

**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009a

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 2

Facing North



#### Wetland 009a

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009a

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 2

Facing South



#### Wetland 009a

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009a

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009b

Date:

September 22, 2020

**Description:** 

PSS wetland

Category 2

Facing North



### Wetland 009b

Date:

September 22, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009b

Date:

September 22, 2020

**Description:** 

PSS wetland

Category 2

Facing South



### Wetland 009b

Date:

September 22, 2020

**Description:** 

PSS wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009b

Date:

September 22, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009c

Date:

September 22, 2020

**Description:** 

PFO wetland

Category 2

Facing North



### Wetland 009c

Date:

September 22, 2020

**Description:** 

PFO wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 009c

Date:

September 22, 2020

**Description:** 

PFO wetland

Category 2

Facing South



### Wetland 009c

Date:

September 22, 2020

**Description:** 

PFO wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 009c

Date:

September 22, 2020

**Description:** 

PFO wetland

Category 2

Soil Pit



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

Project/Site: Crooksville-North No	ewark 138 kV Transmission Line	City/County: Perry	Sampling Date: 22-Sep-20
Applicant/Owner: AEP		State: OH	Sampling Point: w-aeh-20200922-11
Investigator(s): AEH, WRL		Section, Township, Range: S	20 T 14N R 14W
Landform (hillslope, terrace, etc.)	): Toeslope	Local relief (concave, convex, no	one): concave Slope: 2.0 % / 63.4 °
Subregion (LRR or MLRA): LRF	R N Lat.:	: 39.76281 Long	- NADO3
Soil Map Unit Name: GwE - Gue	ernsey-Westmoreland silt loams, 25 t	to 40 percent slopes	NWI classification: N/A
Are climatic/hydrologic condition	ns on the site typical for this time of y	year? Yes O No O (If no, e	explain in Remarks.)
Are Vegetation , Soil 🔽	_		Circumstances" present? Yes • No •
Are Vegetation 🗹 , Soil 🗌	, or Hydrology 🔲 naturally		xplain any answers in Remarks.)
Summary of Findings -	Attach site map showing	sampling point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present			
Hydric Soil Present?	Yes   No	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present?	Yes ● No ○	within a Wetland?	
vegetation growth. Wetland ful through and around wetland=c	lly delineated, located on graded/leve		olematic vegetation due to seasonality in wetland sturbed soils. Several drainage ditches dug
Hydrology			
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ima Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations:	Presence of Redu Recent Iron Redu Thin Muck Surface Other (Explain in	ots (B14) Odor (C1) heres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) e (C7) Remarks)	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
		<u> </u>	
	Depth (inches):		ology Present? Yes   No
(includes capillary fringe) Yes	Depth (inches):		
Describe Recorded Data (stream	n gauge, monitoring well, aerial phot	os, previous inspections), if availa	ıble:
Remarks:			
concentration of precipitation ar	nd surface runoff in geomorphic posi w to a cuvert to flows northeast to ir	tion. Hydrology disturbed by sever	dwater seepage evident throughout wetland and eral drainage ditches dug through and around northeast to perennial Moxahala Creek that flows

			ominant		Sampling Point: <b>w-aeh-20200922-11</b>
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		Species / in our data.
5.			0.0%		Percent of dominant Species
6		$\Box$	0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
		$\Box$	0.0%		Prevalence Index worksheet:
7		$\Box$	0.0%		Total % Cover of: Multiply by:
8	_	Ta	tal Cover		
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )		- 10	ntai covei		
1. Rosa multiflora	-	<b>✓</b>	100.0%	FACU	FACW speci es $75 \times 2 = 150$
2.			0.0%		FAC speci es x 3 =60
3.			0.0%		FACU speci es18 x 4 =72
		$\Box$	0.0%		UPL speci es x 5 =
4			0.0%		Col umn Total s: 113 (A) 282 (B)
5		$\Box$	0.0%		
6					Prevalence Index = B/A = 2.496
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4		$\Box$	0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
6					Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		_	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: <u>5' r</u> )		= Tc	tal Cover		of height.
1. Scirpus cyperinus	50	<b>✓</b>	46.3%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Juncus effusus	15	<b>✓</b>	13.9%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Solidago canadensis	10		9.3%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Solidago rugosa	10		9.3%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Eutrochium maculatum	10		9.3%	FACW	in height.
6. Eupatorium rotundifolium	5		4.6%	FAC	Five Venetation Streets
7. Euthamia graminifolia	5		4.6%	FAC	Five Vegetation Strata:
8. Symphyotrichum ericoides	3		2.8%	FACU	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
	0	$\overline{\Box}$	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
12		Ta	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)		_ 10	ntai covei		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	Ш	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		
6	0	$\bar{\Box}$	0.0%		Hydrophytic Vegetation
·	0		otal Cover		Present? Yes No
		. 17	J.G. GOVE		<u> </u>
Remarks: (Include photo numbers here or on a separate sheet Hydrophytic vegetation indicator present as dominance test > 50%, d		ecies	s are FACW	and FACU	

Soil Wetland 010
Sampling Point: w-aeh-20200922-11

	ription: (D		the depth	needed to				firm the a	bsence of indicator	rs.)	
Depth (inches)	Color	Matrix (moist)		Color	R∈ (moist)	edox Feat	ures1 Tvpe_1	Loc <sup>2</sup>	Texture	Remarks	
0-2	10YR	3/3	100		(11101317		1700		Silt Loam	Komana	
2-9	10YR	3/1	90	10YR	4/4	10	С	PL	Sandy Clay	distinct redox concentrations	
_			_		_	_	_	_			
<u>=</u>								<u>=</u>			
			on. RM=Redi	uced Matrix,	CS=Cover	ed or Coat	ed Sand Grai	ns ²Locat	ion: PL=Pore Lining.	M=Matrix	
Hydric Soil									Indicators for I	Problematic Hydric Soils <sup>3</sup> :	
Histosol ( Histic Epi Black His	pedon (A2)			Poly		w Surface	(S8) (MLRA 1 MLRA 147, 14			(A10) (MLRA 147) e Redox (A16)	
Hydroger	n Sulfide (A4 Layers (A5)			Loar		Matrix (F2		+0)	(MLRA 147, Piedmont F (MLRA 136	loodplain Soils (F19)	
	ck (A10) (LR					urface (F6)				w Dark Surface (TF12)	
☐ Depleted	Below Dark	Surface (A	A11)	Dep	leted Dark	Surface (F	7)			lain in Remarks)	
	rk Surface (A				ox Depress						
MLRA 14	,		N,	MLR	RA 136)		(F12) (LRR N LRA 136, 122				
Sandy Gl	eyed Matrix	(S4)					s (F19) (MLR		<sup>3</sup> Indicators of hydrophytic vegetation and		
	Matrix (S6)						) (MLRA 127		wetla	nd hydrology must be present, less disturbed or problematic.	
Restrictive L	ayer (if ob	served):									
Depth (inc	ches):								Hydric Soil Prese	ent? Yes • No O	
Remarks: Hydric soil in depth due to	dicator pre gravel/fill	esent as l dirt.	ow chroma	/low value	matrix w	ith distind	t redox cor	centratior	ns in pore linings ir	n sandy soils. Shovel refusal at 9"	

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

Project/Site: Crooksville-North Newark 138 kV Transm	nission Line City/County: Perry	Sampling Date: 22-Sep-20
Applicant/Owner: AEP	State:	OH Sampling Point: upl-aeh-20200922-10
Investigator(s): AEH, WRL	Section, Township, Range:	S 20 T 14N R 14W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex	x, none): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.76281 L	ong.: -82.09875 Datum: NAD83
Soil Map Unit Name: GwE - Guernsey-Westmorela	and silt loams, 25 to 40 percent slopes	NWI classification:
Are climatic/hydrologic conditions on the site typic	al for this time of year? Yes $lacktriangle$ No $lacktriangle$ (If r	no, explain in Remarks.)
Are Vegetation 🔲 , Soil 🗹 , or Hydrology		nal Circumstances" present? Yes 🍳 No 🔾
Are Vegetation . , Soil . , or Hydrology	naturally problematic? (If needed	d, explain any answers in Remarks.)
3 0	nap showing sampling point location	ons, transects, important features, etc.
3	0	
	Is the Sampled Area	<sup>a</sup> Yes ○ No •
Wetland Hydrology Present? Yes O N	within a Wetland?	
elevation. Location in fill dirt area=disturbed soils  Hydrology	. Not a wetiana point as no wetiana ontena med	1.
Wetland Hydrology Indicators:	- de all allega annale A	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; che Surface Water (A1)	eck all that apply)  True Aquatic Plants (B14)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3) Algal Mat or Crust (B4)	Thin Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Other (Explain in Remarks)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		✓ FAC-neutral Test (D5)
Field Observations: Surface Water Present?  Yes No  No	Depth (inches):0	
Water Table Present? Yes O No •	Depth (inches):	
Saturation Present?	Depth (inches):  Wetland Hy	ydrology Present? Yes O No 💿
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring)		/ailable:
Remarks:		
No hydrology indicators present.		

		Dominant Species 2	Sampling Point: upl-aeh-20200922-10
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover		dicator Dominance Test worksheet:
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2	0	0.0%	
3.		0.0%	Total Number of Dominant Species Across All Strata: 3 (B)
4.		0.0%	Species Across Air Strata.
5		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
7		0.0%	Prevalence Index worksheet:
8.		0.0%	Total % Cover of: Multiply by:
	0	= Total Cover	0BL speci es
Sapling-Sapling/Shrub Stratum (Plot size: 15' r			FACW species 45 x 2 = 90
1		0.0%	FAC speciles 38 x 3 = 114
2		0.0%	FACU speci es 35 x 4 = 140
3		0.0%	UPL speciles $\frac{5}{}$ x 5 = $\frac{25}{}$
4		0.0%	Col umn Total s: 123 (A) 369 (B)
5		0.0%	001 dillin 10 tal 01
6		0.0%	Prevalence Index = B/A = 3.000
7		0.0%	Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9		0.0%	Dominance Test is > 50%
10		0.0%	Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)		= Total Cover	☐ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1		0.0%	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2		0.0%	
3		0.0%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0.0%	Definition of Vegetation Strata:
5	0	0.0%	Four Vegetation Strata:
6		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in.
7.		= Total Cover	(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: _5' r)			Sapling/shrub stratum – Consists of woody plants, excluding
1. Onoclea sensibilis	30		vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Setaria pumila		=	regardless of size and all other plants less than 2.29 ft tall
3. Panicum dichotomiflorum	15		Woody vines Consists of all woody vines greater than 3.29 ft
4. Andropogon virginicus	10		in height.
Rosa multiflora     Trifolium pratense	10	$\neg$	
7. Rubus occidentalis	5	4.1% UF	Five vegetation Strata:
Rubus occidentalis     Pycnanthemum virginianum	5	4.1% FA	I Tree - Woody plants, excluding woody vines, approximately 20
9. Achillea millefolium	5		diameter at breast height (DBH).
40.00	3	2.4% FA	Sapling stratum – Consists of woody plants, excluding woody
10. Symphyotrichum pilosum 11.	0	0.0%	vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody
	_	= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1		0.0%	species, except woody vines, less than approximately 3 ft (1 m)
2		0.0%	in height.
3	0	0.0%	Woody vines – Consists of all woody vines, regardless of height.
4	0	0.0%	
5	0	0.0%	Hydrophytic
6	0	0.0%	Vegetation Present? Yes No O
	0	= Total Cover	Tresent:

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

Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are FACW and FAC. Vegetation mowed recently resulting in any shrubby/woody species being low-growing, though not likely to significatly alter determination of hydrophytic vegetation indicators

