Surface	Silt loam, icator or confirm Color (10YR	the absence of Matrix (Moist)	slopes, e findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	x Features % Indicators	Type for Problen A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic SI A3 - Black Hi A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	CdC2- Centerburg: the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface duck Mineral lucky Peat or Peat	color of confirmation of the confirmation of the color of the confirmation of the color of the c	de de la companya de	slopes, e findicators.) (Typ % 100	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	%	Type Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Explain	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick E S1 - Sandy M	CdC2- Centerburg: the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface duck Mineral lucky Peat or Peat	color of confirmation of the confirmation of the color of the confirmation of the color of the c	the absence of Matrix (Moist)	slopes, e findicators.) (Typ % 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	x Features % Indicators	Type Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Explain	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic SI A3 - Black Hi A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	CdC2- Centerburg: the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface duck Mineral lucky Peat or Peat	color of confirmation of the confirmation of the color of the confirmation of the color of the c	de de la companya de	slopes, e findicators.) (Typ % 100	roded	ion, D=Depletion, RM=Reduced Matrix, CS=C Redc Color (Moist)	%	Type Type for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Explain	Location	(e.g. clay, sand, loam) silt loam



Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 11 Sample Point: SP 23

VEGETATION		ative spe	cies.)		
Tree Stratum (P	lot size: 30 ft radius)				Danimana Task Washalask
_	<u>Species Name</u>		<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					N 1 (D 1 10 1 11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:5(B)
5.					00/ (A/D)
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.					Daniel and Luder Wednese 4
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.	Total Cavar -				OBL spp. 0 x 1 = 0 FACW spp. 17 x 2 = 34
	Total Cover =	0			
Canling/Church C	trature (Dist sine) 45 ft radius)				FAC spp. 3 x 3 = 9
Sapiing/Shrub Si	tratum (Plot size: 15 ft radius) Rubus allegheniensis	5	Y	FACU	FACU spp. 100 x 4 = 400 UPL spp. 10 x 5 = 50
2.	Rosa multiflora	5	Y	FACU	UPL spp. 10 x 5 = 50
3.					Total 130 (A) 493 (B)
4.					Total 130 (A) 493 (B)
5.					Prevalence Index = B/A = 3.792
6.					Frevalence muex - B/A - 3.792
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
10.	Total Cover =	10			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
	rotal cover	10			☐ Yes ☑ No Morphological Adaptations (Explain) *
Herh Stratum (D	lot size: 5 ft radius)				☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Solidago canadensis	35	Υ	FACU	, , , , , , , , , , , , , , , , , , ,
2.	Rosa multiflora	20	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Rubus allegheniensis	20	Ÿ	FACU	present, unless disturbed or problematic.
4.	Cirsium arvense	10	N	FACU	Definitions of Vegetation Strata:
5.	Centaurea biennis	10	N	UPL	20
6	Erigeron annuus	5	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Euthamia graminifolia	5	N	FACW	breast height (DBH), regardless of height.
8.	Dichanthelium clandestinum	5	N	FACW	
9.	Agrimonia parviflora	5	N	FACW	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.	Persicaria virginiana	3	N	FAC	ft. tall.
11.	Cinna latifolia	2	N	FACW	
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.
	Total Cover =	120			
	10101 00001	0			
Woody Vine Stra	atum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present □ Yes ☑ No
4.					7 7 7 9
5.					
	Total Cover =	0			
Remarks:		-			
Additional Re	emarks:				



Project/Site:	Mount Verr	non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1	Nate Nolar	d		Invest	igator #2:	Corev C	ook			State:	Ohio
Soil Unit:		It Ioam, Southern Ohio Till F	Plain, 0 to 2				NWI Classification:			Wetland ID:	Wetland 12
Landform:	Depression		, , , , ,		al Relief:	Linear				Sample Point:	SP 24
Slope (%):	0	Latitude:	40 4020				177°\\/	Datum:	NAD83	Community ID:	
		ditions on the site ty	nical for	thic time	of year?	/lf no ovale	in in remarks)	□ Yes □	No	Section:	
						(II IIO, expia					
		or Hydrology □ sig					Are normal circumsta	•	•	Township:	
		or Hydrology □ nat	turally pr	oblemat	IC?		Yes	NŪ		Range:	Dir:
SUMMARY OF	FINDINGS										
Hydrophytic Ve	getation Pre	sent?		☐ Yes	. ☑ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydro	logy Present	?		□ Yes	⊠ No			Is This Samp	oling Point	Within A Wetla	nd? ■ Yes ⊠ No
Remarks:											
HYDROLOGY											
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicato	rs are n	ot presen	t ☑):					
Primary	:	•			•	•			Secondary:		
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface Soi	il Cracks
	A2 - High Wa	ater Table			B13 - Aqu					B10 - Drainage I	
	A3 - Saturati				B14 - True					C2 - Dry-Seasor	
	B1 - Water M				C1 - Hydr					C8 - Crayfish Bu	
	B2 - Sedime						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutra	al lest
		on Visible on Aerial Ima			D9 - Gaug						
	Bo - Sparser	Vegetated Concave S	urrace	П	Other (Ex	piain in Re	marks)				
Field Observa	tions:										
Surface Water	Present?	☐ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hyd	drology Dr	ocont?	Yes ☑ No
Water Table Pr	esent?	□ Yes ☑ No	Depth:	N/A	(in.)			welland ny	urology Fi	esent:	res 🖭 NO
Saturation Pres	sent?	□ Yes ☑ No	Depth:	N/A	(in.)						
					. ,						
Describe Record											
	eu Data (Sile	am gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:	eu Data (Sire	am gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
	ed Data (Sile	am gauge, monitoring	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
	ed Data (Stre	am gauge, monitorino	g well, ae	rial photo	s, previou	s inspecti	ons), if available:		N/A		
Remarks:					-		,		N/A		
Remarks: SOILS Map Unit Name	9:	OcA- Ockley silt lo	am, Sou	thern O	hio Till Pla	ain, 0 to 2	2% slopes			ore Lining, M=Matrix)	
Remarks: SOILS Map Unit Name Profile Descrip	e: otion (Describe to	OcA- Ockley silt lo	am, Sou	thern O	nio Till Pla	ain, 0 to 2	2% SIOPES on, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grai		ore Lining, M=Matrix)	Teyture
Remarks: SOILS Map Unit Name Profile Descrip	e: otion (Describe to Bottom	OcA- Ockley silt lo	am, Sou	thern Ol of the absence of Matrix	hio Till Pla f indicators.) (Typ	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Red(Covered/Coated Sand Grai	ins; Location: PL=Po	1	Texture
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: ption (Describe to Bottom Depth	OcA- Ockley silt lo the depth needed to document the ind Horizon	am, Sou icator or confirm	thern Ol the absence o Matrix (Moist)	nio Till Pla f indicators.) (Typ	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai	ins; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip	e: otion (Describe to Bottom	OcA- Ockley silt lo	am, Sou	thern Ol of the absence of Matrix	hio Till Pla f indicators.) (Typ	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Red(Covered/Coated Sand Grai	ins; Location: PL=Po	1	
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	e: ption (Describe to Bottom Depth	OcA- Ockley silt lo the depth needed to document the ind Horizon	am, Sou icator or confirm	thern Ol the absence o Matrix (Moist)	nio Till Pla f indicators.) (Typ	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai	ins; Location: PL=Po	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: ption (Describe to Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Ol nthe absence o Matrix (Moist) 4/3	hio Till Pla findicators.) (Typ % 100	ain, 0 to 2 e: C=Concentrat	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist)	Covered/Coated Sand Grai OX Features % 	ins; Location: PL=Po	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	e: Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Olathe absence of Matrix (Moist) 4/3	hio Till Pla findicators.) (Typ	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Matrix, CS= Color (Moist)	Covered/Coated Sand Grai	Type	Location 	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	b: Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Olymphe absence of Matrix (Moist) 4/3	nio Till Pla f indicators.) (Typ % 100 	e: C=Concentrat	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3	hio Till Pla findicators.) (Typ % 100 	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	b: Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Olymphe absence of Matrix (Moist) 4/3	nio Till Pla f indicators.) (Typ % 100 	e: C=Concentrat	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3	hio Till Pla findicators.) (Typ % 100 	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern OI the absence o Matrix (Moist) 4/3	hio Till Pla findicators.) (Typ % 100 	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grai OX Features %	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom (Describe to Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3	% 100	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3 cators a	% 100 re not pre	ain, 0 to 2	2% slopes on D=Depletion RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grain OX Features % Indicators	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3	hio Till Pla findicators.) (Typ % 100 re not pre S4 - Sand	ain, 0 to 2	2% slopes on D=Depletion RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Graio OX Features % Indicators	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom (Describe to Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E	OcA- Ockley silt lo the depth needed to document the ind Horizon 1	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3	% 100	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grai OX Features % Indicators	Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E A3 - Black H	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he oipedon stic	am, Sou icator or confirm Color 10YR	thern Ol the absence of Matrix (Moist) 4/3	% 100 100	ain, 0 to 2	Reduced Matrix, CS= Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grain Ox Features %	Type for Problen A16 - Coast S7 - Dark St F12 - Iron-M	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he objedon stic en Sulfide	am, Sou icator or confirm Color 10YR	the absence of Matrix (Moist) 4/3 cators al	% 100	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Matrix,	Covered/Coated Sand Graio OX Features % Indicators	Type Type for Problen A16 - Coast S7 - Dark SI F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic E A3 - Black H	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he objeedon stic en Sulfide d Layers	am, Sou icator or confirm Color 10YR	thern Oi the absence o Matrix (Moist) 4/3 cators a	% 100 re not pre \$4 - Sand \$5 - Sand \$5 - Stripp F1 - Loarr	ain, 0 to 2 e: C=Concentral sent ☑ ly Gleyed ly Redox py Muck M ny Gleyed ny Gleyed ny Gleyed	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Matrix	Covered/Coated Sand Graio OX Features % Indicators	Type Type for Problen A16 - Coast S7 - Dark SI F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 idicators (check he objedon stic stic Suffide d Layers luck	am, Soulicator or confirm Color 10YR re if indic	thern Ol the absence of Matrix (Moist) 4/3	% 100 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loarr F2 - Loarr	ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Graio OX Features % Indicators	Type Type for Problen A16 - Coast S7 - Dark SI F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth NRCS Hydric	Bottom Depth 16	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic strong Sulfide d Layers luck luck luck Below Dark Surface	am, Soulicator or confirm Color 10YR re if indic	thern O the absence of Matrix (Moist) 4/3 cators a	% 100 100 100 100 100 100 100 100 100 10	ain, 0 to 2 e: C=Concentrat	Reduced Matrix, CS= Reduced Matrix, CS= Reduced Matrix, CS= Color (Moist)	Covered/Coated Sand Graio OX Features % Indicators	Type Type for Problen A16 - Coast S7 - Dark SI F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histo E A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic en Sulfide d Layers luck Below Dark Surface Dark Surface	am, Soulicator or confirm Color 10YR re if indic	thern Ol the absence of Matrix (Moist) 4/3 cators a	% 100 100 100 100 100 100 100 100 100 10	ain, 0 to 2 ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Graio OX Features % Indicators	Type Type for Problen A16 - Coast S7 - Dark SI F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic en Sulfide d Layers luck Below Dark Surface Dark Surface	am, Soulicator or confirm Color 10YR re if indic	thern Oi the absence o Matrix (Moist) 4/3 cators a	% 100	ain, 0 to 2 ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Graio OX Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Dep let A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface fuck Mineral lucky Peat or Peat	am, Soulicator or confirm Color 10YR re if indic	thern Oi the absence o Matrix (Moist) 4/3 cators a	% 100 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Redo F7 - Deple F8 - Redo	ain, 0 to 2 ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grain OX Features % Indicators Indicators of hydrophyty	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface fuck Mineral lucky Peat or Peat	am, Soulicator or confirm Color 10YR re if indic	thern Oi the absence o Matrix (Moist) 4/3 cators a	% 100	ain, 0 to 2 ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Graio OX Features % Indicators	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Dep let A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface fuck Mineral lucky Peat or Peat	am, Soulicator or confirm Color 10YR re if indic	thern Oi the absence o Matrix (Moist) 4/3 cators a	% 100 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Redo F7 - Deple F8 - Redo	ain, 0 to 2 ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Reduced Moist)	Covered/Coated Sand Grain OX Features % Indicators Indicators of hydrophyty	Type Type	Location	(e.g. clay, sand, loam) silt loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Dep let A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	OcA- Ockley silt lo the depth needed to document the ind Horizon 1 dicators (check he bipedon stic an Sulfide d Layers luck Below Dark Surface bark Surface fuck Mineral lucky Peat or Peat	am, Soulicator or confirm Color 10YR re if indic	thern Oi the absence o Matrix (Moist) 4/3 cators a	% 100 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Redo F7 - Deple F8 - Redo	ain, 0 to 2 ain, 0 to 2	2% slopes on, D=Depletion, RM=Reduced Matrix, CS= Redu Color (Moist)	Covered/Coated Sand Grain OX Features % Indicators Indicators of hydrophyty	Type Type	Location	(e.g. clay, sand, loam) silt loam