Soil

Sampling Point:

upl-aeh-20200922-10

nches) Cole	Matrix		Redox Features	
	or (moist)		Color (moist) % Type Loc2	Remarks
0-3 10YF	R 4/3	100		Silt Loam
<b>3-7</b> 10YF	R 2/2	100		Silty Clay
	`	-		
e: C=Concentratio	n. D=Depletio	n. RM=Reduc	ced Matrix, CS=Covered or Coated Sand Grains 2Locat	tion: PL=Pore Lining. M=Matrix
Iric Soil Indicato				Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Dark Surface (S7)	
Histic Epipedon (A:	2)		Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)
Black Histic (A3)			Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147,148)
Hydrogen Sulfide (	(A4)		Loamy Gleyed Matrix (F2)	
Stratified Layers (A	<del>1</del> 5)		Depleted Matrix (F3)	☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)
2 cm Muck (A10) (	LRR N)		Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF12)
Depleted Below Da	ark Surface (A	.11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface	•	,	Redox Depressions (F8)	Utilei (Explain in Kemarks)
Sandy Muck Minera MLRA 147, 148)		1,	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matr	ix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)	IX (3 1)		Piedmont Floodplain Soils (F19) (MLRA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and
Stripped Matrix (Se	5)		Red Parent Material (F21) (MLRA 127, 147)	wetland hydrology must be present, unless disturbed or problematic.
				· ·
trictive Layer (if	observed):			
Туре:				Hydria Cail Dragant?
Depth (inches):				Hydric Soil Present? Yes No •
marks:				
ydric soil indicat	ors present.	Shovel refu	sal at 7" due to gravel/fill dirt. Problematic/distu	urbed hydric soil indicator not used as no indicators of
ology are presen			J	

Site: Cro	oksville- Nev	vark Project	Rater(s): Audre	y Hanner	•		Date:	9/22/2020
		•	. , ,	-	Field Id:			
	1 1	Metric 1. Wetl	and Area (size).		w-aeh-20200922-1	0		
max 6 pts	subtotal	Select one size class	and assign score.					
		>50 acres (>20.2ha) ( 25 to <50 acres (10.1 10 to <25 acres (4 to < 3 to <10 acres (1.2 to 0.3 to <3 acres (0.12 t	to <20.2ha) (5 pts) <10.1ha) (4 pts) <4ha) (3 pts)		0.27 acre	es		
		x 0.1 to <0.3 acres (0.04 <0.1 acres (0.04ha) (0	to <0.12ha) (1 pt)					
	8 9		ınd buffers and ຣເ	ırroundi	ng land use.			
max 14 pts.	subtotal	_			gn score. Do not double chec	:k.		
		WIDE. Buffers averag  x MEDIUM. Buffers ave  NARROW. Buffers av  VERY NARROW. Buf	e 50m (164ft) or more aroun rage 25m to <50m (82 to <16 erage 10m to <25m (32ft to s fers average <10m (<32ft) ar	d wetland per 64ft) around v <82ft) around round wetland	meter (7) vetland perimeter (4) wetland perimeter (1) perimeter (0)			
	1		unding land use. Select on th or older forest, prairie, say		-			
			ears), shrubland, young seco					
			. Residential, fenced pasture al, open pasture, row croppin		vation tillage, new fallow field. (	(3)		
	7.0 16.0	Metric 3. Hydi		ig, mining, co	istruction. (1)			
max 30 pts.	subtotal	_	. Score all that apply.		3b. Connectivity. Score all th	nat apply	<i>ı</i> .	
шах оо µs.		High pH groundwater Other groundwater (3)  X Precipitation (1) Seasonal/Intermittent Perennial surface water 3c. Maximum water ( >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27 x <0.4m (<15.7in) (1)	surface water (3) er (lake or stream) (5) lepth. Select one.  7.6in) (2) natural hydrologic regime. it (12)	x	100 year floodplain (1) Between stream/lake and othe Part of wetland/upland (e.g. fo Part of riparian or upland corni 3d. Duration inundation/satu Semi- to permanently inundate Regularly inundated/saturated Seasonally inundated (2) Seasonally inundated in upper double check and average. Check all disturbances obse ditch title dike weir stormwater input	er human rest), cor dor (1) rration. S ed/satura (3)  30cm (1) erved point so filling/g road be	use (1) implex (1)  core one or dbl check. ted (4)  2in) (1)  burce (nonstormwater) rading ed/RR track	
	10 26	Metric 4. Habi	itat Alteration and	Develor	oment.			
max 20 pts.	subtotal	None or none apparer  X Recovered (3) X Recovering (2) Recent or no recovery 4b. Habitat developm Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)	ent. Select only one and a ent. Select only one and a . Score one or double chec it (9)	ssign score.		shrub/s herbac sedime dredgir farming	ıg	al
	26	age ORAM v. 5.0 Field Fo	rm Quantitative Rating					

w-aeh-20200922-10 oram.xlsm | test\_Field

Site: Crooksville- Newark Project Rater(s): Audrey	Hanner	Date:	9/22/2020
	Field Id:	-	
26	w-aeh-20200922-10		
subtotal this page			
0 26 Metric 5. Special Wetlands.			
max 10 pts. subtotal Check all that apply and score as indi-	cated.		
Bog (10)			
Fen (10)			
Old growth forest (10)  Mature forested wetland (5)			
Lake Erie coastal/tributary wetland-unrestricted hydi	rology (10)		
Lake Erie coastal/tributary wetland-restricted hydrol			
Lake Plain Sand Prairies (Oak Openings) (10)			
Relict Wet Praires (10)	aggred anasias (10)		
Known occurrence state/federal threatened or enda Significant migratory songbird/water fowl habitat or u			
Category 1 Wetland. See Question 5 Qualitative Ra			
2 28 Metric 6. Plant communities, int	erspersion, microtopography	•	
max 20pts. subtotal 6a. Wetland Vegetation Communities.	Vegetation Community (	over Scale	
Score all present using 0 to 3 scale.	0 Absent or comprises <0.1ha (0.24)		
Aquatic bed	1 Present and either comprises sma		
1 Emergent Shrub	vegetation and is of moderate qual significant part but is of low quality	ity, or comprises a	
Forest	Present and either comprises significant part but is on low quality	ficant part of wetland's 2	
Mudflats	vegetation and is of moderate qual		
Open water	part and is of high quality		
Other	3 Present and comprises significant	part, or more, of wetland's	3
<b>6b. horizontal (plan view) Interspersion.</b> Select only one.	vegetation and is of high quality		
High (5)	Narrative Description of Vegetat	on Quality	
Moderately high(4)	Low spp diversity and/or predomin	ance of nonnative or low	
Moderate (3)	disturbance tolerant native species	-4 -4 4b	
Moderately low (2) Low (1)	Native spp are dominant compone although nonnative and/or disturba	•	
x None (0)	can also be present, and species of		
6c. Coverage of invasive plants. Refer	moderately high, but generallyw/o		
Table 1 ORAM long form for list. Add	threatened or endangered spp to		
or deduct points for coverage  Extensive >75% cover (-5)	A predominance of native species, and/or disturbance tolerant native s		
Moderate 25-75% cover (-3)	absent, and high spp diversity and		
Sparse 5-25% cover (-1)	the presence of rare, threatened, o		
Nearly absent <5% cover (0)	<u> </u>		
x Absent (1)	Mudflat and Open Water Class C	uality	
<b>6d. Microtopography.</b> Score all present using 0 to 3 scale.	0 Absent <0.1ha (0.247 acres) 1 Low 0.1 to <1ha (0.247 to 2.47 acr	26)	
0 Vegetated hummucks/tussucks	2 Moderate 1 to <4ha (2.47 to 9.88 a		
0 Coarse woody debris >15cm (6in)	3 High 4ha (9.88 acres) or more	,	
0 Standing dead >25cm (10in) dbh			
0 Amphibian breeding pools	Microtopography Cover Scale  0 Absent		
	Present very small amounts or if m	ore common	
	of marginal quality		
	2 Present in moderate amounts, but		
Category 1	quality or in small amounts of high		
28 GRAND TOTAL(max 100 pts)	3 Present in moderate or greater am	ounts	
	and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 010

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing North



#### Wetland 010

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 010

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing South



### Wetland 010

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing West





Site Location:

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

**Project No.** 60616110

### Wetland 010

**Client Name:** 

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



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

Project/Site: Crooksville-Nort	n Newark 138 kV Transmission Lin	e City/County:	Perry	Sampling Date: 22-Sep-20
Applicant/Owner: AEP			State: OH	Sampling Point: w-aeh-20200922-10
nvestigator(s): AEH, WRL		Section, Town	ship, Range: S 20	T 14N R 14W
andform (hillslope, terrace, e	etc.): Hillside	Local relief (cor	icave, convex, none):	concave Slope: <u>5.0</u> % / 78.7 °
	I RR N	Lat: 20.744E4	long: 00	NAPOO
		Lat.: 39.76454	Long.: -82	
	Guernsey-Westmoreland silt lo		_	WI classification: N/A
	tions on the site typical for thi	s time of year? Yes 🕙	No (If no, explain	•
re Vegetation , Soil	, or Hydrology	significantly disturbed?	Are "Normal Circums	stances" present? Yes   No
Are Vegetation, Soil	, or Hydrology	naturally problematic?	(If needed, explain a	any answers in Remarks.)
Summary of Findings	Attach cita man ch	owing compling no	int locations tro	neaste important factures ata
			int locations, tra	nsects, important features, etc.
Hydrophytic Vegetation Pres				
Hydric Soil Present?	Yes ● No ○		Sampled Area Yes	No O
Wetland Hydrology Present?	yes ● No ○	Within	a Wetland?	
Remarks:				
Sample point w-aeh-20200	921-10 point in to PEM wetlar	d 011, in seepage area of	excavated hillside = dis	turbed soils, at base of new structure.
	intermittent Stream 004 outsi			
		,		
Lludrologu				
Hydrology				
Wetland Hydrology Indicato				ary Indicators (minimum of two required)
_	m of one required; check all th			face Soil Cracks (B6)
Surface Water (A1)		Aquatic Plants (B14)		rsely Vegetated Concave Surface (B8)
☐ High Water Table (A2)  ✓ Saturation (A3)		gen Sulfide Odor (C1)		inage Patterns (B10)
Water Marks (B1)		ed Rhizospheres along Living R nce of Reduced Iron (C4)		ss Trim Lines (B16)
Sediment Deposits (B2)		t Iron Reduction in Tilled Soils		Season Water Table (C2) yfish Burrows (C8)
Drift deposits (B3)		Muck Surface (C7)		uration Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		(Explain in Remarks)		nted or Stressed Plants (D1)
☐ Iron Deposits (B5)	Other	(Explain in Remarks)		omorphic Position (D2)
☐ Inundation Visible on Aerial	Imagery (B7)			llow Aquitard (D3)
☐ Water-Stained Leaves (B9)			Micr	rotopographic Relief (D4)
Aquatic Fauna (B13)			<b>✓</b> FAC	-neutral Test (D5)
Field Observations:				
		th (inches): 1		
Water Table Present?	Yes O No O Dep	th (inches): 14		resent? Yes  No
Saturation Present? (includes capillary fringe)	Yes No Dep	th (inches):0	Wetland Hydrology Pr	resent? Yes S INO C
	eam gauge, monitoring well, a	aerial photos, previous insp	ections), if available:	
	gg-,		,,	
Remarks:				
	ary hydrology indicators prese	ent Primary sources of hyd	ology are precipitation.	and concentration of surface runoff in
				ermittent Stream 004 that flows northeast
to Moxahala Creek that flow	s north to Muskingum River, a	TNW.	, and the second se	

		Dominant —Species? ————	Sampling Point: w-aeh-20200922-10
771	Absolute	Rel.Strat. Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' r )	% Cover		Number of Dominant Species
1		0.0%	That are OBL, FACW, or FAC: (A)
2		0.0%	Total Number of Dominant
3		0.0%	Species Across All Strata: 2 (B)
4		0.0%	Percent of dominant Species
5		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
6		0.0%	Dravalance Index warksheet.
7	0	0.0%	Prevalence Index worksheet:  Total % Cover of: Multiply by:
8		= Total Cover	0BL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15' r		_	FACW speciles 90 x 2 = 180
1	0	0.0%	FAC species 10 x 3 = 30
2	0	0.0%	FACU species
3		0.0%	
4		0.0%	(5)
5		0.0%	Column Totals: 100 (A) 210 (B)
6		0.0%	Prevalence Index = B/A = 2.100
7		0.0%	Hydrophytic Vegetation Indicators:
8	0	0.0%	✓ Rapid Test for Hydrophytic Vegetation
9.		0.0%	✓ Dominance Test is > 50%
10	0	0.0%	✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Total Cover	☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1.	0	0.0%	data in Remarks or on a separate sheet)
2	0	0.0%	☐ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3		0.0%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0.0%	
5		0.0%	Definition of Vegetation Strata:
6		0.0%	Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		0.0%	(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= Total Cover	of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Scirpus cyperinus	60	<b>✓</b> 60.0% FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Panicum dichotomiflorum	20	<b>✓</b> 20.0% FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Microstegium vimineum	10	10.0% FAC	regardless of size, and all other plants less than 3.28 ft tall.
4. Solidago gigantea	5	5.0% FACW	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Symphyotrichum lateriflorum		5.0% FACW	
6		0.0%	Five Vegetation Strata:
7		0.0%	Tree - Woody plants, excluding woody vines, approximately 20
8		0.0%	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0	0.0%	Sapling stratum – Consists of woody plants, excluding woody
10	0	0.0%	vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11 12	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody
	_	= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15'r )			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	0	0.0%	species, except woody vines, less than approximately 3 ft (1 m)
2	0	0.0%	in height.
3	0	0.0%	Woody vines – Consists of all woody vines, regardless of height.
4		0.0%	
5		0.0%	Hydrophytic
6	0	0.0%	Vegetation Present?  Yes  No  No
	0	= Total Cover	Trosont:

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

Hydrophytic vegetation indicator present as rapid test, dominant species are FACW. Sphagnum sp. present but not included in dominance calculations as not a vascular plant.

Soil

Sampling Point:

w-aeh-20200922-10

	0-1-	Matrix (maist)	0/	0-1-		edox Featu		1 2	T=+	_	) am arks
inches) 0-1	Color_ 2.5Y	(moist) 4/3	100	Color	(moist)	%	Type	Loc <sup>2</sup>	Texture Silt Loam		Remarks
		2.5/1	90		4/6	10				promi nei	nt redox rations
1-10	N	`			-			PL PL	Clay Loam		rations nt redox
10-15	10Y	3/1	80	10YR	4/3	20		PL	Clay	concenti	
										<u>,                                      </u>	
					_		_			,	
		,									
										· · · · · · · · · · · · · · · · · · ·	
			n. RM=Redu	uced Matrix,	CS=Cover	ed or Coate	ed Sand Grain	ns <sup>2</sup> Locat	ion: PL=Pore Lining	g. M=Matrix	
dric Soil I Histosol ( <i>F</i>	ndicators: A1)			☐ Dar	k Surface	(S7)				r Problematic Hy	
Histic Epip	pedon (A2)			Poly	value Belo	ow Surface (	(S8) (MLRA 1			ck (A10) (MLRA 147 irie Redox (A16)	7)
	Sulfide (A4					face (S9) (N I Matrix (F2)	/ILRA 147, 14	ŧၓ)	(MLRA 14		19)
	Layers (A5) k (A10) (LR				leted Matr	rix (F3) urface (F6)			(MLRA 13	86, 147)	
	Below Dark		.11)	<b>✓</b> Dep	leted Dark	Surface (F	7)		-	low Dark Surface (* plain in Remarks)	IF 12)
	k Surface (A					sions (F8)	(F12) (LRR N		`		
MLRA 147	,		J,	MLF	RA 136)						
Sandy Gleg Sandy Red	eyed Matrix	(S4)					.RA 136, 122 (F19) (MLR		<sup>3</sup> Indica	ators of hydrophyti	c vegetation and
	Matrix (S6)						) (MLRA 127		wet u	land hydrology mus inless disturbed or	st be present, problematic.
Suibbea V											
trictive La	ayer (if ob	served):									
		served):							Hydric Soil Pres	sent? Yes	No O
trictive La Type: Depth (inch		served):						_	Hydric Soil Pres	sent? Yes	No O
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr	Hydric Soil Pres		
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
rictive La ype: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			
trictive La Type: Depth (inch	hes):		low chroma	a/low value	e matrix v	with promi	nent redox	concentr			

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

Project/Site: Crooksville-North Newark	138 kV Transmission Line	City/County: Perry	Sampling Date: 22-Se	ep-20
Applicant/Owner: AEP		State: 0	H Sampling Point: upl-aeh-2	:0200922-09
Investigator(s): AEH, WRL		Section, Township, Range: S	S 20 T 14N R 14W	
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex,	none): convex Slope: 10.0	% / <u>84.3</u> °
Subregion (LRR or MLRA): LRR N	Lat.:	39.76451 Lo	ng.:82.10093 Datum:	NAD83
Soil Map Unit Name: GwE - Guernse	y-Westmoreland silt loams, 25 to	40 percent slopes	NWI classification: N/A	
Are climatic/hydrologic conditions on	the site typical for this time of ye	ar? Yes • No O (If no	o, explain in Remarks.)	_
Are Vegetation . , Soil 🗹 ,	or Hydrology    significantl	y disturbed? Are "Norma	l Circumstances" present? Yes •	No O
Are Vegetation . , Soil . ,	or Hydrology 🔲 naturally pi	roblematic? (If needed,	explain any answers in Remarks.)	
Summary of Findings - Atta		ampling point location	ns, transects, important featu	ures, etc.
Hydrophytic Vegetation Present?	Yes O No O	_		
Hydric Soil Present?	Yes No O	Is the Sampled Area within a Wetland?	Yes O No •	
Wetland Hydrology Present?	Yes ○ No ●	WILIIII a Welland:		
potential spoils pile, coal fines prese	nt in surrounding area. Not a we	tland point as hydrophytic veg	petation and hydrolgoy criteria not met.	
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two requi	ired)
Primary Indicators (minimum of one			Surface Soil Cracks (B6)	
Surface Water (A1)	☐ True Aquatic Plants		Sparsely Vegetated Concave Surface (B8	3)
☐ High Water Table (A2)☐ Saturation (A3)	☐ Hydrogen Sulfide O	odor (C1) eres along Living Roots (C3)	Drainage Patterns (B10)  Moss Trim Lines (B16)	
Water Marks (B1)	Presence of Reduce		Dry Season Water Table (C2)	
Sediment Deposits (B2)		tion in Tilled Soils (C6)	Crayfish Burrows (C8)	
Drift deposits (B3)	Thin Muck Surface	(C7)	Saturation Visible on Aerial Imagery (C9)	)
Algal Mat or Crust (B4)	Other (Explain in Re	emarks)	Stunted or Stressed Plants (D1)	
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery	(R7)		Geomorphic Position (D2) Shallow Aquitard (D3)	
Water-Stained Leaves (B9)	(57)		Microtopographic Relief (D4)	
Aquatic Fauna (B13)			FAC-neutral Test (D5)	
Field Observations: Surface Water Present?  Yes	No Depth (inches):	0		
Water Table Present? Yes		<u> </u>		
	= = = (	Wetland Hyc	rology Present? Yes O No 💿	
(includes capillary fringe) Yes	No Depth (inches):	in	1-1-1-	
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos	s, previous inspections), ii ava	lable:	
Remarks:				
No hydrology indicators present.				

			ominant oecies?		Sampling Point: upl-aeh-20200922-09
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Acer rubrum	40	<b>✓</b>	80.0%	FAC	That are OBL, FACW, or FAC: 3 (A)
2. Acer saccharum	10	✓	20.0%	FACU	Total Muselson of Department
3			0.0%		Total Number of Dominant Species Across All Strata: 7 (B)
1			0.0%		
5			0.0%		Percent of dominant Species That Are OBL FACW or FAC: 42.9% (A/B)
3			0.0%		That Are OBL, FACW, or FAC: 42.9% (A/B)
7	0		0.0%		Prevalence Index worksheet:
3			0.0%		Total % Cover of: Multiply by:
		= To	otal Cove	г	0BL speci es x 1 =
apling-Sapling/Shrub Stratum (Plot size: 15' r	/		E0 00/	54011	FACW species x 2 =
. Fraxinus americana		<b>✓</b>	50.0%	FACU	FAC speciles 113 x 3 = 339
Corylus americana			33.3%	FACU	FACU speci es 75 x 4 = 300
Acer saccharum			16.7%	FACU	UPL species
·			0.0%		
5.			0.0%		Col umn Total s: <u>188</u> (A) <u>639</u> (B)
). <sub></sub>			0.0%		Prevalence Index = B/A = 3.399
7			0.0%		Hydrophytic Vegetation Indicators:
3	0		0.0%		Rapid Test for Hydrophytic Vegetation
)	0	Ш	0.0%		Dominance Test is > 50%
)	0		0.0%		Prevalence Index is ≤3.0 ¹
hrub Stratum (Plot size:)		= To	otal Cove	г	Morphological Adaptations <sup>1</sup> (Provide supporting
	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%	•	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.		$\Box$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1.		$\Box$	0.0%	•	be present, unless disturbed or problematic.
		$\Box$	0.0%	•	Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
5			0.0%	•	Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		Ш _ т	otal Cove		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
lerb Stratum (Plot size: <u>5' r</u> )		_			Sapling/shrub stratum – Consists of woody plants, excluding
. Microstegium vimineum		<b>✓</b>	56.8%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
. Lactuca biennis		<b>✓</b>	34.1%	FACU	Herb stratum - Consists of all herbaceous (non-woody) plants,
Phytolacca americana	5		5.7%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
Symphyotrichum pilosum	3		3.4%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
j.,			0.0%		
)	0		0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
3	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
)	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
)	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
l	0		0.0%		3 in. (7.6 cm) DBH.
2.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Voody Vine Stratum (Plot size: 15' r )	88	= To	otal Cove	г	Herb stratum – Consists of all herbaceous (non-woody) plants,
Toxicodendron radicans	20	<b>✓</b>	100.0%	FAC	including herbaceous vines, regardless of size, and woody
2.	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
			0.0%		Woody vines – Consists of all woody vines, regardless of
3	0		0.0%		height.
5			0.0%		Hydrophytic
S	0	Ш	0.0%		Vegetation Present? Yes No •
	20		otal Cove	\F	