Sample Point: SP 24 Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 12 **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: 0 (A) 3. 4. Total Number of Dominant Species Across All Strata: 2 5 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = FACW spp. 0 x 2 = 25 50 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 =FACU spp. 97 388 FACU x 5= Rubus allegheniensis 3 Ν UPL spp. 40 3. 133 ____(A) Total 487 (B) 4. Prevalence Index = B/A = 5. 3.662 --6. 7. 8. __ **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes ✓ No 10 Yes ☑ No Dominance Test is > 50% Total Cover = 3 Yes ✓ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * FACU 45 Solidago canadensis * Indicators of hydric soil and wetland hydrology must be Centaurea cyanus 20 FACU present, unless disturbed or problematic. **FACW** 3. Agrostis gigantea 15 Ν Schedonorus arundinaceus **FACU Definitions of Vegetation Strata:** FACU 5. Rosa multiflora 10 N 6 **FACW** Agrimonia parviflora 5 Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. UPI 7. Daucus carota 5 Ν 8. Euthamia graminifolia 5 N **FACW** Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 FAC q Vernonia gigantea 3 N ft. tall. 10. Ν UPL Conyza canadensis 11 Erigeron annuus Ν **FACU** Herb - All herbaceous (non-woody) plants, regardless of size, 12 Phleum pratense Ν **FACU** 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 = Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4. 5. Total Cover = Remarks:

Additional Remarks:



Project/Site:		non - Hedding 138 k	V Line F	Rebuild			Stantec Project #:	193704281		Date:	08/11/16
Applicant:	AEP									County:	Knox
Investigator #1:	Nate Nolar	nd	Investigator #2: Corey Cook				ook			State:	Ohio
Soil Unit:	Sh- Shoals silt	loam, 0 to 2 percent slopes,	occasional	ly flooded			NWI Classification:			Wetland ID:	Wetland 12
Landform:	Depression	า		Loc	cal Relief:	Concav	e			Sample Point:	SP 25
Slope (%):	2	Latitude:	:: 40.402132°N Longitude: -82.629756°W Datum: NAD83					NAD83	Community ID:	PEM	
Are climatic/hyd	drologic cond	ditions on the site type	pical for	this time	e of year?	(If no, expla	ain in remarks)	□ Yes □	No	Section:	
Are Vegetation	□ , Soil □ ,	or Hydrology □ sig	gnificantly disturbed? Are normal circumsta			nces present?)	Township:			
Are Vegetation	□ , Soil □ ,	or Hydrology □ nat	urally pr	oblemat	ic?		✓ Yes	NŪ		Range:	Dir:
SUMMARY OF		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
Hydrophytic Ve	getation Pre	sent?		Yes	. □ No			Hydric Soils	Present?		
Wetland Hydro				Yes						Within A Wetla	
Remarks:	- 37										
HYDROLOGY											
	a la ana la ali a	-4 (Obl- b :f	!!!4 -		-4						
		ators (Check here if	indicato	rs are n	ot presen	τ⊔):			C		
<u>Primary</u>	A1 - Surface	Mator			B9 - Wate	r Stainad	Lagyas		Secondary:	B6 - Surface So	oil Cracks
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation				B14 - True					C2 - Dry-Season	
	B1 - Water M	Marks			C1 - Hydr	ogen Sulfi	de Odor			C8 - Crayfish Bu	
	B2 - Sedimer			✓			spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						educed Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorphi	
	B5 - Iron Dep	on Visible on Aerial Ima	nany		C7 - Thin D9 - Gaug					D5 - FAC-Neutra	ai rest
		y Vegetated Concave S			Other (Ex						
_		,				, , , , , , , , , , , , , , , , , , , ,	,				
Field Observat	tions:										
Surface Water		□ Yes ☑ No	Depth:	N/A	(in.)						
Water Table Pr		□ Yes ☑ No	Depth:	N/A	(in.)			Wetland Hy	drology Pr	esent?	Yes □ No
Saturation Pres		□ Yes ☑ No	Depth:	N/A	(in.)						
					, ,						
	ed Data (stre	eam gauge, monitoring	well, ae	rial photo	os, previou	s inspecti	ons), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name		Sh- Shoals silt loan									
		the depth needed to document the ind	cator or confirm			e: C=Concentral	ion, D=Depletion, RM=Reduced Matrix, CS=C		ins; Location: PL=Po	ore Lining, M=Matrix)	
Тор	Bottom			Matrix			Redo	x Features	1	1	Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	16	1	10YR	4/2	80	10YR	3/6	20	С	M	silt loam
-											
-											
-											
											
					ro not pro						
_	A1- Histosol	ndicators (check he	ie ii iiidii		S4 - Sand		<i>.</i>		A16 - Coast	Prairie Redox	
	A2 - Histic E	ninedon			S5 - Sand		wautx		S7 - Dark Si		
	A3 - Black H	•			S6 - Strip					langanese Masse	es
	A4 - Hydroge				F1 - Loan					Shallow Dark Su	
	A5 - Stratifie	d Layers			F2 - Loan	ny Gleyed	Matrix			ain in Remarks)	
	A10 - 2 cm M			☑	F3 - Deple						
		ed Below Dark Surface			F6 - Redo						
	A12 - Thick [F7 - Deple						
	S1 - Sandy N	ucky Peat or Peat			F8 - Redo	v Debiess		1 Indicators of hydronhyl	tic vegetation and w	etland hydrology must he	e present, unless disturbed or problematic.
Restrictive Layer		-									
(If Observed)	Type:	N/A		Depth:	N/A			Hydric Soil	Present?	M	Yes □ No
Remarks:											
-											

Herb - All herbaceous (non-woody) plants, regardless of size,

and woody plants less than 3.28 ft. tall.

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

Hydrophytic Vegetation Present ☑ Yes □ No



10.

11

12

13. 14.

15.

1. 2. 3.

4. 5.

Remarks:

Carex lupulina

Leersia oryzoides

Carex frankii

Woody Vine Stratum (Plot size: 30 ft radius)

WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Mount Vernon - Hedding 138 kV Line Rebuild Wetland ID: Wetland 12 Sample Point: SP 25 **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: 6 (A) 3. 4. Total Number of Dominant Species Across All Strata: 8 5 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B) 7 8. **Prevalence Index Worksheet** 9. Total % Cover of: Multiply by: x 1 = 10. OBL spp. Total Cover = 0 FACW spp. x 2 = 45 90 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 =FACU spp. 20 80 x 5= UPL spp. 0 0 2 3. 123 ____(A) Total 228 4. 5. Prevalence Index = B/A = 1.854 --6. 7. 8. **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 9. □ Yes ✓ No 10 ✓ Yes □ No Dominance Test is > 50% Total Cover = 0 ✓ Yes □ No Prevalence Index is ≤ 3.0 * ✓ No □ Yes Morphological Adaptations (Explain) * □ Yes ☑ No Herb Stratum (Plot size: 5 ft radius) Problem Hydrophytic Vegetation (Explain) * 30 FACW Agrostis gigantea * Indicators of hydric soil and wetland hydrology must be Mentha X piperita 15 OBL present, unless disturbed or problematic. 3. Persicaria sagittata 15 OBL Scirpus atrovirens OBL **Definitions of Vegetation Strata: FACW** 5. 10 Agrimonia parviflora 6 FACU Cirsium arvense 10 Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. Juncus effusus 10 OBL 8. 10 FACU Centaurea cyanus Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 **FACW** q Carex vulpinoidea 5 N ft. tall.