Soil

Sampling Point:

upl-aeh-20200922-09

Depth	Matrix		needed to docum	Redox Featu					
(inches)	Color (moist)	%	Color (moist		Tvpe 1	Loc²	Texture	Remarks	
0-2	10YR 3/3	100					Silt Loam		
2-10	10YR 2.5/1	50	10YR 4/1	45	D	М	Clay	dual matrix	
			10YR 4/6	5	С	PL		distinct redox concentrations	
								, concern at rons	
	$\overline{}$		$\overline{}$		•			4	
	$\overline{}$		$\overline{}$					4	
								·	
								·	
	centration. D=Depletic	on. RM=Redu	uced Matrix, CS=Co	vered or Coate	d Sand Grai	ns <sup>2</sup> Loca	tion: PL=Pore Lining	. M=Matrix	
Hydric Soil Ir							Indicators for	Problematic Hydric Soils <sup>3</sup> :	
Histosol (A			☐ Dark Surfa	. ,	200 4 = :		2 cm Muc	k (A10) (MLRA 147)	
Histic Epip				Selow Surface (				rie Redox (A16)	
Black Histi	ic (A3) Sulfide (A4)			Surface (S9) (N		+ď)	(MLRA 147	7,148)	
	Layers (A5)		Depleted M	ed Matrix (F2)			Piedmont	Floodplain Soils (F19)	
	k (A10) (LRR N)						(MLRA 13	,	
2 cm Muck (A10) (LRR N)				7)		_	ow Dark Surface (TF12)		
	Thick Dark Surface (A12)  Redox Depressions (F8)					☐ Other (Exp	plain in Remarks)		
Sandy Muck Mineral (S1) (LRR N, Iron-Manganese Masses					F12) (LRR N	Ι,			
MLRA 147	MLRA 147, 148) MLRA 136)								
Sandy Gleyed Matrix (S4)			Umbric Sur	face (F13) (ML	.RA 136, 12	2)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Sandy Redox (S5)			Piedmont F	loodplain Soils	(F19) (MLR	A 148)			
☐ Stripped M	Matrix (S6)		Red Parent	Material (F21)	(MLRA 127	, 147)	u	nless disturbed or problematic.	
Restrictive La	ayer (if observed):								
	ayor ( obsol. rod).								
							Hydric Soil Pres	sent? Yes • No O	
Туре:	hes):								
Type: Depth (inch	nes):								
Type: Depth (inch Remarks:		ow chroma	/low value matrix	with distinct	redov cor	centratio	ne in nore lininge	Shovel refusal at 10" denth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentratio	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind			/low value matrix	with distinct	redox cor	ncentratio	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentratio	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentratio	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentratio	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentratio	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: lydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	
Type: Depth (inch Remarks: Hydric soil ind	dicator present as lo		/low value matrix	with distinct	redox cor	ncentration	ns in pore linings.	Shovel refusal at 10" depth due to	

Site: Cro	oksville- Ne	wark Project	Rater(s): Audrey	/ Hanner	Date:	9/22/2020
		-	` ` ` `	Field Id:	•	
	0 0	Metric 1. Wet	land Area (size).	w-aeh-20200922-1	<b>I1</b>	
max 6 pts	subtotal	Select one size clas	s and assign score.			
		>50 acres (>20.2ha)	' '	0.01 ac	res	
		25 to <50 acres (10.1 10 to <25 acres (4 to	, , , ,	1		
		3 to <10 acres (1.2 to	<4ha) (3 pts)			
		0.3 to <3 acres (0.12 0.1 to <0.3 acres (0.0				
		x <0.1 acres (0.04ha) (				
	5 5	Metric 2. Upla	and buffers and su	rrounding land use.		
max 14 pts.	subtotal	2a. Calculate averag	e buffer width. Select only o	one and assign score. Do not double che	eck.	
			ge 50m (164ft) or more around	_		
				4ft) around wetland perimeter (4)		
			rerage 10m to <25m (32ft to < ffers average <10m (<32ft) are	82ft) around wetland perimeter (1) bund wetland perimeter (0)		
			, ,	e or double check and average.		
			vth or older forest, prairie, sav	_		
			ears), shrubland, young seco			
				park, conservation tillage, new fallow field.	. (3)	
			al, open pasture, row croppino	g, mining, construction. (1)		
	9.0 14.0	Metric 3. Hyd	rology.			
max 30 pts.	subtotal		r. Score all that apply.	3b. Connectivity. Score all	that apply.	
		High pH groundwater  x Other groundwater (3		100 year floodplain (1)  x Between stream/lake and oth	ner human use (1)	
		x Precipitation (1)	)	Part of wetland/upland (e.g. f	, ,	
		Seasonal/Intermittent	` '	Part of riparian or upland cor	ridor (1)	
		Perennial surface wa 3c. Maximum water	er (lake or stream) (5)	3d. Duration inundation/sat Semi- to permanently inunda		neck.
		>0.7 (27.6in) (3)	deptili. Gelect olie.	Regularly inundated/saturate		
		0.4 to 0.7m (15.7 to 2	7.6in) (2)	Seasonally inundated (2)		
		x <0.4m (<15.7in) (1)	natural hydrologic regime	x Seasonally saturated in uppe Score one or double check and average.	, , , ,	
		None or none appare		Check all disturbances obs		
		Recovered (7)		x ditch	' '	ter)
		x Recovering (3) x Recent or no recover	u (1)	tile dike	filling/grading road bed/RR track	
		X TROCCITE OF THE TOCOVER	(1)	weir		
				stormwater input	Other:	
	7 21	Metric 4. Hab	itat Alteration and	Development.		
max 20 pts.	subtotal		pance. Score one or double	check and average.		
		None or none appare Recovered (3)	nt (4)			
		x Recovering (2)				
		Recent or no recover				
		4b. Habitat developi Excellent (7)	nent. Select only one and as	sign score.		
		Very good (6)				
		Good (5)				
		Moderately good (4) Fair (3)				
		x Poor to fair (2)				
		Poor (1)				
		4c. Habitat alteration None or none appare	n. Score one or double check nt (9)	k and average. Check all disturbances obser	rved	
		Recovered (6)	(0)		shrub/sapling removal	
		x Recovering (3)	. (4)	grazing	herbaceous/aquatic bed re	emoval
		Recent or no recover	y (1)	x clearcutting x selective cutting	sedimentation dredging	
				x woody debris removal	farming	
		=		toxic pollutants	nutrient enrichment	
	21					
	subtotal this	spage ORAM v. 5.0 Field Fo	rm Quantitative Rating			

w-aeh-20200922-11 oram.xlsm | test\_Field

Site: Croc	ksville- Ne	wark Project	Rater(s): Audrey H	lanner		Date:	9/22/2020
		<u> </u>			Field Id:		
	21	]			w-aeh-20200922-11		
	subtotal this	<u> </u>					
	0 21	Metric 5. Spec	cial Wetlands.				
max 10 pts.	subtotal	Bog (10) Fen (10) Old growth forest (10) Mature forested wetlar Lake Erie coastal/tribu Lake Plain Sand Prairi Relict Wet Praires (10)	ary wetland-unrestricted hydrology ary wetland-restricted hydrology es (Oak Openings) (10)	gy (10) (5)	on (40)		
			ongbird/water fowl habitat or usag		C3 (10)		
			ee Question 5 Qualitative Rating				
	2 23	Metric 6. Plan	t communities, inter	spers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland Veg	etation Communities.		Vegetation Community Cov	er Scale	
-,		Score all present using		0	Absent or comprises <0.1ha (0.2471 ac		
		Aquatic bed		1	Present and either comprises small par		
		1 Emergent			vegetation and is of moderate quality, o	or comprises a	
		Shrub Forest		2	significant part but is of low quality  Present and either comprises significar	nt nart of wetland's 2	
		Mudflats		2	vegetation and is of moderate quality o		
		Open water			part and is of high quality		
		Other		3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan v Select only one.	iew) Interspersion.		vegetation and is of high quality		
		High (5)			Narrative Description of Vegetation	Quality	
		Moderately high(4)			Low spp diversity and/or predominance		
		Moderate (3)			disturbance tolerant native species		
		Moderately low (2)			Native spp are dominant component of		
		Low (1) x None (0)			although nonnative and/or disturbance can also be present, and species diver-		
		6c. Coverage of invas	ive plants. Refer		moderately high, but generallyw/o pres		
		Table 1 ORAM long fo			threatened or endangered spp to		
		or deduct points for co	•		A predominance of native species, with		
		Extensive >75% cover			and/or disturbance tolerant native spp		
		Moderate 25-75% cover (-			absent, and high spp diversity and ofte the presence of rare, threatened, or en-		
		Nearly absent <5% co			the presence of fare, threatened, or en	uangered spp	
		x Absent (1)	(-)		Mudflat and Open Water Class Quali	ty	
		6d. Microtopography			Absent <0.1ha (0.247 acres)		
		Score all present using			Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/     Coarse woody debris >			Moderate 1 to <4ha (2.47 to 9.88 acres High 4ha (9.88 acres) or more	·)	
		0 Standing dead >25cm		3	Inight 4ha (9.00 acres) of more		
		Amphibian breeding po			Microtopography Cover Scale		
					Absent		
					Present very small amounts or if more of marginal quality		
Catagam: 4				2	Present in moderate amounts, but not o	· ·	
Category 1	23 GRANI	D TOTAL(max 100 pts	)	3	quality or in small amounts of highest q Present in moderate or greater amount	· · · · · · · · · · · · · · · · · · ·	
	20 SIVANI	D TOTAL (IIIAX 100 PIS	1	3	•	.o	
					and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 011

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing North



### Wetland 011

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 011

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing South



### Wetland 011

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 011

Date:

September 22, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



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

Project/Site: AEP Crooksville-Newark	City/County: Perry County Sampling Date: 08-Oct-20
Applicant/Owner: AEP	State: OH Sampling Point: w-jbl-20201008-01
Investigator(s): jbl, rcm	Section, Township, Range: S 18 T 14N R 14W
Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, convex, none): concave Slope: 1.0% / 0.6 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.78591 Long.: -82.11766 Datum: NAD 83
Soil Map Unit Name: WsF - Westmoreland-Guernsey silt loan	
Are climatic/hydrologic conditions on the site typical for this t	
	V
	The Normal Greathstatices present:
Are Vegetation ✓ , Soil ☐ , or Hydrology ☐ na	iturally problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map show	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area
V • N- O	Is the Sampled Area Yes No No
vvettaria riyarology riesent.	
Remarks: Sample point (w.ibl. 20201008, 01) in to PSS Wetland 012 in	n 2 drainage swales of valley botom. Old mining area (disturbed soils) now cow pasture
(potentially problematic vegetation). Wetland extends to ea	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that	
	iatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
☐ High Water Table (A2) ☐ Hydroger	n Sulfide Odor (C1)
Saturation (A3)	Rhizospheres along Living Roots (C3) Moss Trim Lines (B16)
	of Reduced Iron (C4) Dry Season Water Table (C2)
	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
	Sk Surface (C7)  Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Other (E) ☐ Iron Deposits (B5)	xplain in Remarks)
☐ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
·	(inches):
Water Table Present? Yes O No O Depth (	(inches): Wetland Hydrology Present? Yes ● No ○
Saturation Present? (includes capillary fringe) Yes No • Depth (	(inches):15 Wetland Hydrology Present? Yes ● No ○
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspections), if available:
Remarks:	
	e of hydrology is concentration of precipitation and surface runoff in geomorphic position.
Wetland extends to east to old pond that drains northeast to River, a TNW.	NHD-mapped stream that flows east to Moxahala Creek that flows north to Muskingum
Niver, a riviv.	

			ominant		Sampling Point: w-ibl-20201008-01
Tree Stratum (Plot size: 30' )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  4 (A)
2	0		0.0%		Total Number of Dominant
3	0		0.0%		Species Across All Strata: 4 (B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		That Are obe, FAOW, of FAO.
7			0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15'	0	= Tc	otal Cover		0BL speci es x 1 =
1. Lindera benzoin	40	<b>✓</b>	100.0%	FAC	FACW speci es x 2 =140
2.			0.0%		FAC speci es <u>85</u> x 3 = <u>255</u>
3			0.0%		FACU speci es x 4 =
4			0.0%		UPL speci es x 5 =
5.			0.0%		Column Totals: <u>155</u> (A) <u>395</u> (B)
6.			0.0%		Prevalence Index = B/A =2.548_
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1			0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' )	0	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	40	<b>✓</b>	36.4%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding
0 81	30	<ul><li>✓</li></ul>	27.3%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Pilea pumila     Cyperus esculentus	15		13.6%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
Impatiens capensis	15	$\overline{\Box}$	13.6%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Leersia virginica	10		9.1%	FACW	in height.
6.	0		0.0%		Five Veretation Streets
7.	0		0.0%		Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 30' )	110	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
1. Toxicodendron radicans	5	<b>✓</b>	100.0%	FAC	including herbaceous vines, regardless of size, and woody
2.	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0		0.0%		Woody vines - Consists of all woody vines, regardless of
3	0		0.0%		height.
4	0		0.0%		
5 6	0		0.0%		Hydrophytic Vegetation
U		 	otal Cove		Present? Yes No
Describe (Include what		1 1	- C.G. 50VE		L
Remarks: (Include photo numbers here or on a separate sheethydrophytic vegetation indicator present as dominance test > 50%. I		ecie:	s are FACW	/ and FAC.	

Sampling Point:

w-jbl-20201008-01

Color   Footback   Section   Color   Footback   Section   Section   Color   Footback	10YR   4/2   95   10YR   4/6   5   C   PL   Clay Loam   Clay Lo	Depth =	Matrix			dox Featu							
Signature   Special Concentration   D=Depletion   RM=Reduced Matrix, CS=Covered or Coated Sand Grains   2Location: PL=Pore Lining   M=Matrix   Indicators:   Indicators   In	pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains												
pe: C-Concentration. D-Depletion. RM-Reduced Matrix, CS-Covered or Coated Sand Grains 2Location: PL-Pore Lining. M-Matrix.  dric Soil Indicators: Histosol (A1) Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Hydrogen Sulfide (A4) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Depleted Below Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N. MLRA 147, 148) MLRA 136, 122) MLRA 137, 148) MLRA 137, 148) MLRA 137, 148) MLRA 137, 149 MLRA 137, 149 MLRA 136, 122) MLRA 137, 148) MLRA 137, 149 MLRA 136, 122) MLRA 137, 148) MLRA 137, 148) MLRA 138, MLRA 136, 122) MLRA 136, 122) MLRA 136, 122) MLRA 137, 148) MLRA 137, 148) MLRA 138, MLRA 136, 122) MLRA 137, 148) MLRA 137, 148) MLRA 138, MLRA 136, 122) MLRA 136, 122) MLRA 137, 149) MLRA 137, 149 MLRA 136, 122) MLRA 137, 149 MLRA 147, 149 MLRA 147, 148	pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=Matrix drice Soil Indicators:  Histosoi (A1)		· · · · · · · · · · · · · · · · · · ·					PL		<u>concentrations</u>			
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)	5-17	10YR 4/1	80	10YR 4/6				Clay Loam				
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)									· · · · · · · · · · · · · · · · · · ·			
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)												
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)	;											
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)		<del></del>							· · · · · · · · · · · · · · · · · · ·			
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)					-				<u>.</u>			
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)		<del></del>		<del></del>					:			
Indicators:  Histosol (A1)	Indicators:  Histosol (A1)	e: C=Conce	entration. D=Depleti	on, RM=Reduc	ed Matrix, CS=Covere	ed or Coate	d Sand Grair	ns <sup>2</sup> Locat	ion: PL=Pore Linina.	M=Matrix			
Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F2)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Simpled Matrix (S6)  Depleted Matrix (S6)  Depleted Parent Material (F21) (MLRA 136, 122)  Stratified Layer (if observed):  Simple Matrix (S6)  Dark Surface (S8) (MLRA 147, 148)  Depleted Surface (S9) (MLRA 147, 148)  Depleted Matrix (S6)  Depleted Matrix (S6)  Depleted Dark Surface (F6)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  Uvery Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Prictive Layer (if observed):  Special Surface (F7)  Hydric Soil Present? Yes No O	Histosol (A1)  Histic Epipedon (A2)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Hydrogen Sulfide (A4)  Coast Prairie Redox (A16) (MLRA 147,148)  Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Peledmont Floodplain Soils (F19) (MLRA 136, 147)  Peledmont Floodplain Soils (F19) (MLRA 136, 147)  Depleted Below Dark Surface (A11)  Peledto Dark Surface (F6)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Other (Explain in Remarks)  Ton-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148)  Sandy Ruck Mineral (S1) (LRR N, MLRA 136)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 147, 148)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Pictive Layer (if observed):  Pipe:  Pipeth (inches):  Darks:  Ic soil Indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to	Iric Soil In	idicators:										
Black Histic (A3)	Black Histic (A3)												
Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F2)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Poepleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  MLRA 136,  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Other (Explain in Remarks)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Trictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes  No O	Hydrogen Sulfide (A4)												
Stratified Layers (A5)  2 cm Muck (A10) (LRR N)  Redox Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 142)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Trictive Layer (if observed):  Type:  Depth (inches):  MIRA 136, 147)  Depleted Matrix (F3)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  All Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  January Redox (S5)  Red Parent Material (F21) (MLRA 148)  Type:  Depth (inches):  Hydric Soil Present?  Yes No Other (Explain in Remarks)  Hydric Soil Present?  Hydric Soil Present?	Stratified Layers (A5)  2 cm Muck (A10) (LRR N)  Redox Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Depleted Dark Surface (F12) (LRR N, MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Depth (inches):  Type:  Depth (inches):  Tric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to	Hydrogen S	Sulfide (A4)		Loamy Gleyed	Matrix (F2)		-,	`	,			
Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Troi-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Red Parent Material (F21) (MLRA 127, 147)  Depth (inches):  Type:  Depth (inches):  Type:  Depth (inches):	Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Trictive Layer (if observed):  Type:  Depth (inches):  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present?  Yes No  No  Marks:  ric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to												
Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 127, 147)  Stripped Matrix (S6)  Type:  Depth (inches):  Hydric Soil Present?  Yes  No  Other (Explain in Rehalaks)  Other (Explain in Rehalaks)  Other (Explain in Rehalaks)  Other (Explain in Rehalaks)  I other (Explain in Rehalaks)  Other (Explain in Rehalaks)  I	Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Stripped Matrix (S6)  Type:  Depth (inches):  Type:  Depth (inches):  Tric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to					, ,			Very Shallo	w Dark Surface (TF12)			
Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Depth (inches):  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  Piedmont Floodplain Soils (F19) (MLRA 148)  Red Parent Material (F21) (MLRA 127, 147)  Hydric Soil Present?  Yes  No  No  No  No  No  No  No  No  No  N	Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Depth (inches):  Depth (inches):  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  Jeff Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)  Jeff Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)  Jeff Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)  Jeff Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 148)  Jeff Muck Mineral (S1) (LRR N, MLRA 136)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Type:  Depth (inches):  Hydric Soil Present? Yes No Omarks:		,	A11)			)		Other (Explain in Remarks)				
MLRA 147, 148)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Diedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Trictive Layer (if observed):  Type:  Depth (inches):  The product of the pro	MLRA 147, 148)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Sandy Redox (S5)  Stripped Matrix (S6)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Trictive Layer (if observed):  Type:  Depth (inches):  The soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to			N,	☐ Iron-Manganes		-12) (LRR N	ı					
Sandy Redox (S5)	Sandy Redox (S5)	MLRA 147,	148)			(E13) (MI	RΔ 136 123	)					
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.  Strictive Layer (if observed):  Type:  Depth (inches):  Type:  Depth (inches):  Depth (inches):	Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.  Strictive Layer (if observed):  Type:  Depth (inches):  Type:  Depth (inches):  Iric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to								<sup>3</sup> Indicate	ors of hydrophytic vegetation a	nd		
Type:	Type:								wetlai unl	nd hydrology must be present, less disturbed or problematic.			
Depth (inches): Hydric Soil Present? Yes No O	Depth (inches): Hydric Soil Present? Yes No O marks:  ric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to	strictive Lay	yer (if observed):										
marks:	marks: ric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to	Туре:											
	ric soil indicators present as low chroma/high value depleted matrix with required redox concentrations, in closed depressions subject to	Depth (inche	es):						Hydric Soil Prese	ent? Yes ♥ No U			
inding.		Depth (inche marks: Iric soil indi		low chroma,	high value deplete	d matrix	with requir	ed redox			to		

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

Project/Site: AEP Crooksville-Newark	City/County: Pe	Perry County Sampling Date: 08-Oct-20			
Applicant/Owner: AEP		State: OH Sampling Point: upl-jbl-20201008-01			
Investigator(s): jbl, rcm	Section, Townsh	nip, Range: S 18 T 14N R 14W			
Landform (hillslope, terrace, etc.): Mound	Local relief (conca	ave, convex, none): convex Slope: 5.0% / 2.9 °			
Subregion (LRR or MLRA): LRR N	 Lat.: 39.78051	Long.: -82.12486 Datum: NAD 83			
Soil Map Unit Name: GwD - Guernsey-Westmo		<u> </u>			
Are climatic/hydrologic conditions on the site ty					
Are Vegetation, Soil, or Hydrol		Are "Normal Circumstances" present? Yes • No •			
Are Vegetation, Soil, or Hydrol		(If needed, explain any answers in Remarks.)			
Summary of Findings - Attach site	map showing sampling poin	it locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes	No •				
Hydric Soil Present? Yes		mpled Area Yes O No •			
Wetland Hydrology Present? Yes	No • within a V	Wetland?			
Upland 011 on ridgetop, point out to Wetland  Hydrology	12 between two patches. Not a wetland	point as no wetland criteria met.			
Wetland Hydrology Indicators:		Cocondany Indicators (minimum of two required)			
Primary Indicators (minimum of one required;	check all that apply)	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)			
Saturation (A3)	Oxidized Rhizospheres along Living Root				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry Season Water Table (C2)			
Sediment Deposits (B2)  Drift deposits (B3)	Recent Iron Reduction in Tilled Soils (C6  Thin Muck Surface (C7)	6) Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)			
☐ Iron Deposits (B5)	Guer (Explain in Remarks)	Geomorphic Position (D2)			
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)		Microtopographic Relief (D4)			
Aquatic Fauna (B13)		FAC-neutral Test (D5)			
Field Observations: Surface Water Present?  Yes No  No	Depth (inches):				
Water Table Present? Yes No	Depth (inches):				
Saturation Present?		Wetland Hydrology Present? Yes ○ No •			
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitor	Depth (inches):	tions) if a milable.			
Describe Recorded Data (stream gauge, monito	oring well, aeriai priotos, previous inspect	.ioris), ii avaliabie.			
Remarks:					
No hydrology indicators present.					

			minant		Sampling Point: upl-ibl-20201008-01
_Tree Stratum (Plot size: 10')	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:
1. Juglans nigra	50	<b>✓</b>	71.4%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2. Celtis occidentalis	20	<b>✓</b>	28.6%	FACU	
3			0.0%		Total Number of Dominant Species Across All Strata: 7 (B)
4			0.0%		Species Nores America.
5.			0.0%		Percent of dominant Species
6.			0.0%		That Are OBL, FACW, or FAC: 28.6% (A/B)
7			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
	70	= Tc	tal Cover		0BL speci es 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 10' )					FACW speci es 60 x 2 = 120
1. Lindera benzoin		<b>✓</b>	41.7%	FAC	FAC speci es 25 x 3 = 75
2. Elaeagnus angustifolia		<b>✓</b>	25.0%	FACU	FACU speci es $130 \times 4 = 520$
3. Rosa multiflora		<b>✓</b>	33.3%	FACU	UPL species
4			0.0%		
5			0.0%		210 (II) 710 III
6			0.0%		Prevalence Index = B/A = 3.326
7.			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		☐ Dominance Test is > 50%
10		Ш	0.0%		☐ Prevalence Index is ≤3.0 1
Shrub Stratum (Plot size:)	60	= Tc	tal Cover		☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' )	0	= Tc	tal Cover		of height.
1. Persicaria pensylvanica	60	<b>v</b>	70.6%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Poa pratensis	25	<b>v</b>	29.4%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3	0		0.0%		regardless of size, and all other plants less than 3.28 ft tall.
4	0		0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
5	0		0.0%		in height.
6.	0		0.0%		Five Vegetation Strata:
7.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8.	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%	·	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%	·	3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 10' )	85	= Tc	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0	$\Box$	0.0%		Woody vines – Consists of all woody vines, regardless of
3 4	0		0.0%		height.
	0		0.0%		
•	0		0.0%		Hydrophytic Vegetation
6	0	 	otal Cove		Present? Yes No

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

plot confined to ridgetop, and not adjacent wetland lowland area. No hydrophytic vegetation indicators present, dominance test <50%, prevalence index >3.0. Dominant species are FACW, FAC and FACU.