Additional Remarks:			

Ν

Ν

Ν

3

Total Cover =

Total Cover =

OBL

OBI

OBL

MT. VERNON STATION – HEDDING STATION 138 KV TRANSMISSION LINE REBUILD PROJECT, KNOX AND MORROW COUNTIES, OHIO

D.2 ORAM DATA FORMS



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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Nate Noland	
Date: 8 / 10 / 20 / U	
Affiliation: Stantec	
Address: 11687 Lebanon Rd. Cincinnati, OH 4524	/
I Phone Number:	r
513-842-8200 e-mail address:	
nathan, notand @ 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.	2
Sparta 229	7
project 7	li Vernon
area	(594)
	S
Mt. Liberty 3	(C)
The production of the control of the	THE MAINSON KIND
Lat/Long or UTM Coordinate 40.371118°N, -82.523708°W	Entirement States
USGS Quad Name Fredericktown	
County	
Township	
Section and Subsection	
Hydrologic Unit Code 05040003	
Site Visit 8 10 2010	
National Wetland Inventory Map N/A	
Ohio Wetland Inventory Map	
Soil Survey AdD2 Amenda silt loam 12 to 18 persont alongs are ded	
Delineation report/map See Wetland Delineation Report	
Colo Mellana Delinealtal Report	1

Name of Wetland:	
Wetland Size (acres, hectares): 20.01	acres
Sketch: Include north arrow, felationship with other	er surface waters, vegetation zones, etc.
Rows	Pond
ROWN Parture	wetland 1 sp 3 Harrise 10
Comments, Narrative Discussion, Justification of G	Category Changes:
Final score: 23	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 hydrologic regime changes.	/	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	(NO)
į	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).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain	YES	(NO)
	an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	\bigcirc
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	YES YES	(NO)
70	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) 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	YES	(NO)
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	Go to Question 7 YES	(NO)
7	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	(NO)
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence 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?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

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
		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 elevation, or along a tributary to Lake Erie that is accessible to fish?	YES 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 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.	YES Go to Question 9d	NO 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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

Table 1. Characteristic plant species.

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

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

Site: Wetland	1	Rater(s): NINOla	ind	Date: 8/10/2014
0 0	Metric 1. Wetland A	,		
max 6 pts, subtotal	Select one size class and assign score >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 to <10.1 to <25 acres (4 to <10.1 to <10 acres (1.2 to <4ha	0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
3 3	Metric 2. Upland bu	ffers and surrou	nding land use.	
<i>c</i>	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth or LOW. Old field (>10 years) MODERATELY HIGH. Res	m (164ft) or more around wetlan 25m to <50m (82 to <164ft) ard e 10m to <25m (32ft to <82ft) a average <10m (<32ft) around w	nd perimeter (7) pund wetland perimeter (4) around wetland perimeter (1) retland perimeter (0) and average. , wildlife area, etc. (7) with forest. (5) conservation tillage, new falle	ow field. (3)
13 16	Metric 3. Hydrology		,	
max 30 pts. subtotal	Perennial surface water (lal 3c. Maximum water depth. Select or >0.7 (27.6in) (3)	ce water (3) ke or stream) (5) nly one and assign score. (2) c regime. Score one or double	Part of wetland/u Part of riparian o 3d. Duration inundation/sat X Semi- to perman Regularly inunda Seasonally inund Seasonally satur- check and average.	ain (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3) lated (2) ated in upper 30cm (12in) (1)
	Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (nor filling/grading road bed/RR traced dredging other	
6 22	Metric 4. Habitat Al	teration and Dev	elopment.	
	4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only Excellent (7) Very good (6) Good (5)	ū		
	Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or (1)	double check and average.		
	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Testino-ov	shrub/sapling rer herbaceous/aqua sedimentation dredging farming nutrient enrichma	atic bed removal

Site: V	Vetlan	d 1	Rate	r(s): /V, /	Uoland	Date: 8/10/2014
31	ZZ	T. 88.	etric 5. Special Wetlar	nds.		
mex 10 pts.	subtotal	Che	ck all that apply and score as indicated. 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 Ope Relict Wet Prairies (10) Known occurrence state/federal thr Significant migratory songbird/wate Category 1 Wetland. See Questior	restricted hydro nings) (10) reatened or end or fowl habitat or	angered species (10) usage (10)	
		M	etric 6. Plant commun		* · ·	tonography
1	23		otilo o. I lant comma		croperoion, inioro	topograpity.
max 20 pts.	subtotal		Wetland Vegetation Communities.	Vegetation	Community Cover Scale	
		Scor	e all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0	
			Aquatic bed Temergent	1	Present and either comprises s vegetation and is of moderate	
			Shrub		significant part but is of low q	
		1	Forest	2	Present and either comprises s	
			Mudflats			e quality or comprises a small
			Open water	-	part and is of high quality	
		- [Other	3	Present and comprises signification	
			horizontal (plan view) Interspersion.		vegetation and is of high qual	lity
		Sele	ct only one.	November 5	econistics of Variatellas Quality	
			High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predor	
			Moderate (3)	low	disturbance tolerant native sp	
)	Moderately low (2)	mod	Native spp are dominant comp	
		7.1	又 Low (1)		although nonnative and/or dis	
			None (0)		can also be present, and spe	cies diversity moderate to
			Coverage of invasive plants. Refer		moderately high, but generall	•
			ble 1 ORAM long form for list. Add		threatened or endangered sp	·
		or de	educt points for coverage	high	A predominance of native spec	the state of the s
		-	Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbance tolerant na absent, and high spp diversity	
		-3	Sparse 5-25% cover (-1)		the presence of rare, threater	
		~	Nearly absent <5% cover (0)	-	the presented of fare, infector	ica, or critatingered opp
			Absent (1)	Mudflat and	d Open Water Class Quality	
			Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Scor	e all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47	
			Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.	88 acres)
		2	Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
		-	Standing dead >25cm (10in) dbh Amphibian breeding pools	Microtopos	raphy Cover Scale	
		1	Amphibian breeding pools	0	Absent	
				- 1	Present very small amounts or	if more common
				5611	of marginal quality	
				2	Present in moderate amounts, quality or in small amounts of	
				3	Present in moderate or greater	amounts
73					and of highest quality	
6						

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		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 (10)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	AUGS TO THE STATE OF
- 129	Metric 2. Buffers and surrounding land use	3	CONTRACTOR DESCRIPTION
	Metric 3. Hydrology	13	HOUSE PARTY AND
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	ort Access
	Metric 6. Plant communities, interspersion, microtopography	1	The state of the s
*	TOTAL SCORE	23	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	-	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(0)	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	(20)	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 welland?	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, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
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	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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Nate Noland	
Date: 8/10/2010	
Affiliation:	
Stantec	
Address: 11687 Lebanon Rd. Cincinnati, OH 4524	/
Phone Number: 513 - 842 - 8200	
e-mail address:	
nathan, noland @ stantec. Com	
Name of Wetland: 111etland 2	
Vegetation Communit(ies):	
HGM Class(es):	
depressional Location of Wetland: include map, address, north arrow, landmarks, distances, roads) etc.	
s-outa	N
(223)	1
	//
	/ -
	li Vernon
project area	pitting.
area	(590)
	(B)
Mt. Liberty (3)	
Lat/Long or UTM Coordinate 40.372603°N, -82.531588°W	SECRETARY NEW PROPERTY.
USGS Quad Name Fredericktown	
County	
Knox	
Township NA	
Section and Subsection	
Hydrologic Unit Code 05040003	
Site Visit 8 10 2010	
National Wetland Inventory Map N/A	
Ohio Wetland Inventory Map	-
Soil Survey CdC2- Centerburg silt loam, 6 to 12 percent slopes, eroded	
Delineation report/map	
See Wetland Delineation Report]

Name of Wetland:		
Wetland Size (acres, hectares): 0,1 acres		
Sketch: Include north arrow, relationship with other surface water	s, vegetation zones, etc.	
12/12		
	forest	
1 1/1 1	1	
\ \\ \\ \\		
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	V)
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N firest		V/V/
	7	111
Character Discounting Discounting Character Ch	Row	
Comments, Narrative Discussion, Justification of Category Change	jes: 🗸	
Final score: 35	Category:	2
OJ .		0

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.		78-21
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

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), http://www.dnr.state.oh.us/dnap. 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	_
	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	(NO)
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
	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	Go to Question 3
	threatened of endangered plant of animal species:	3 wetland.	Go to Question 5
		Go to Question 3	
	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO'
	The state of the s	Wetland is a Category 3 wetland	Go to Question 4
	201	Go to Question 4	0
	Significant Breeding or Concentration Area. Does the wetland	YES	(NO)
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	(NO)
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or	Wetland is a Category 1 wetland	Go to Question 6
	no vegetation?	Go to Question 6	0
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	(NO)
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
	COVER OF ITTVASIVE SPECIES (SEE TABLE 1) 13 12070?	Go to Question 7	\cap
_	Fens. is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	(NO)
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	
la	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	(NO)
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	3 wetland.	
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	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
		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 elevation, or along a tributary to Lake Erie that is accessible to fish?	YES 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
0-	Ave to the Taile weeken bound attended to the second of th	Go to Question 10 YES	NO
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 include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	NO Go to Question 10
9 d	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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var, capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex aligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Tvpha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronants		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhannus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		G
	Solidago ohioensis	<i>y</i> 33		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: \	Vetlan	d 2	Rater(s): N. Nolund		Date: 8/10/2016
()	0	Metric 1. Wetland A			
max 6 pts.	subtotal	Select one size class and assign score			
		>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1h	2ha) (5 pts)		n
		3 to <10 acres (1.2 to <4ha)	(3 pts)		
		0.3 to <3 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0 <0.1 acres (0.04ha) (0 pts)			
3	3	Metric 2. Upland but	fers and surroundi	ng land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. S			
		MEDIUM. Buffers average 2	(164ft) or more around wetland per 5m to <50m (82 to <164ft) around v	vetland perimeter (4)	
		NARROW. Buffers average VERY NARROW. Buffers a	10m to <25m (32ft to <82ft) around erage <10m (<32ft) around wetland	l wetland perimeter (1)	
		Intensity of surrounding land use.	Select one or double check and av	erage.	
		Z LOW. Old field (>10 years),	older forest, prairie, savannah, wildli shrub land, young second growth fo dential, fenced pasture, park, conse	orest. (5)	w field. (3)
·		HIGH. Urban, industrial, ope	n pasture, row cropping, mining, co		
17.5	20.5	Metric 3. Hydrology.		2	
max 30 pts.	subtotal	3a. Sources of Water. Score all that a	pply, 3b. C	Connectivity. Score all to 100 year floodpla	
		Other groundwater (3) Precipitation (1)	2		ake and other human use (1) pland (e.g. forest), complex (1)
		Seasonal/Intermittent surfac	water (3)	Part of riparian or	upland corridor (1)
		Perennial surface water (lake 3c. Maximum water depth. Select onl			uration. Score one or dbl check. ently inundated/saturated (4)
		>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2)	Regularly inundat Seasonally inundat	
		 <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic 		Seasonally satura	ated in upper 30cm (12in) (1)
	0	None or none apparent (12)	Art Name of the Control of the Contr	and average.	
		Recovered (7) Recovering (3)	ditch tile	point source (non filling/grading	stormwater)
		Recent or no recovery (1)	dike	road bed/RR track	k
			weir stormwater input	dredging other	
10.5	31	Metric 4. Habitat Alt	eration and Develo	pment.	
max 20 pts	subtotal	4a. Substrate disturbance. Score one	or double check and average.		
		None or none apparent (4) Recovered (3) Recovering (2)			
		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)			
		> X Fair (3)			
		Poor to fair (2) Poor (1)			
		4c. Habitat alteration. Score one or de	Proceedings of the Control of the Co		
	L	None or none apparent (9) Recovered (6)	Check all disturbances observed mowing	shrub/sapling rem	
		Recovering (3) Recent or no recovery (1)	grazing clearcutting	herbaceous/aqua sedimentation	tic bed removal
	31]	selective cutting woody debris removal	dredging farming	
1.00	01]	toxic pollutants	nutrient enrichme	nt
51	ublotal this p	age			

last revised 1 February 2001 jjm

Site:	Wetla	nd 2		Rater(s):	N.No	land	Date: 8/10/2016
0	31 31	_	ric 5. Special W	etlands.			
max 10 pts.	subtotal	Check	all that apply and score as ind	icated.			
			Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5 Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (0 Relict Wet Prairies (10) Known occurrence state/fe Significant migratory songt Category 1 Wetland. See) wetland-unrestrict wetland-restrict Dak Openings) deral threatene sird/water fowl h	ed hydrold (10) d or endai nabitat or u	ngered species (10) usage (10)	
4	35	Met	ric 6. Plant com	munitie	s, inte	erspersion, microto	opography.
max 20 pts.	subtotai		etland Vegetation Communitie	s. <u>Ve</u>		Community Cover Scale	
		Score a	all present using 0 to 3 scale. Aquatic bed Emergent Shrub		1	Absent or comprises <0.1ha (0.2 Present and either comprises sm vegetation and is of moderate of significant part but is of low quality	all part of wetland's quality, or comprises a
	8	5	Forest Mudflats Open water		2	Present and either comprises sig vegetation and is of moderate of part and is of high quality	nificant part of wetland's
			Other rizontal (plan view) Interspers	on.	3	Present and comprises significant vegetation and is of high quality	
		Select	only one. High (5)	Na.	rrative De	scription of Vegetation Quality	
			Moderately high(4) Moderate (3)		low	Low spp diversity and/or predom disturbance tolerant native spe	
) 2	Moderately low (2) Low (1) None (0)		mod	Native spp are dominant compor although nonnative and/or distu can also be present, and speci	urbance tolerant native spp
			verage of invasive plants. Re e 1 ORAM long form for list.		Y.	moderately high, but generally threatened or endangered spp	,
		or dedu	uct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-1) Sparse 5-25% cover (-1)	3)	high	A predominance of native specie and/or disturbance tolerant nat absent, and high spp diversity the presence of rare, threatene	ive spp absent or virtually and often, but not always,
		, D	Nearly absent <5% cover (•	461-4 - 4	0	
		64 M	Absent (1) crotopography.	MU	O 0	Open Water Class Quality Absent <0.1ha (0.247 acres)	
			all present using 0 to 3 scale.	_	1	Low 0.1 to <1ha (0.247 to 2.47 a	cres)
			Vegetated hummucks/tuss	ucks —	2	Moderate 1 to <4ha (2.47 to 9.8	
		1 =	Coarse woody debris >150	m (6in)	3	High 4ha (9.88 acres) or more	
		H	Standing dead >25cm (10i	794750	crotonom	raphy Cover Scale	
			Amphibian breeding pools	140	0	Absent	
					ĭ	Present very small amounts or if of marginal quality	more common
					2	Present in moderate amounts, be quality or in small amounts of h	
	7				3	Present in moderate or greater a	mounts

35

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert	Result
Marratica Datina	Question 1 Critical Habitat	score	T 16 Ontone 0
Narrative Rating	Question i Critical Habitat	YES (NO)	If yes, Category 3,
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	Withday
	Metric 2. Buffers and surrounding land use	3	W. State V. P. State St.
	Metric 3. Hydrology	17.5	
	Metric 4. Habitat	10.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	
	TOTAL SCORE	35	Category based on score breakpoints modified 2

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	P	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	(10)	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 <i>greater</i> 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 welland?	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 welland 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.

Fin	al Category	
Category 1	Category 2	Category 3
		Final Category Category 1 Category 2

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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name:	
Name: Agreen Kwolek	
Button	
8/20/16	
Affiliation:	Contract of
Address:	
11681 Lebanon Rd Cincinnati 64 45241 Phone Number:	
Phone Number:	1
513 285 8200	
e-mail address:	
Agron, knoleke stanter, com	
Name of Wetland: Wetland 3	
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PEM / PFO	
HGM Class(es):	
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Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
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mments, Narrative Discussion, Justification of Category (
	Category: Z	

wetland 3

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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), http://www.dnr.state.oh.us/dnap. 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).	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?	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	NO 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
<u>Z</u>	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 8
Ва	"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?	Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8

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?	Wetland should be evaluated for possible Category 3 status.	NO Go to Question 9a
		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 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 Go to Question 10	NO Go to Question 9c
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 include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris arundinacea Phragmites australis Potamogeton crispus	Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa	Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma Carex trisperma Chamaedaphne calyculata	Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides Calamagrostis stricta Calamagrostis canadensis	Calamagrostis canadensis Calamogrostis stricto Carex atherodes Carex buxbaumi Carex pellito Carex sartwelli
Ranunculus ficaria Rhamnus frangula Typha angustifolia Typha xglauca	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	Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Quercus palustris	Carex sartwelli Gentiana andrewsii 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:	wetla	ndi		Rater(s):	ATK		Date: 8/10/16
2	2	Metric 1.	Wetland A	rea (size)			= HI = H
max 6 pts.	subtotal	>50 a 25 to 10 to 3 to < 0.3 to 0.1 to <0.1 to	class and assign scor cores (>20.2ha) (6 pts) <50 acres (10.1 to <20 <25 acres (4 to <10.1) :10 acres (1.2 to <4ha) <3 acres (0.12 to <1.2 <0.3 acres (0.04 to <0 acres (0.04ha) (0 pts)	0.2ha) (5 pts) na) (4 pts) (3 pts) 2ha) (2pts) 0.12ha) (1 pt)			
E 5	7	Metric 2.	. Upland bu	ffers and	surround	ling land use.	1
max 14 pts.	subtotal	WIDE MEDI ANARI VERY 2b. Intensity of VERY LOW MOD	ROW. Buffers average / NARROW. Buffers a surrounding land use. / LOW. 2nd growth or . Old field (>10 years)	n (164ft) or more 25m to <50m (82 2 10m to <25m (5 e 10m to <25m (5 exerage <10m (<5 Select one or d older forest, prai , shrub land, your idential, fenced p	around wetland p to <164ft) aroun s2ft to <82ft) around s2ft) around wetla ouble check and rie, savannah, wing g second growth asture, park, con	perimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) a forest. (5) servation tillage, new fall	
11	19	Metric 3.	Hydrology				
max 30 pts.	subtotal	High Other Preciperation Season Perer 3c. Maximum v	Water. Score all that pH groundwater (5) groundwater (3) pitation (1) onal/Intermittent surface mater (lakwater depth. Select on (27.6in) (3)	ce water (3) te or stream) (5)	3d	Part of wetland/u Part of riparian of Duration inundation/sa Semi- to perman	
		3e. Modification None Reco Reco	o 0.7m (15.7 to 27.6in) o (15.7 to 27.6in) o (<15.7in) (1) ns to natural hydrologic or none apparent (12) vered (7) vering (3) nt or no recovery (1)	regime. Score	rbances observe	Seasonally inund Seasonally saturates Seasonally saturates Seck and average.	dated (2) rated in upper 30cm (12in) (1) nstormwater)
1/2	31	Metric 4	. Habitat Alt	eration a	nd Devel	opment.	
max 20 pts.	subtotal	None Reco Reco Rece 4b. Habitat dev Excel Very Good	rately good (4)		•		
		Poor	to fair (2) (1)				
s) subtotal this pa	4c. Habitat alte	ration. Score one or d or none apparent (9) vered (6) vering (3) nt or no recovery (1)	Check all distumowing grazing clearcuttised	rbances observed ng cutting ebris removal	shrub/sapling rei	atic bed removal
last revised	d 1 Februa	ry 2001 jjm					