Soil

Sampling Point: upl-jbl-20201008-01

Profile Description: (Describe to the depth	needed to document the indicator or confirm the a	bsence of indicators.)	
Depth - Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture	Remarks
0-4 10YR 3/3 100		Loam	
<b>4-16</b> 10YR 4/4 100		Silt Loam	
	duced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup> Locat	ion: PL=Pore Lining. M=Ma	trix
Hydric Soil Indicators:		Indicators for Proble	matic Hydric Soils <sup>3</sup> :
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10)	
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,148)	Coast Prairie Redo	`
Black Histic (A3)	☐ Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147,148)	(110)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodpla	ain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark	Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in I	Remarks)
☐ Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	3	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	Indicators of I wetland hyd	hydrophytic vegetation and rology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		sturbed or problematic.
Restrictive Layer (if observed):			
Type:			
Depth (inches):	•	Hydric Soil Present?	Yes ○ No •
Remarks:			
No hydric soil indicators present.			
no nyune son maicators present.			

SILE. ALF CIT	<u>oks</u> ville	-Newark Tline	Rater(s): J. Lubb	ers; R. Massa		Date:	10/8/2020
			_	Field Id:			
1	1	Metric 1. Wetla	and Area (size).	w-jbl-20201008	-01		
max 6 pts	subtotal	Select one size class  >50 acres (>20.2ha) (6  25 to <50 acres (10.1 to  10 to <25 acres (4 to <  3 to <10 acres (1.2 to <  0.3 to <3 acres (0.12 to  0.1 to <0.3 acres (0.04  <0.1 acres (0.04ha) (0	pts) 2-20.2ha) (5 pts) 10.1ha) (4 pts) 4ha) (3 pts) <1.2ha) (2pts) to <0.12ha) (1 pt)	0.18	acres		
4	. 5			rounding land use.			
max 14 pts.	subtotal	2a. Calculate average WIDE. Buffers average MEDIUM. Buffers avera x NARROW. Buffers ave VERY NARROW. Buffers	buffer width. Select only on 50m (164ft) or more around v age 25m to <50m (82 to <164f rage 10m to <25m (32ft to <82 ers average <10m (<32ft) arou	e and assign score. Do not double vetland perimeter (7) t) around wetland perimeter (4) 2ft) around wetland perimeter (1)	check.		
7.0	12.0	VERY LOW. 2nd growt x LOW. Old field (>10 ye. MODERATELY HIGH. x HIGH. Urban, industrial	h or older forest, prairie, savar ars), shrubland, young second Residential, fenced pasture, p , open pasture, row cropping,	nnah, wildlife area, etc. (7) I growth forest. (5) ark, conservation tillage, new fallow fi	ield. (3)		
7.0 max 30 pts.	12.0	Metric 3. Hydro 3a. Sources of Water.		3b. Connectivity. Score	all that annly		
<b>6</b>	[ [ [ 18]	None or none apparent Recovered (7)  X Recovering (3)  X Recent or no recovery	urface water (3) r (lake or stream) (5) pth. Select one. 6in) (2) atural hydrologic regime. So (12)	100 year floodplain (1)  x Between stream/lake an Part of wetland/upland (c Part of riparian or upland 3d. Duration inundation Semi- to permanently int x Regularly inundated/satu Seasonally inundated (2) x Seasonally saturated in u core one or double check and avera Check all disturbances  x ditch x tile dike weir stormwater input	d other human i.e.g. forest), com d corridor (1) n/saturation. So undated/saturati urated (3) ) upper 30cm (12 gge.  observed  point sc x filling/gr	use (1) pplex (1) core one or dbl check. ed (4) lin) (1) cource (nonstormwater) rading d/RR track g	
max 20 pts.	subtotal		ince. Score one or double ch	-			
	[ 18]	None or none apparent Recovered (3) Recovering (2) X Recent or no recovery 4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)	(4) (1) ent. Select only one and assi Score one or double check (9)	ign score.	x shrub/s herbace x sedime dredgin farming	g	al

Site: AEP	Crooksville	e-Newark Tline	Rater(s): J. Lu	ıbbers; R. N	Massa	Date:	10/8/2020
	_				Field Id:		
	18	3			w-jbl-20201008-01		
	subtotal this	<u> </u>					
	0 18	Metric 5. Spec	ial Wetlands.				
max 10 pts.	subtotal	Check all that ap	ply and score as in	ndicated.			
		Bog (10)					
		Fen (10) Old growth forest (10)					
		Mature forested wetlan	d (5)				
		<del></del>	ary wetland-unrestricted h	hydrology (10)			
			ary wetland-restricted hyd	drology (5)			
		<del></del>	es (Oak Openings) (10)				
		Relict Wet Praires (10)	e/federal threatened or er	ndangered specie	es (10)		
			ongbird/water fowl habitat		(10)		
			ee Question 5 Qualitative				
	3 21	Metric 6. Plan	communities, i	nterspersi	on, microtopography.		
max 20pts.	subtotal	6a. Wetland Vege	tation Communitie	es.	Vegetation Community Cove	er Scale	
		Score all present using	0 to 3 scale.		Absent or comprises <0.1ha (0.2471 ac		
		Aquatic bed		1	Present and either comprises small par		
		0 Emergent 1 Shrub			vegetation and is of moderate quality, or significant part but is of low quality	r comprises a	
		Forest		2	Present and either comprises significan	t part of wetland's 2	
		Mudflats			vegetation and is of moderate quality or		
		Open water			part and is of high quality		
		Other		3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan vi Select only one.	ew) interspersion.		vegetation and is of high quality		
		High (5)			Narrative Description of Vegetation (	Quality	
		Moderately high(4)			Low spp diversity and/or predominance	of nonnative or low	
		Moderate (3)			disturbance tolerant native species	the vegetation mad	
		Moderately low (2) x Low (1)			Native spp are dominant component of although nonnative and/or disturbance	-	
		None (0)			can also be present, and species divers		
		6c. Coverage of invas	ive plants. Refer		moderately high, but generallyw/o prese	ence of rare	
		Table 1 ORAM long for			threatened or endangered spp to		
		or deduct points for co	•		A predominance of native species, with and/or disturbance tolerant native spp a		
		Moderate 25-75% cover			absent, and high spp diversity and often	·	
		Sparse 5-25% cover (-	, ,		the presence of rare, threatened, or end	•	
		x Nearly absent <5% cov	rer (0)				
		Absent (1)			Mudflat and Open Water Class Qualit	ty	
		6d. Microtopography Score all present using		1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/		2	Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		1 Coarse woody debris >	15cm (6in)	3	High 4ha (9.88 acres) or more		
		0 Standing dead >25cm					
		0 Amphibian breeding po	ols	0	Microtopography Cover Scale Absent		
				1	Present very small amounts or if more	common	
				·	of marginal quality		
				2	Present in moderate amounts, but not o	•	
Category 1					quality or in small amounts of highest q	uality	
	21 GRANI	D TOTAL(max 100 pts	1	3	Present in moderate or greater amount	s	
					and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 012

Date:

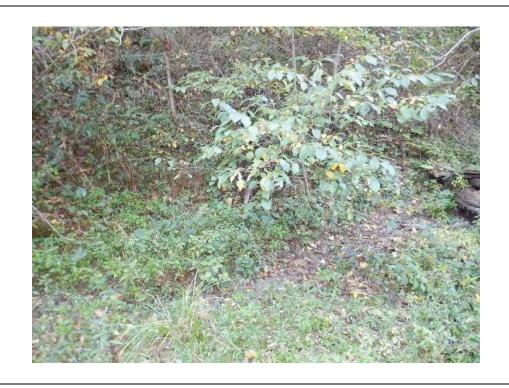
October 8, 2020

**Description:** 

PSS wetland

Category 1

Facing North



## Wetland 012

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 012

Date:

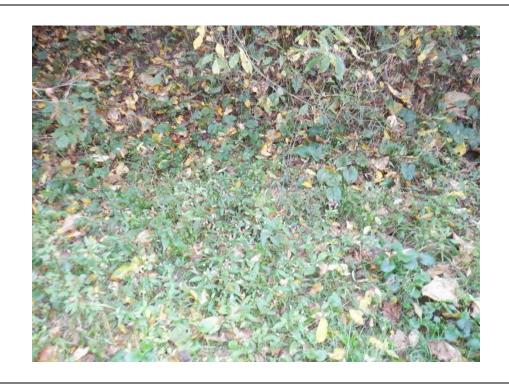
October 8, 2020

**Description:** 

PSS wetland

Category 1

Facing South



## Wetland 012

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 1

Facing West





Client Name:

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 012

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 1

Soil Pit



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

City/County: Perry County

Applicant/Owner: AEP	State: OH Sampling Point: w-jbl-20201008-02
Investigator(s): jbl, rcm Sect	ion, Township, Range: S 7 T 14N R 14W
Landform (hillslope, terrace, etc.): Undulating Local	relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N Lat.: 39.7	78891 Long.: -82.11880 Datum: NAD 83
Soil Map Unit Name: Bethesda-Pits, surface mine complex, 25 to 70 percen	t slopes, unreclaimed NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year?  Are Vegetation  , Soil  , or Hydrology  significantly distu	· · · · · · · · · · · · · · · · · · ·
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 naturally problem	natic? (If needed, explain any answers in Remarks.)
	ling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?  Yes  No  Yes  No  Yes  No  No  Yes  No  No  Yes  No	La the Secretari Association
y	Is the Sampled Area within a Wetland? Yes ● No ○
Wetland Hydrology Present? Yes No No Remarks:	
Sample point (w-jbl-20201008-02) in to PSS Wetland 013 in swale on prior 011.	r mining land (disturbed soils). Wetland fully delineated, drains to stream
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)  True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)   Hydrogen Sulfide Odor (C²     ✓ Saturation (A3)   ✓ Oxidized Rhizospheres alo	
Sediment Deposits (B2)  Recent Iron Reduction in 7  Prift deposits (B2)	
Drift deposits (B3)  Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Other (Explain in Remarks	
Iron Deposits (B5)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard (D3)
	Microtopographic Relief (D4)
Aquatic Fauna (B13) Field Observations:	FAC-neutral Test (D5)
Surface Water Present? Yes No Depth (inches):	
	0
Saturation Present? Vos No Denth (inches):	0 Wetland Hydrology Present? Yes   ○ No ○
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	vious inspections), if available:
Remarks:	
Multiple primary and secondary hydrology indicators present. Primary source geomorphic position. Wetland abuts intermittent Stream 011 that flows norted Muskingum River, a TNW.	e of hydrology is concentration of precipitation and surface runoff in the NHD-mapped stream that flows east to Moxahala Creek that flows north

Sampling Date: 08-Oct-20

Project/Site: AEP Crooksville-Newark

			ominant		Sampling Point: <b>w-ibl-20201008-02</b>
_Tree Stratum (Plot size: 30' )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	15	<b>✓</b>	100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC:6(A)
2	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 7 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 85.7% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 85.7% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0	Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' )	15	= Tc	otal Cover	-	0BL speci es <u>40</u> x 1 = <u>40</u>
4 I belandara da de la librationa	25	<b>✓</b>	38.5%	FACU	FACW speci es x 2 = 160
•		<b>✓</b>	30.8%	FAC	FAC speci es <u>35</u> x 3 = <u>105</u>
•	20	<b>✓</b>	30.8%	FACW	FACU speci es $25$ x 4 = $100$
Spiraea tomentosa  4.			0.0%		UPL speci es x 5 =
5		$\Box$	0.0%		Column Totals: <u>180</u> (A) <u>405</u> (B)
6.		$\Box$	0.0%		Prevalence Index = $B/A = 2.250$
7		$\Box$	0.0%		
8.	0	$\Box$	0.0%		Hydrophytic Vegetation Indicators:
9.	0		0.0%		Rapid Test for Hydrophytic Vegetation
10.	0		0.0%		Dominance Test is > 50%
	65	 = Tc	otal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0		0.0%		Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3			0.0%		be present, unless disturbed or problematic.
4			0.0%		Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
6	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	— – Та	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: _5' )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Leersia oryzoides	40	<b>✓</b>	40.0%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus cyperinus	35	<b>✓</b>	35.0%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Impatiens capensis	25	<b>✓</b>	25.0%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
4	0		0.0%		in height.
5	0		0.0%		
6	_		0.0%		Five Vegetation Strata:
7 8	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0	$\Box$	0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
11	0	$\Box$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12.	0	$\Box$	0.0%		Shrub stratum – Consists of woody plants, excluding woody
	100	= To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30'	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1					species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0		0.0%		
5	0		0.0%		Hydrophytic
6	0	<u></u>	0.0%		Vegetation Present? Yes No O
	0	= 10	otal Cove	ı	
Remarks: (Include photo numbers here or on a separate sheet Hydrophytic vegetation indicator present as dominance test $>$ 50%. $\square$		oecie:	s are OBL,	FACW, FAC	and FACU.