Site: U	retla	nd 3		Rater(s)	: AI 1	.	Date: 8/10/16
su max 10 pts.	3 (btotal first pa	Metri	ic 5. Special We		s.		
			Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary v Lake Erie coastal/tributary v Lake Plain Sand Prairies (C Relict Wet Prairies (10) Known occurrence state/fec Significant migratory songbi Category 1 Wetland. See C	wetland-unre wetland-rest Dak Opening deral threate ird/water fov Question 1 C	ricted hydrol s) (10) med or enda vI habitat or i Qualitative Ra	ogy (5) ngered species (10) usage (10) ating (-10)	
4	35	Metr	ic 6. Plant com			erspersion, microto	opography.
max 20 pts.	subtotal		and Vegetation Communities	i.]		Community Cover Scale	
		Score all	present using 0 to 3 scale. Aquatic bed Emergent		1	Absent or comprises <0.1ha (0.2 Present and either comprises sm vegetation and is of moderate of	all part of wetland's quality, or comprises a
			Shrub			significant part but is of low qua	
		Z	Forest Mudflats Open water		2	Present and either comprises sig vegetation and is of moderate of part and is of high quality	
			Other ontal (plan view) Interspersion	on.	3	Present and comprises significan vegetation and is of high quality	
		Select on					
			High (5) Moderately high(4) Moderate (3)		low	Low spp diversity and/or predom disturbance tolerant native spe	cies
		X	Moderately low (2) Low (1)		mod	Native spp are dominant compor although nonnative and/or distu can also be present, and speci	urbance tolerant native spp
			∫None (0) erage of invasive plants. Ref 1 ORAM long form for list. A			moderately high, but generally threatened or endangered spp	
		or deduct	t points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3 Sparse 5-25% cover (-1)	3)	high	A predominance of native specie and/or disturbance tolerant nat absent, and high spp diversity the presence of rare, threatene	ive spp absent or virtually and often, but not always,
			Nearly absent <5% cover (0 Absent (1)		Mudflat and	Open Water Class Quality	
			otopography.		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	
		0	Vegetated hummucks/tussu		2	Moderate 1 to <4ha (2.47 to 9.8	B acres)
	2	2	Coarse woody debris >15cr Standing dead >25cm (10ir	n) dbh	3	High 4ha (9.88 acres) or more	
			Amphibian breeding pools			raphy Cover Scale	
					01	Absent	more commen
				9	1	Present very small amounts or if of marginal quality	
					2	Present in moderate amounts, be quality or in small amounts of h	nighest quality
					3	Present in moderate or greater a	mounts

35

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

netland 3

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species		If yes, Category 3.
	Question 3. High Quality Natural Wetland	under a	If yes, Category 3.
	Question 4. Significant bird habitat	11	If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies		If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	U	No freehalt was party
	TOTAL SCORE	35	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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 Z	Is quantitative rating score <i>greater</i> 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, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category			
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

	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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

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Address: 1681 Lebanon Rd Cincinnation H 4152411
Phone Number: 513 285 8200
e-mail address: Aason, Kwolek @ Stantec, com
Namo of Wotland:
Vegetation Communit(ies):
HGM Class(es):
Depression 9'
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
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2011年 - 1911年
Lat/Long or UTM Coordinate 40.38127, -82,565510
USGS Quad Name
County Knc 4
Township Mt herner
Section and Subsection
Hydrologic Unit Code 0 50400630307
Site Visit 8/11/16
National Wetland Inventory Map
Ohio Wetland Inventory Map
Soil Suprov
Delineation report/map Stantac Delineation report to stantac Delineation report
Delineation report/map

Scoring Boundary Worksheet

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

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

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

Vetland Size (acres, hectares): 〈 O , / Q C ,	
ketch: Include north arrow, relationship with other surface	e waters, vegetation zones, etc.
	Decicuous
	Decicuous forest
	teral
105510	
Solo file	
Rorloldfield	
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omments, Narrative Discussion, Justification of Categor	v Changes:
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- M	

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. 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?	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
1	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	NO Go to Question 6
3	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly Sphagnum 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
-	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%?	Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a
3a	"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?	Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b

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.	NO Go to Question 9a
		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 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	And I also finite water to rate the westernite project in the second and a second and a second in the second and a second	Go to Question 10	NO.
90	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 X Go to Question 9e
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 Go to Question 10	NO 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 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 type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
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	2.	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
71 0	Parnassia glauca	Schechzeria palustris		Lythrum alatun
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinato
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site:	wetl	and 4	Rater(s): AJK	Date: 8////b
0	0	Metric 1. Wetland A	Area (size).	
max 6 pts.	subtotal	Select one size class and assign scores (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to <10.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts	s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) .2ha) (2pts) <0.12ha) (1 pt)	
	4	Metric 2. Upland bu	ıffers and surroundi	ng land use.
max 14 pts.	subtotal	WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth LOW. Old field (>10 years MODERATELY HIGH. Re	Select only one and assign score. Do im (164ft) or more around wetland pet a 25m to <50m (82 to <164ft) around w ge 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland a. Select one or double check and av or older forest, prairie, savannah, wildl b), shrub land, young second growth for assidential, fenced pasture, park, conse upen pasture, row cropping, mining, co	imeter (7) vetland perimeter (4) wetland perimeter (1) perimeter (0) erage. fe area, etc. (7) rest. (5) rvation tillage, new fallow field. (3)
11	15	Metric 3. Hydrolog		uthorn h. a. a. a.
max 30 pts,	subtotal	None or none apparent (1	ace water (3) ake or stream) (5) 3d. 1 nily one and assign score.	Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1) Duration inundation/saturation. Score one or dbl check. Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) and average.
		Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (nonstormwater) filling/grading road bed/RR track dredging other
8,5	23,5	Metric 4. Habitat A	Iteration and Develo	pment.
max 20 pts.	subtotal	4a. Substrate disturbance. Score o None or none apparent (4 Recovered (3) Recovering (2) Recent or no recovery (1)		
		4b. Habital development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habital alteration. Score one or		
SI	23,5	None or none apparent (9 K Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

last revised 1 February 2001 jjm

Site: wet	and 1	Rater(s): AT	k	Date: 8/11// 6
Z 3	rst page				
0 23	Metric 5. S	pecial Wetland	S.		
max 10 pts, subto	Check all that apply a	nd score as indicated.			
	Bog (10)				
	Fen (10) Old growth	forest (10)			
		sted wetland (5)			
		pastal/tributary wetland-unre	•		
		pastal/tributary wetland-rest Sand Prairies (Oak Opening		ogy (5)	
	Relict Wet F	' '	<i>j</i> s) (10)		
		rrence state/federal threate	ened or enda	ngered species (10)	
		migratory songbird/water for			
		Wetland. See Question 1 (_
5 28	Metric 6. P	lant communiti	ies, inte	erspersion, microt	opography.
3 60	27.3				
max 20 pts, subto	ou. Trouding Togotati			Community Cover Scale	Name of the other beautiful and the state of
	Score all present using	-	0	Absent or comprises <0.1ha (0.3) Present and either comprises sr	
	Aquatic bed			vegetation and is of moderate	
	Shrub			significant part but is of low qu	
	Forest	2	2	Present and either comprises si	gnificant part of wetland's
	Mudflats			vegetation and is of moderate	quality or comprises a small
	Open water			part and is of high quality	ut and an man of wallandle
	Other 6b. horizontal (plan vi	iew) Interenersion	3	Present and comprises significa vegetation and is of high quali	· ·
	Select only one.	ew) interspersion.		vegetation and is of riight quan	
	High (5)		Narrative De	scription of Vegetation Quality	
	Moderately		low	Low spp diversity and/or predon	
	Moderate (3		mod	Native spp are dominant compo	
	Moderately Low (1)	iow (2)	mod	although nonnative and/or dist	
	None (0)			can also be present, and spec	
	6c. Coverage of invas			moderately high, but generally	w/o presence of rare
	to Table 1 ORAM long			threatened or endangered spp	
	or deduct points for co	-	high	A predominance of native specie and/or disturbance tolerant na	
		75% cover (-5) 5-75% cover (-3)		absent, and high spp diversity	
		5% cover (-1)		the presence of rare, threaten	
		ent <5% cover (0)		***	
	Absent (1)			Open Water Class Quality	
	6d. Microtopography.		0	Absent <0.1ha (0.247 acres)	acroc\
	Score all present using	g v to 3 scale. nummucks/tussucks	2	Low 0.1 to <1ha (0.247 to 2.47 a Moderate 1 to <4ha (2.47 to 9.8	
		dy debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
		ad >25cm (10in) dbh			
	Amphibian I	preeding pools		raphy Cover Scale	
			0	Absent Property and amounts or in	I more commen
			3	Present very small amounts or it of marginal quality	more common
		ė.	2	Present in moderate amounts, b	ut not of highest
				quality or in small amounts of	
			3	Present in moderate or greater a	amounts

28,5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

	· ·	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	no	If yes, Category 3.
	Question 2. Threatened or Endangered Species		If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
*	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	4	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	Ч	SHOWN SHAPE
	Metric 3. Hydrology	(1	
	Metric 4. Habitat	8.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	5	es. Hamania Salasa Si
	TOTAL SCORE	28,5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO 📈	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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?	VES 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?	VES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	
	V			

End of Ohio Rapid Assessment Method for Wetlands.

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.

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Background Information

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Date: 8/11/16
Affiliation: Stantce
Address:
1168 Lebanon ad Cincinnati, 014 45-24/1 Phone Number: 513 285 8200
e-mail address:
Name of Wetland: wetland 5
Vegetation Communit(ies):
HGM Class(es):
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
X (3/65)
3
Training and translationary our raining experience of the contract many to
Lat/Long or UTM Coordinate 40,383946, -82,573757
- Crucial to
County Kno X
Mt vesnon
Section and Subsection Hydrologic Unit Code Grant CCC Code Hydrologic Unit Code
Sife Visit
National Wetland Inventory Map
Ohio Wetland Inventory Map
Soil Survey, AdFZ Amonda silt loam 18-2-1 % slopes Delineation report/map
Stanter Delineation Report

Name of Wetland: Wetland Size (acres, hectares): Ketch: Include north arrow, relationship with other surface	
Vetland Size (acres, hectares): < 0, a C	
ketch: Include north arrow, relationship with other surface	waters, vegetation zones, etc.
	N
\	
\>/°ee.	
streams	
Istram 6	
1stragm 1	
	metland 5
	me tland
	200
P	ow tab. kg x
	trabita.
	* 7 *
4	
omments, Narrative Discussion, Justification of Category	Changes:

vetland 5

Scoring Boundary Worksheet

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

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

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

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered principly 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?	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?	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	NO 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	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	NO Go to Question 8b

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?	Wetland should be evaluated for possible Category 3 status.	NO Go to Question 9a
		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 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 Go to Question 10	NO Go to Question 9c
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 include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwelli
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
- /F ···· · · · · · · · · · ·	Parnassia glauca	Schechzeria palustris		Lythrum alatun
	Potentilla fruticosa	Sphagnum spp.	S PARAMETER	Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddelli
	Salix serissima	Xyris difformis		
	Solidago ohioensis	33		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: ve	tland s)	Rater(s): AJK		Date: 8//	116
	Mo	etric 1. Wetland A	rea (size).			
max 6 pts. su	ibtotal Sele	25 to esize class and assign score >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1.0 10 to <0.3 acres (0.04 to <0.1 acres (0.04 to <0.1 acres (0.04ha) (0 pts)) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)			
6	6 M	etric 2. Upland bu	ffers and surrour	nding land use.		
max 14 pts. su		MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth o LOW. Old field (>10 years) MODERATELY HIGH. Res	m (164ft) or more around wetlan 25m to <50m (82 to <164ft) aro e 10m to <25m (32ft to <82ft) a average <10m (<32ft) around we	d perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0) nd average. wildlife area, etc. (7) with forest. (5) conservation tillage, new fall		
14	ZC M	etric 3. Hydrology		3, (, ,		
max 30 pts. su	Зс.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) Modifications to natural hydrological services.	ce water (3) ke or stream) (5) nly one and assign score.	Part of wetland/u Part of riparian of a semi-to perman Regularly inundation/sat Seasonally inundation/saturity inundation/s	ain (1) //ake and other hum upland (e.g. forest), or upland corridor (1) turation. Score one tently inundated/satu ated/saturated (3)	complex (1)) or dbl check. urated (4)
	,	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (no filling/grading road bed/RR traddredging other_	,	
	3	etric 4. Habitat Al		•		
max 20 pts. su		Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3)				
	4c.	Poor to fair (2) Poor (1) Habitat alteration. Score one or	double check and average.			
subtota	3C)	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)		shrub/sapling re	atic bed removal	9

last revised 1 February 2001 jjm

Site: wet	land 5	Rat	ter(s): AJK		Date: 8/11//6
3 C	rst page	c 5. Special Wetl	ands.		
max 10 pts. subto		that apply and score as indicated Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetlat Lake Erie coastal/tributary wetlat Lake Plain Sand Prairies (Oak CRelict Wet Prairies (10) Known occurrence state/federal Significant migratory songbird/w Category 1 Wetland. See Ques	and-unrestricted hydro and-restricted hydro Openings) (10) threatened or enda vater fowl habitat or stion 1 Qualitative R	ingered species (10) usage (10) ating (-10)	
3 3	3 Metri	c 6. Plant comm		erspersion, microto	opograpny.
max 20 pts. subto	otal 6a. Wetla	and Vegetation Communities.	Vegetation	Community Cover Scale	
		present using 0 to 3 scale. Aquatic bed Emergent	0	Absent or comprises <0.1ha (0.2d) Present and either comprises sm vegetation and is of moderate of significant part but is of low qual	all part of wetland's quality, or comprises a
		Shrub Forest Mudflats Open water	2	Present and either comprises sig vegetation and is of moderate of part and is of high quality	nificant part of wetland's quality or comprises a small
	6b. horize	Otherontal (plan view) Interspersion.	3	Present and comprises significan vegetation and is of high quality	
	Selection	High (5)	Narrative D	escription of Vegetation Quality	
	-	Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomi disturbance tolerant native spe	cies
	6c. Cove	Moderately low (2) Low (1) None (0) rage of invasive plants. Refer I ORAM long form for list. Add	mod	Native spp are dominant compon although nonnative and/or distu can also be present, and specie moderately high, but generally threatened or endangered spp	rbance tolerant native spp es diversity moderate to
	or deduct	points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	high	A predominance of native specie and/or disturbance tolerant nati absent, and high spp diversity a the presence of rare, threatene	ve spp absent or virtually and often, but not always,
	W	Nearly absent <5% cover (0) Absent (1)		Open Water Class Quality	
	6d. Micro	otopography.	0	Absent <0.1ha (0.247 acres)	
	Score all	present using 0 to 3 scale.	- 5 1	Low 0.1 to <1ha (0.247 to 2.47 a	
		Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88	s acres)
		Coarse woody debris >15cm (6 Standing dead >25cm (10in) db	oh	High 4ha (9.88 acres) or more	
		Amphibian breeding pools		raphy Cover Scale	
	1120		0	Absent Present very small amounts or if of marginal quality	
			2	Present in moderate amounts, but quality or in small amounts of h	
			3	Present in moderate or greater a	

End of Quantitative Rating. Complete Categorization Worksheets.

wetland 5

ORAM Summary Worksheet

	477	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NC	If yes, Category 3.
	Question 2. Threatened or Endangered Species		If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3,
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	1	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	G	Second Cold
	Metric 2. Buffers and surrounding land use	6	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	10	
	Metric 5. Special Wetland Communities	C	
	Metric 6. Plant communities, interspersion, microtopography	3	And the last of th
	TOTAL SCORE	33	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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	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?	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.	

Final Category				
Choose one	Category 1	Category 2	Category 3	
		· ·		
		1		

End of Ohio Rapid Assessment Method for Wetlands.

Ohio Rapid Assessment Method for Wetland 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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name:	
Date:	
8/11/16 Affiliation:	
Stantec	
Address: 11681 Lebanon Rd Cincinnati, 014 Phone Number:	
Phone Number: 513 285 8200	
e-mail address:	
Name of Wetland: 111 1	10
Vegetation Communit(ies):	
PEM	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	115
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The state of the s	
(365)	
3	
	Division in
Lat/Long or UTM Coordinate 40,384300, -82,575504) USGS Quad Name	on the same of
USGS Quad Name Fredrick town	
County ,	
Township	
Mf vernan	
Section and Subsection	
Hydrologic Unit Code 05 C L C CO 3 O 30 3	
Site Visit 8/11/16	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map See Stanter Delineation report	
Dec Hanter Defineration report	

Name of Wetland: wcfland 6 Wetland Size (acres, hectares): Sketch: Include north arrow, relationship with other surf	
Wetland Size (acres, hectares): (0.1 9.6	
Sketch: Include north arrow, relationship with other surf	face waters, vegetation zones, etc.
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stream 7	
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Comments, Narrative Discussion, Justification of Categ	ory Changes:
and the second second second	
Final score:	Category: /

wetland 6

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.

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

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. 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
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	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	NO 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 Sphagnum 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	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	NO Go to Question 8b

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.	NO Go to Question 9a
		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 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
		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 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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	NO Complete Quantitative Rating

Table 1.	Characteristic	plant s	pecies.
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invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellin
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
77	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: metlar	nd 6	Rater(s): AJK	Date: 8//// 6
0 0	Metric 1. Wetland	Area (size).	
max 6 pts. subtotal	Select one size class and assign so >50 acres (>20.2ha) (6 pt 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to	s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) 1.2ha) (2pts) <0.12ha) (1 pt)	
1	<0.1 acres (0.04ha) (0 pts Metric 2. Upland by	uffers and surroundi	ng land use.
max 14 pts. subtotal	WIDE. Buffers average 5 MEDIUM. Buffers averag NARROW. Buffers avera VERY NARROW. Buffers 2b. Intensity of surrounding land us VERY LOW. 2nd growth LOW. Old field (>10 year MODERATELY HIGH. R	Select only one and assign score. Dom (164ft) or more around wetland pee 25m to <50m (82 to <164ft) around ge 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlander. Select one or double check and avor older forest, prairie, savannah, wild s), shrub land, young second growth feesidential, fenced pasture, park, conseppen pasture, row cropping, mining, co	orimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) orest. (5) ervation tillage, new fallow field. (3)
5 6	Metric 3. Hydrolog	y.	
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surful Perennial surface water (I) 3c. Maximum water depth. Select Source (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (1) 3e. Modifications to natural hydrolo	face water (3) ake or stream) (5) 3d. only one and assign score.	Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1) Duration inundation/saturation. Score one or dbl check. Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) sk and average.
	None or none apparent (1) Recovered (7) Recovering (3) Recent or no recovery (1)	ditch	point source (nonstormwater) filling/grading road bed/RR track dredging other
4 10	Metric 4. Habitat A	Iteration and Develo	pment.
max 20 pts. subtotal	4a. Substrate disturbance. Score of None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1))) 	
	4c. Habitat alteration. Score one o	The second secon	
subtotal this parallast revised 1 Februa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

Site: \	refla	nd 6	Rater	(s): At	K	Date: 8/11/16
Su C	C blotal first pa	1	ic 5. Special Wetlar	nds.		
max 10 pts.	subtotal		that apply and score as indicated. 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 Ope Relict Wet Prairies (10) Known occurrence state/federal thro Significant migratory songbird/wate Category 1 Wetland. See Question	restricted hydr nings) (10) eatened or end r fowl habitat o 11 Qualitative	dangered species (10) or usage (10) Rating (-10)	on og ran hv
3	13	Metr	ic 6. Plant commun			opograpny.
max 20 pts.	subtotal	6a. Wetl	and Vegetatioп Communities.	Vegetation	n Community Cover Scale	
		Score all	present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.	
			Aquatic bed	1	Present and either comprises s	
		3	Emergent		vegetation and is of moderate	
			Shrub		significant part but is of low qu	
			Forest	2	Present and either comprises s	
		- 4	Mudflats		vegetation and is of moderate	quality or comprises a small
			Open water		part and is of high quality	
			Other	3	Present and comprises significa	ant part, or more, of wetland's
		6h horiz	contal (plan view) Interspersion.	-20	vegetation and is of high qual	
			e-manager s.		regetation and to orringing	
		Select or	7	Narrativo	Description of Vegetation Quality	
		-	High (5)	low	Low spp diversity and/or predor	
		_	Moderately high(4)	1044	disturbance tolerant native sp	
			Moderate (3)	mod	Native spp are dominant compo	
			Moderately low (2)	mod	although nonnative and/or dis	
			Low (1)		can also be present, and spe	
		LX	None (0)			-
			erage of invasive plants. Refer		moderately high, but generall	
			1 ORAM long form for list. Add		threatened or endangered sp	
		or deduc	t points for coverage	high	A predominance of native spec	
			Extensive >75% cover (-5)		and/or disturbance tolerant na	
			Moderate 25-75% cover (-3)		absent, and high spp diversity	
			Sparse 5-25% cover (-1)		the presence of rare, threater	ed, or endangered spp
		X	Nearly absent <5% cover (0)			
			Absent (1)	Mudflat a	nd Open Water Class Quality	
		6d. Micr	otopography.	0	Absent <0.1ha (0.247 acres)	
		Score all	present using 0 to 3 scale.	· 1	Low 0.1 to <1ha (0.247 to 2.47	acres)
			Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.	88 acres)
			Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
			Standing dead >25cm (10in) dbh			
			Amphibian breeding pools	Microtopo	ography 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	
				3	Present in moderate or greater	
	ī				and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

	Do 198	circle answer or insert	Result
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered	1	If yes, Category 3.
	Species Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	J	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	PHA DECCEPTION A
	Metric 3. Hydrology	5	
	Metric 4. Habitat	LI	
	Metric 5. Special Wetland Communities	G	The same and same
	Metric 6. Plant communities, interspersion, microtopography	3	is the Additional to
	TOTAL SCORE	13	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO.	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	Vetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.	
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM	
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.	
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).	
Does the wetland otherwise exhibit 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.	