Sampling Point: w-jbl-20201008-02

DepthMatrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture Remarks Sandy Clay Learn distinct redox
<b>0-16</b> 10Y 4/2 85	10YR 4/6 15 D PL	Sandy Clay Loam distinct redox concentrations
		`
		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
no. C. Consentration D. Deplation DM I	Pedured Matrix CS Covered or Coated Cond Crains 21 cont	ion. Di Doro Lining M. Matriy
	Reduced Matrix, CS=Covered or Coated Sand Grains 2Locat	
dric Soil Indicators:	Dark Curface (C7)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Histic Epipedon (A2)	☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	(MLRA 147,148)
Stratified Layers (A5)	Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	Other (Explain in Kemarks)
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
strictive Layer (if observed):		
Type:		Hydric Soil Present? Yes  No
Depth (inches):		1,000
ma a milia .		
marks:		
	oma matrix with required redox concentrations in san	dy soil.
	oma matrix with required redox concentrations in san	dy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	dy soil.
	oma matrix with required redox concentrations in san	idy soil.
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	oma matrix with required redox concentrations in sar	idy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	ndy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	idy soil.
	oma matrix with required redox concentrations in san	ndy soil.
	oma matrix with required redox concentrations in san	ndy soil.
	oma matrix with required redox concentrations in san	ndy soil.
	oma matrix with required redox concentrations in san	idy soil.

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

Project/Site: AEP Crooksville-Newark	City/County: Perry County Sampling Date: 08-Oct-20
Applicant/Owner: AEP	State: OH Sampling Point: upl-jbl-20201008-02
Investigator(s): jbl, rcm	Section, Township, Range: S 7 T 14N R 14W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): undulating Slope: 25.0% / 14.0 °
Subregion (LRR or MLRA): LRR N Lat.:	: 39.78920 Long.: -82.11914 Datum: NAD 83
Soil Map Unit Name: Bethesda-Pits, surface mine complex, 25 to 70	percent slopes, unreclaimed NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of y	year? Yes   No (If no, explain in Remarks.)
	ntly disturbed? Are "Normal Circumstances" present? Yes   No O
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 naturally	problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes O No O	
Hydric Soil Present? Yes No •	Is the Sampled Area Yes O No •
Wetland Hydrology Present? Yes O No 💿	within a Wetland?
as no wetland criteria met.  Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1)       ☐ True Aquatic Plan         ☐ High Water Table (A2)       ☐ Hydrogen Sulfide	
	odor (C1)
Water Marks (B1)  Presence of Redu	
	uction in Tilled Soils (C6)
Drift deposits (B3) Thin Muck Surface	
Algal Mat or Crust (B4) Other (Explain in	·
Iron Deposits (B5)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ●
Saturation Present? (includes capillary fringe)  Yes No Depth (inches):	wetiand Hydrology Present? Tes O NO O
Describe Recorded Data (stream gauge, monitoring well, aerial phot	cos, previous inspections), if available:
Remarks:	
No hydrology indicators present.	

			ominant ecies? -		Sampling Point: upl-ibl-20201008-02
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1. Robinia pseudoacacia	25	<b>✓</b>	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2	0		0.0%		T
3			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)
6			0.0%		That Are Obl., FACW, Or FAC.
7	0	$\sqsubseteq$	0.0%		Prevalence Index worksheet:
8	0	Ш.	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 10'	25	= To	tal Cover		0BL speci es 0 x 1 = 0 FACW speci es 35 x 2 = 70
1. Liriodendron tulipifera	45	✓,	47.4%	FACU	
2. Rubus allegheniensis	50	✓.	52.6%	FACU	
3	0		0.0%		· — —
4	0	$\sqcup$	0.0%		of E specifics
5	0	$\sqcup$	0.0%		Column Totals: 190 (A) 655 (B)
6		$\sqsubseteq$	0.0%		Prevalence Index = B/A = 3.447
7		$\sqcup$	0.0%		Hydrophytic Vegetation Indicators:
8		$\square$	0.0%		Rapid Test for Hydrophytic Vegetation
9		$\square$	0.0%		☐ Dominance Test is > 50%
10	0	Ш.	0.0%		☐ Prevalence Index is ≤3.0 1
Shrub Stratum (Plot size:)	95	= Tc	tal Cover		☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0	$\sqcup$	0.0%		☐ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0	$\sqcup$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4	0	$\square$	0.0%		be present, unless disturbed or problematic.
5	0	$\sqcup$	0.0%		Definition of Vegetation Strata:
6	0	$\sqcup$	0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш.	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' )			tal Cover		of height.  Sapling/shrub stratum – Consists of woody plants, excluding
1. Impatiens capensis	35	<b>✓</b>	50.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Dichanthelium clandestinum	35	✓.	50.0%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3		Ц.	0.0%		regardless of size, and all other plants less than 3.28 ft tall.
4		$\square$	0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5		Н.	0.0%		
6.		$\square$	0.0%		Five Vegetation Strata:
7		Η.	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		$\square$	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10		$\square$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0	Η.	0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	0 70	Ш. Та	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 10'		= 10	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	$\sqcup$	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0	$\square$	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	$\sqsubseteq$	0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation No. No. No.
	0	= To	otal Cove	-	Present? Yes O No 9

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

plot confined to hillside and not wetland swale. No hydrophytic vegetation indicators present, dominance test <50%, prevalence index >3.0. Dominant species are FACW, FAC and FACU

Soil

Sampling Point: upl-jbl-20201008-02

	iption: (De	escribe to Matrix	the depth r		the indicator or co dox Features	nfirm the a	bsence of indicators.)		
Depth (inches)	Color	(moist)	%	Color (moist)	%Tvpe_1	Loc <sup>2</sup>	Texture	Remarks	
0-8	10YR	3/3	100				Sandy Loam		
					•			,	
				$\overline{}$				4	
								4	
					` `			1	
				$\overline{}$				,	
								4	
		ì			•				
					1			:	
Type: C=Cond	centration. [	D=Depletic	n. RM=Redu	ced Matrix, CS=Covere	ed or Coated Sand Gra	ains <sup>2</sup> Locat	ion: PL=Pore Lining. M=Ma	atrix	
Hydric Soil I	ndicators:						Indicators for Proble	ematic Hydric Soils <sup>3</sup> :	
Histosol (A				☐ Dark Surface (			2 cm Muck (A10)	(MI RA 147)	
Histic Epip					w Surface (S8) (MLRA		Coast Prairie Red		
Black Histi				_	ace (S9) (MLRA 147,	148)	(MLRA 147,148)	JX (A10)	
	Sulfide (A4)	)		Loamy Gleyed			Piedmont Floodpl	ain Soils (F19)	
	Layers (A5)			Depleted Matri			(MLRA 136, 147)		
2 cm Muck	(A10) (LRI	R N)		Redox Dark Su	, ,		Very Shallow Dar	k Surface (TF12)	
Depleted I	Below Dark	Surface (A	11)	Depleted Dark			Other (Explain in	Remarks)	
Thick Dark	k Surface (A	12)		Redox Depress					
Sandy Mu MLRA 147	ck Mineral ( ', 148)	S1) (LRR N	١,	☐ Iron-Manganes MLRA 136)	se Masses (F12) (LRR	N,			
Sandy Gle	yed Matrix	(S4)		Umbric Surface	e (F13) (MLRA 136, 1	22)	2		
Sandy Red	dox (S5)			☐ Piedmont Floo	dplain Soils (F19) (ML	RA 148)	<sup>3</sup> Indicators of	hydrophytic vegetation and drology must be present,	
Stripped N	Matrix (S6)			Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless di	sturbed or problematic.	
	(10.1								
Restrictive La	ayer (if obs	served):							
Type: 8							Hydric Soil Present?	Yes ○ No •	
Depth (inch	nes): <u>rock</u>						- i yan i o oon i i ooonii	163 0 110 0	
Remarks:									
lo hydric soil	indicators	present.	Shovel ref	usal at 8" due to roo	ck.				

Site: AEF	<sup>o</sup> Crooksvill	e-Newark Tline	Rater(s): J. Lubbe	ers; R. Massa	Date:	10/8/2020
				Field Id:	-	
	2 2	Metric 1. Wetl	and Area (size).	w-jbl-20201008-0	)2	
max 6 pts	subtotal	Select one size class >50 acres (>20.2ha) ( 25 to <50 acres (10.1 10 to <25 acres (4 to 3 to <10 acres (1.2 to x 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 <0.1 acres (0.04ha) (0	6 pts) to <20.2ha) (5 pts) t10.1ha) (4 pts) <4ha) (3 pts) to <1.2ha) (2pts) to <1.2ha) (2pts)	0.58	acres	
	8 10	Metric 2. Upla	nd buffers and surr	ounding land use.		
max 14 pts.	subtotal	WIDE. Buffers averag x MEDIUM. Buffers ave NARROW. Buffers av	e 50m (164ft) or more around w rage 25m to <50m (82 to <164ft erage 10m to <25m (32ft to <82 ers average <10m (<32ft) arour	) around wetland perimeter (4) ft) around wetland perimeter (1) id wetland perimeter (0)	eck.	
		x VERY LOW. 2nd grow LOW. Old field (>10 you MODERATELY HIGH	unding land use. Select one o th or older forest, prairie, savan ears), shrubland, young second Residential, fenced pasture, pa al, open pasture, row cropping, r	nah, wildlife area, etc. (7) growth forest. (5) rk, conservation tillage, new fallow field	d. (3)	
	8.0 18.0	Metric 3. Hydi	ology.			
max 30 pts.	subtotal	High pH groundwater Other groundwater (3) x Precipitation (1) Seasonal/Intermittent Perennial surface wate 3c. Maximum water (2) >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27 x <0.4m (<15.7in) (1) 3e. Modifications to 1 None or none apparer Recovered (7) x Recovering (3) x Recent or no recovery	surface water (3) er (lake or stream) (5) lepth. Select one.  6.6in) (2) natural hydrologic regime. Scott (12)  (1)	Semi- to permanently inund x Regularly inundated/satura Seasonally inundated (2) x Seasonally saturated in up ore one or double check and average Check all disturbances of x ditch x tile dike weir stormwater input	other human use (1) i. forest), complex (1) orridor (1) naturation. Score one or dbl che dated/saturated (4) ted (3) per 30cm (12in) (1) 3.	
	6.5 24.5	Metric 4. Habi	tat Alteration and D	evelopment.		
max 20 pts.	subtotal	None or none apparer Recovered (3) X Recovering (2) X Recent or no recovery 4b. Habitat developm Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)	(1) lent. Select only one and assignment. Score one or double check at (9)	nd average.  Check all disturbances obs mowing grazing x clearcuting selective cutting woody debris removal	x shrub/sapling removal herbaceous/aquatic bed rem x sedimentation dredging farming	noval
	24.5	5		x toxic pollutants	nutrient enrichment	