Final Category			
Choose one	Category 1	Category 2	Category 3
	1		
	1		

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	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating	Final: February 1, 2001	
	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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name:
Haran knolek
Date: 8/11/16
Affiliation: Stantec
Address: 11681 Lebanon Rel
Phone Number: 513 285 8200
e-mail address: Aaron, kwoleke stantec, com
Name of Wetland: wetland 7
Vegetation Communit(ies):
HGM Class(es):
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
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Lat/Long or UTM Coordinate
USGS Quad Name
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County
Township M + verman
Section and Subsection
Hydrologic Unit Code
Site Visit 7/11 (//
National Wetland Inventory Map
Ohio Wetland Inventory Map
none
Soil Survey Sh, Shoals Silt loam Of percent slepes
Delineation report/ridap See Stantee Delineation Reports

tland Size (acres, hectares): O. Z.5 G.C. we tland we tland Row Trab ments, Narrative Discussion, Justification of Category Changes:	
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nal score: \$3,5 Cate	gory: 7

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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), http://www.dnr.state.oh.us/dnap. 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?	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?	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	NO 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
<u>7</u>	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?	Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b

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.	NO Go to Question 9a
		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 elevation, or along a tributary to Lake Erie that is accessible to fish?	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 Go to Question 10	NO Go to Question 9c
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 include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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	Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
invasive/exotic spp Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris arundinacea Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnus frangula Typha angustifolia Typha xglauca		Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides Calamagrostis stricta Calamagrostis canadensis Quercus palustris	Calamagrostis canadensis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita Carex sartwellii Gentiana andrewsii Helianthus grosseserratus Liatris spicata Lysimachia quadriflora
	Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix myricoides Salix serissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum Triglochin palustre	Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis		Lythrum alatur Pycnanthemum virginianun Silphium terebinthinaceun Sorghastrum nutan Spartina pectinat Solidago riddelli

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

Metric 1. Wetland Area (size). Select one size class and assign score. 1-96 acres (-70 20 20 acres (-10 1 - 20 2	Site: wetla	nd	7	Rater(s): AJK	Date: 8/11/16
So of So cares (10 to 20 2ths) (5 pts)	-11	Me	etric 1. Wetland A	area (size).	
25 to <50 acres (10.1 to <50.2ha) (5 pts) 10 to <52 seres (10.4 to <50.2ha) (5 pts) 11 to <52 seres (10.4 to <50.2ha) (5 pts) 13 to <10 acres (12.4 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (2 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha) (1 pts) 10 to <53 acres (0.2 to <51.2ha)	max 6 pts. subtotal	Sele	ct one size class and assign sco	re.	
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0.3 to <3 acres (0.12 to <1.2 ha) (2 pts) 0.1 to <3 acres (0.14 to <1.2 ha) (2 pts) 0.1 to <3 acres (0.04 ha) (0 pts) 4.0.1 ac			10 to <25 acres (4 to <10.1	ha) (4 pts)	
Of to <0.3 acras (0.04 to <0.12 hay) (pts) Metric 2. Upland buffers and surrounding land use. Calculate everage buffer width. Select only one and assign acore. Do not double check. MEDIUM. Buffers average 5 fom (1641) or more around welland perimeter (1) MEDIUM. Buffers average 5 fom (1641) or more around welland perimeter (1) MEDIUM. Buffers average 5 fom (1641) or more around welland perimeter (1) MEDIUM. Buffers average 5 fom (1641) around welland perimeter (1) MERIUM of surrounding land use. Select one or double check and average. Nerry Low. 2 and growth or older forest, prairie, savernash, wildlife area, etc. (7) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) Mother Cas. Hydrology. Metric 3. Hydrology. Metric 3. Hydrology. Metric 3. Hydrology. Mother Government of Water. Score all that apply. High PH groundwater (5) Metric 3. Hydrology. Metric 4. Habitat artiface water (3) Seasonal/Introntition to startal hydrologic regime. Score one or double check and average. Mone or none apparent (12) Recovered (7) Recovering (3) Recover or or recovery (1) Metric 4. Habitat Alteration and Development. Metric 4. Habitat alteration. Score one or double check and average. None or none apparent (19) Recovering (3) Recover (7) Recovering (3) Recover (7) Recovering (3) Recover (6) Recovered (7) Recovered (6) Recovered (7) Recovered (7) Recovered (8) Recovered (9) Re		- 1	3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1) (3 pts) 2ha) (2pts)	
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## Building ## Bui		lag.		.ff	4
WIDE. Buffers average 50m (164ft) or more around welland perimeter (7)		1 .	- 10 10 10 10 10 10 10 10 10 10 10 10 10	_	
MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 45m to <25m (25th to <25ft) around wetland perimeter (9) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (9) VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High phi groundwater (3) Precipitation (1) Precipitation (1) Seasonal/Internet surface water (3) Seasonal/Internet surface w	max 14 pts. aubtotal	2a. (WIDE. Buffers average 50	Select only one and assign score. Do not double m (164ft) or more around wetland perimeter (7)	e check.
VERY NARROW. Buffers average 10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) 1. LOW. Old field (-10) years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HiGH. Urban, Industrial, open pasture, row cropping, mining, construction. (1) Wetric 3. Hydrology. Jan. Sources of Weter. Score all that apply. High pH groundwater (3) Other groundwater (3) Percipitation (1) Seasonal/Imminimal surface water (3) Seasonal/Imminimal surface water (4) Part of wetland/upland (e.g. forest), complex (1) Part of praint minimal surface water (3) Seasonal/Imminimal surface water (4) Recovered (7) Adv. (15.7 in) (2) Other (15.7 to 27.6 in) (2) Other (15.7			MEDIUM. Buffers average	25m to <50m (82 to <164ft) around wetland peri	
2b. Intensity of surrounding land use. Select one or double check and average. Note National					
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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 (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovered (6) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recovering (4)		1			
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Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) Recent or no recovery (1) Subtotal this page Rair (3) Poor to fair (2) Poor (1) Check all disturbances observed mowing grazing grazing clearcutting selective cutting woody debris removal toxic pollutants nutrient enrichment					
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Recent or no recovery (1) Clearcutting Sedimentation dredging farming nutrient enrichment local contents local					
woody debris removal farming nutrient enrichment	1	, 1		clearcutting sedin	nentation
subtotal this page toxic pollutants nutrient enrichment	7 1 6	+			
]		toxic pollutants nutrie	
last revised 1 February 2001 jjm	·		01 jjm		

Site: Letla	nd7	Rater	(s): AT	<	Date: 8/////
30,5		Curacial Watlant			
0 30,5	- Metric 5	. Special Wetlan	ias.		
ax 10 pts. subtotal		apply and score as indicated.			
	Bog Fen				
		growth forest (10)			
		re forested wetland (5)			
		Erie coastal/tributary wetland- Erie coastal/tributary wetland-			
		Plain Sand Prairies (Oak Oper		logy (o)	
	Relic	t Wet Prairies (10)			
	Knov	vn occurrence state/federal thre	eatened or enda	angered species (10)	
	Signi	ificant migratory songbird/water gory 1 Wetland. See Question	1 Qualitative R	ating (-10)	
				erspersion, microt	onogranhy
3 333	Metrico	. Flant Commun	ities, iiit	erspersion, iniciot	opograpny.
ax 20 pts. subtotal		egetation Communities.	Vegetation	Community Cover Scale	
		ent using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2	
		atic bed	1	Present and either comprises sn	
	3 Eme Shru	rgent		vegetation and is of moderate significant part but is of low qu	#30fH
	Fore		2	Present and either comprises sign	
	Mudi			vegetation and is of moderate	
		n water	- 1	part and is of high quality	t or more of wotland
	Othe	r (plan view) Interspersion.	3	Present and comprises significa vegetation and is of high quali	
	Select only one		,	Togotation and to ormalist quant	2
	High			escription of Vegetation Quality	
		erately high(4)	low	Low spp diversity and/or predon disturbance tolerant native spe	
		erate (3) erately low (2)	mod	Native spp are dominant compo	
	Low	• • •		although nonnative and/or dist	urbance tolerant native spp
	None	• •		can also be present, and spec	
		of invasive plants. Refer AM long form for list. Add		moderately high, but generally threatened or endangered spp	•
	or deduct point		high	A predominance of native specie	
		nsive >75% cover (-5)		and/or disturbance tolerant na	tive spp absent or virtually
		erate 25-75% cover (-3)		absent, and high spp diversity the presence of rare, threaten	
		se 5-25% cover (-1) ly absent <5% cover (0)	-	the presence of rare, threaten	ed, or endangered spp
		ent (1)	Mudflat and	d Open Water Class Quality	
	6d. Microtopos		0	Absent <0.1ha (0.247 acres)	
		ent using 0 to 3 scale.	1 2	Low 0.1 to <1ha (0.247 to 2.47 to Moderate 1 to <4ha (2.47 to 9.8	
		etated hummucks/tussucks rse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	ou acres)
		ding dead >25cm (10in) dbh	-		
	Amp	hibian breeding pools		raphy Cover Scale	
			0	Absent Present very small amounts or i	more common
			111	of marginal quality	THOIR COMMON
			2	Present in moderate amounts, be quality or in small amounts of	
			3	Present in moderate or greater	
-1.				and of highest quality	등 125.4 [11] [13] (13] (13] (13] (13] (13] (13] (13] (
33,5			-		

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

wetland 7

	1114	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NC	If yes, Category 3.
	Question 2. Threatened or Endangered Species	-(If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest		If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
t	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	1	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size)	
	Metric 2. Buffers and surrounding land use	9	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	9,5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	33.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.	
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score <i>greater</i> 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.	

Final Category				
Choose one	Category 1	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Agran Kwolek	
Date: 8/11/16	
Affiliation: Stantec	dry riend rive
Address: 11681 Lebanon Rd Cincinna E, 0/1 45-24// Phone Number:	
Phone Number: 513 285 8200	± ¹⁶
e-mail address: Acron kwolek@ Stantec, com	
Name of Wetland: netland 8	
Vegetation Communit(ies):	
HGM Class(es): Depressional	
0.15 / 60	
Assessment department, outpearing all to come	PARTICULAR AND
Lat/Long or UTM Coordinate 40, 388 5 23, -8 2, 5 8 9 6 6 1	
USGS Quad Name Fredrick town County	I —
Fnox	* *
Township Section and Subsection	
Hydrologic Unit Code	
05040003030Z	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Suprey	
Delineation report/map Stanfec Delineation Report	_
1 Trantec Delineation KeplorT	

Name of Wetland:	8
Wetland Size (acres, hectares): < 0,) a C	
Sketch: Include north arrow, relationship with other surface waters	, vegetation zones, etc.
	4
1 UDF	
1	
netland	1
8	
/	
	AT ALL STREET
	1 slope
	pond
Comments, Narrative Discussion, Justification of Category Change	os:
	and the second second
	mental and the second
Final score : 7	Category:
Final score: Z	

Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.		À
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

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), http://www.dnr.state.oh.us/dnap. 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).	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?	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	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	NO 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%?	vetland that 1) has no idophilic mosses, c mosses have >30% is present, and 5) the YES NO	
<u>7</u>	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 8t

8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO I
	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
		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 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 Go to Question 10	NO Go to Question 9c
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 include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
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 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	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
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 grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
-)F S	Parnassia glauca	Schechzeria palustris		Lythrum alatun
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutan
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddelli
	Salix serissima	Xyris difformis		10000
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site:	retla	nel 8	Rater(s): ATK		Date: &	111/16
0	0	Metric 1. Wetland A	rea (size).	- H		
max 6 pts.	subtotal	Select one size class and assign score >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1 to <4ha) 0.3 to <10 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0.4 to <0.1 acres (0.04 to <0.4 t	0.2ha) (5 pts) na) (4 pts) (3 pts) tha) (2pts)			
3	3	Metric 2. Upland but	ffers and surround	ing land use.		
max 14 pts.	subtotal	MEDIUM. Buffers average : NARROW. Buffers average : VERY NARROW. Buffers a 2b. Intensity of surrounding land use. VERY LOW. 2nd growth or LOW. Old field (>10 years), MODERATELY HIGH. Res	n (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around 10m to <25m (32ft to <82ft) around verage <10m (<32ft) around wetlar	erimeter (7) wetland perimeter (4) d wetland perimeter (1) id perimeter (0) verage. lilife area, etc. (7) forest. (5) ervation tillage, new falk	ow field. (3)	
1 1	14	Metric 3. Hydrology				
max 30 pts.	subtotal	3a. Sources of Water. Score all that a High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface Perennial surface water (lak 3c. Maximum water depth. Select on >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) 3c. Modifications to natural hydrologic None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	e water (3) e or stream) (5) 3d. y one and assign score. (2) regime. Score one or double check	Connectivity. Score all 100 year floodpla Between stream/ Part of wetland/u Part of riparian or Duration inundation/sat Semi- to perman Regularly inunda Seasonally inund Seasonally satura ck and average. point source (nor filling/grading road bed/RR trace dredging other	uin (1) lake and other hupland (e.g. forest rupland corridor uration. Score or ently inundated/si ted/saturated (3) lated (2) lated in upper 30c), complex (1) (1) ne or dbl check. aturated (4)
max 20 pts.	17	Metric 4. Habitat Alt		pment.		
		None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or defined to the second of the seco	one and assign score.			
sı	\ 7	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	atic bed removal	,

last revised 1 February 2001 jjm

0 Absent

Present very small amounts or if more common 1 of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 3 Present in moderate or greater amounts and of highest quality

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

wetland 8

	3744	circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NC	If yes, Category 3.
	Question 2. Threatened or Endangered Species		If yes, Category 3.
	Question 3. High Quality Natural Wetland		If yes, Category 3.
	Question 4. Significant bird habitat		If yes, Category 3.
	Question 5. Category 1 Wetlands		If yes, Category 1.
	Question 6. Bogs		If yes, Category 3.
	Question 7. Fens		If yes, Category 3.
	Question 8a. Old Growth Forest	******	If yes, Category 3.
	Question 8b. Mature Forested Wetland		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		If yes, evaluate for Category 3; may also be
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		If yes, Category 3
55	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		If yes, Category 3
	Question 11. Relict Wet Prairies	J	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	O	
	Metric 2. Buffers and surrounding land use	3	
	Metric 3. Hydrology	1/	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	A STATE OF THE STA
	TOTAL SCORE	21	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet wetland 8

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on, a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit 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?	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.

	Fin	al Category	
Choose one	Category 1	Category 2	Category 3
	V		

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method 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: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Aaron kuckle
Date: 8/1/1/6
Affiliation: Stantec
Address:
11681 Lebanon Rd Cincinnati, OH 45241
5 13 28 5 8 2 0 0 e-mail address:
Name of Wetland: wetland 9
Vegetation Communit(ies):
HGM Class(es):
Depressional / Pinasian Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
X _0,Zmi
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and the second s
Lat/Long or UTM Coordinate 40, 388 683, -82, 589 68 5
USGS Quad Name
Fredrick town
Knax
Township B/we
Section and Subsection
Hydrologic Unit Code 0504000 30307
Site Visit 8 / / / / / 6
National Wetland Inventory Map
Ohio Wetland Inventory Map
Soil Survey SH Strog 15 5; It learn 0-Z 4c slopes
Delineation report/map Stanter Delineation Report

Name of Wetland:	
Wetland Size (acres, hectares): ∠ O , I a ∠ Sketch: Include north arrow, relationship with other surface with the contractions of the contraction	
Sketch: Include north arrow, relationship with other surface v	waters, vegetation zones, etc.
	\sim \sim
23 19	
stream	
	/
Net a PEM	vd /
1 / 4	/
/ / × M	
/ / PEN	Row trobitat
\	
Comments, Narrative Discussion, Justification of Category C	Changes:
	9
Final score: Zo	Category: /

wetland 9

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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), http://www.dnr.state.oh.us/dnap. 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).	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?	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	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	NO 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%?	Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
<u>7</u>	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

wetland 9

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?	Wetland should be evaluated for possible Category 3 status.	NO Go to Question 9a	
		Go to Question 9a	-1	
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 fo 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 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 10 YES Go to Question 9d	NO 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 tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO 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 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 type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11	
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 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	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensi.
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricto
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherode.
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 sartwell
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrews
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratu
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicat
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflor
31 0	Parnassia glauca	Schechzeria palustris		Lythrum alatu
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianur
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceu
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutar
	Salix candida	Vaccinium oxycoccos		Spartina pectinal
	Salix myricoides	Woodwardia virginica		Solidago riddell
	Salix serissima	Xyris difformis		
	Solidago ohioensis	T		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: wet la	ind 9	Rater(s): AJk	Date	8/11/16
00	Metric 1. Wetla	nd Area (size).	25	<u> </u>
max 6 pts, subtotal	Select one size class and ass >50 acres (>20.2ha			
		.1 to <20.2ha) (5 pts)		
	10 to <25 acres (4 t	o <10.1ha) (4 pts)		
	3 to <10 acres (1.2 0.3 to <3 acres (0.1			
	0.1 to <0.3 acres (0	.04 to <0.12ha) (1 pt)		
	<0.1 acres (0.04ha)	(0 pts)		
= 1	Metric 2. Uplan	d buffers and surro	unding land use.	
max 14 pts. subtotal		width. Select only one and assign s		
		rage 50m (164ft) or more around we		
		average 25m to <50m (82 to <164ft) average 10m to <25m (32ft to <82		
	VERY NARROW.	Buffers average <10m (<32ft) aroun	d wetland perimeter (0)	
		and use. Select one or double chec		
		rowth or older forest, prairie, savanr 0 years), shrub land, young second		
	MODERATELY HK	SH. Residential, fenced pasture, pa	rk, conservation tillage, new fallow field.	(3)
		strial, open pasture, row cropping, n	nining, construction. (1)	
10 11	Metric 3. Hydro	logy.		
max 30 pts. subtotal	3a. Sources of Water. Score	all that apply.	3b. Connectivity. Score all that app	y
	High pH groundwat	er (5)	100 year floodplain (1)	- 20
	Other groundwater Precipitation (1)	(3)	Between stream/lake and Part of wetland/upland (e.	
	Seasonal/Intermitte	nt surface water (3)	Part of wedand/upland (e.	
	Perennial surface v	ater (lake or stream) (5)	3d. Duration inundation/saturation.	Score one or dbl check.
		elect only one and assign score.	Semi- to permanently inui	
	>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to	27 6in) (2)	Regularly inundated/satur Seasonally inundated (2)	ated (3)
	<0.4m (<15.7in) (1)		Seasonally saturated in u	pper 30cm (12in) (1)
	Modifications to natural h	ydrologic regime. Score one or dou	ble check and average.	
	None or none appa			
	Recovered (7) Recovering (3)	ditch	point source (nonstormwa filling/grading	ter)
	Recent or no recov		road bed/RR track	
		weir	dredging	
16		stormwater input	other	
6 17	Metric 4. Habita	at Alteration and De	evelopment.	
max 20 pts. subtotal	4a. Substrate disturbance. S	core one or double check and avera	nge.	
	None or none appa	rent (4)		
	Recovered (3) Recovering (2)			
	Recent or no recov	erv (1)		
	4b. Habitat development. Se	lect only one and assign score.		
	Excellent (7)			
	Very good (6) Good (5)			
	Moderately good (4)		
	Fair (3)			
	Poor to fair (2) Poor (1)			
	4c. Habitat alteration. Score	one or double check and average.		
	None or none appa		oserved	
	Recovered (6)	mowing	shrub/sapling removal	
	Recovering (3)	grazing	herbaceous/aquatic bed r	emoval
	Recent or no recov	ery (1) clearcutting selective cutting	sedimentation dredging	
17		woody debris remo		
		toxic pollutants	nutrient enrichment	
subtotal this pa				
last revised 1 Februa	ary 2001 jjm			

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9/26/2016 12:19:15 PM

in

Case No(s). 16-1530-EL-BLN

Summary: Letter of Notification - Part 15 electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company