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: AEF	Crooksville	e-Newark Tline	Rater(s): J. Lubb	ers; R. N	Massa	Date:	10/8/2020
-			·		Field Id:		
	24.5	1			w-jbl-20201008-02		
	subtotal this	<b>-</b>					
	0 24.5	•	cial Wetlands.				
max 10 pts.	subtotal	Check all that a	pply and score as indic	cated.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10					
		Mature forested wetla	ind (อ) utary wetland-unrestricted hydr	ology (10)			
			utary wetland-restricted hydrolo				
		<del></del>	ries (Oak Openings) (10)	0, ( )			
		Relict Wet Praires (10	*				
		<del></del>	ate/federal threatened or endar		es (10)		
			songbird/water fowl habitat or u See Question 5 Qualitative Rat				
	2 27 5	<del>-                                    </del>		- , ,			
	3 27.5	₫	•	erspersi	on, microtopography		
max 20pts.	subtotal		etation Communities.		Vegetation Community		
		Score all present usir	g 0 to 3 scale.		Absent or comprises <0.1ha (0.2		
		Aquatic bed 0 Emergent		1	Present and either comprises sn vegetation and is of moderate qu		
		0 Emergent 1 Shrub			significant part but is of low quali		
		Forest		2	Present and either comprises sig		
		Mudflats			vegetation and is of moderate qu	iality or comprises a small	
		Open water			part and is of high quality		
		Other	<del></del>	3	Present and comprises significant	nt part, or more, of wetland's 3	
		<b>6b. horizontal (plan</b> Select only one.	view) interspersion.		vegetation and is of high quality		
		High (5)			Narrative Description of Veget	ation Quality	
		Moderately high(4)			Low spp diversity and/or predom		
		Moderate (3)			disturbance tolerant native speci	es	
		Moderately low (2)			Native spp are dominant compo	•	
		x Low (1)			although nonnative and/or distur	• • • • • • • • • • • • • • • • • • • •	
		None (0) 6c. Coverage of inva	sive nlants Refer		can also be present, and species moderately high, but generallyw/		
		Table 1 ORAM long f			threatened or endangered spp to		
		or deduct points for c			A predominance of native specie		
		Extensive >75% cove	• ,		and/or disturbance tolerant nativ	• • • • • • • • • • • • • • • • • • • •	
		Moderate 25-75% co			absent, and high spp diversity ar	· · · · · · · · · · · · · · · · · · ·	
		Sparse 5-25% cover  x Nearly absent <5% co	. ,		the presence of rare, threatened	, or endangered spp	
		Absent (1)	JVCI (0)		Mudflat and Open Water Class	Quality	
		6d. Microtopograph	<b>/</b> .	0	Absent <0.1ha (0.247 acres)		
		Score all present usir	g 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 a		
		0 Vegetated hummucks			Moderate 1 to <4ha (2.47 to 9.88	3 acres)	
		1 Coarse woody debris	, ,	3	High 4ha (9.88 acres) or more		
		Standing dead >25cn     Amphibian breeding page 1.	• •		Microtopography Cover Scale		
		Ampiliblan breeding p	00013	0	Absent		
				1	Present very small amounts or if	more common	
					of marginal quality		
0-4				2	Present in moderate amounts, b	-	
Category 1	07.5	TOTAL /			quality or in small amounts of hig	· · · · · · · · · · · · · · · · · · ·	
	27.5 GRANI	TOTAL(max 100 pts	5)	3	Present in moderate or greater a	mounts	
					and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 013

Date:

October 9, 2020

**Description:** 

PSS wetland

Category 1

Facing North



## Wetland 013

Date:

October 9, 2020

**Description:** 

PSS wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 013

Date:

October 9, 2020

**Description:** 

PSS wetland

Category 1

Facing South



## Wetland 013

Date:

October 9, 2020

**Description:** 

PSS wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 013

Date:

October 9, 2020

**Description:** 

PSS wetland

Category 1

Soil Pit



## Wetland 014 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

City/County: Perry County

Applicant/Owner: AEP	State:	OH Sampling Point: w-jbl-20201008-03
Investigator(s): jbl, rcm	Section, Township, Range:	S 7 T 14N R 14W
Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, convex	x, none): concave Slope: 1.0% / 0.6 °
Subregion (LRR or MLRA): LRR N Lat.	: _39.79117 L	Long.: -82.11966 Datum: NAD 83
Soil Map Unit Name: Ne - Newark silt loam, 0 to 3 percent slopes, f	requently flooded	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes O No O (If	no, explain in Remarks.)
		mal Circumstances" present? Yes   No
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 naturally	problematic? (If neede	d, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No  No		
Hydric Soil Present? Yes   No   No	Is the Sampled Area	a Yes  ● No ○
Wetland Hydrology Present? Yes   No   No	within a Wetland?	
Remarks:		
Sample point (w-jbl-20201008-03) in to PFO Wetlnad 014 in valley stream channel.	bottom abutting both banks of	of stream 013. Wetland extends to east along sides of
Hydrology		
Wetland Hydrology Indicators:	-	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)  True Aquatic Plan		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Hydrogen Sulfide  ✓ Saturation (A3)  ✓ Oxidized Rhizosp		✓ Drainage Patterns (B10)
Water Marks (B1)  Presence of Redu	heres along Living Roots (C3)	<ul><li>✓ Moss Trim Lines (B16)</li><li>✓ Dry Season Water Table (C2)</li></ul>
	uction in Tilled Soils (C6)	Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Surface	, ,	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Other (Explain in	` '	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Remarks)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No Depth (inches):		
Water Table Present? Yes No Depth (inches):		vdrology Present? Yes ● No ○
Saturation Present? Yes No Depth (inches):	12	ydrology Present? Yes ♥ No U
Describe Recorded Data (stream gauge, monitoring well, aerial photostrate photostrate)	os, previous inspections), if a	vailable:
Remarks:		
Multiple primary and secondary hydrology indicators present. Prima	ry sources of hydrology are inf	flow from intermittent Stream 012 and Stream 014,
overbank flow from intermittent Stream 013, and concentration of p	precipitation and surface runof	f in geomorphic position. Wetland abuts intermittent
Stream 013 that flows east to Moxahala Creek that flows north to N	iuskingum River, a TNW.	

Sampling Date: 08-Oct-20

Project/Site: AEP Crooksville-Newark

			ominant oecies? -		Sampling Point: w-ibl-20201008-03
Tree Stratum (Plot size: _30')	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Salix nigra	35	<b>✓</b>	53.8%	OBL	That are OBL, FACW, or FAC:
2. Platanus occidentalis	25	<b>✓</b>	38.5%	FACW	
3. Liriodendron tulipifera	5		7.7%	FACU	Total Number of Dominant Species Across All Strata: 7 (B)
4	0		0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
	65	= To	tal Cover	-	OBL speci es <u>35</u> x 1 = <u>35</u>
Sapling-Sapling/Shrub Stratum (Plot size: 15'	0.5		FF (0)	54004	FACW species 145 x 2 = 290
1. Fraxinus pennsylvanica			55.6%	FACW	FAC speci es 20 x 3 = 60
2. Lindera benzoin			44.4%	FAC	FACU speci es $\frac{5}{}$ x 4 = $\frac{20}{}$
3			0.0%		UPL species
4			0.0%		
5			0.0%		Column Totals: 205 (A) 405 (B)
6			0.0%		Prevalence Index = B/A = 1.976_
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9		$\Box$	0.0%		✓ Dominance Test is > 50%
10	0	Ш	0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)	45	= To	otal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%	•	Four Vegetation Strata:
7.	0		0.0%	•	Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' )	0	= Tc	tal Cover	-	(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	45	<b>✓</b>	47 40/	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
1. Impatiens capensis	45		47.4%		vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Persicaria pensylvanica			26.3%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Pilea pumila	25		26.3%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
4	0 0	$\Box$	0.0%		in height.
5	0	$\Box$	0.0%		
6	0				Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8					ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	0	Ш,	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )	95	= 10	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	Ш	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Hydrophytic
6.	0		0.0%		Vegetation
	0	= To	otal Cove	г	Present? Yes No O
Remarks: (Include photo numbers here or on a separate shee	et )				1
Hydrophytic vegetation indicator present as dominance test > 50%. I		ecie	s are OBL,	FACW and	FAC.

Soil

Sampling Point: w-jbl-20201008-03

Depth	- C.O.I. (DC	Matrix	o dopuiri			edox Feat			bsence of indicators	*/	
(inches)		(moist)	%		(moist)	%	Tvpe <sup>1</sup>	Loc <sup>2</sup> _	Texture		marks
0-17	10YR	4/1	80	7.5YR	4/6	25	С	M	Silty Clay Loam	distinct concentra	redox tions in pore
		`	-		1	1				,	
		`				`				*	
						-,					
		`								,	
					-					<del></del>	
<sup>1</sup> Type: C=Cond	entration. I	D=Depletio	n. RM=Redu	ced Matrix.	CS=Cover	ed or Coate	ed Sand Gra	ins <sup>2</sup> Locati	ion: PL=Pore Lining. N	M=Matrix	
Hydric Soil II											1. 0. 11. 3
Histosol (A				□ Dar	k Surface	(\$7)			Indicators for Pi		ic Soils ":
Histic Epip							(S8) (MLRA	147.148)		A10) (MLRA 147)	
Black Histi							ЛLRA 147, 1		Coast Prairie		
	Sulfide (A4	)				Matrix (F2		/	(MLRA 147,1	•	
	_ayers (A5)				leted Matr		,		Piedmont Flo (MLRA 136,	odplain Soils (F19	))
2 cm Muck						urface (F6)				Dark Surface (TF	12)
	Below Dark		11)	_		Surface (F	7)		_		12)
	s Surface (A		11)		lox Depres		,		Utner (Expla	in in Remarks)	
_	ck Mineral (		ı				(F12) (LRR I	٧,			
MLRA 147	, 148)	JI) (LIKICI	1,	MLF	RA 136)						
Sandy Gle	yed Matrix	(S4)		Um Um	bric Surfac	e (F13) (M	LRA 136, 12	2)	2		
☐ Sandy Rec	dox (S5)			Pied	dmont Floo	dplain Soils	s (F19) (MLF	RA 148)	Indicato	rs of hydrophytic v d hydrology must	egetation and he present
Stripped M	Matrix (S6)			Rec	l Parent Ma	aterial (F21	) (MLRA 127	7, 147)	unle	ss disturbed or pr	oblematic.
Dantainti I.a	(!6 -  -										
Restrictive La	ayer (ii ob	servea):									
Type:	200).								Hydric Soil Preser	nt? Yes •	No O
Depth (inch	ies):										
Remarks:											
Hydric soil ind	licators pr	esent as I	ow chroma	/high valu	ie deplete	ed matrix	with requi	ired redox (	concentrations.		

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

Project/Site: AEP Crooksville-Newa	ırk	City/County: Perry County	Sampling Date: 08-Oct-20				
Applicant/Owner: AEP		State:	OH Sampling Point: upl-jbl-20201008-03				
Investigator(s): jbl, rcm		Section, Township, Range	s: S 7 T 14N R 14W				
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, conve	ex, none): convex Slope: 20.0% / 11.3 °				
Subregion (LRR or MLRA): LRR	N La	<del></del> at.: 39.79176	Long.: -82.11983 Datum: NAD 83				
Soil Map Unit Name: DmF - Deka			NWI classification: N/A				
Are climatic/hydrologic conditions			no, explain in Remarks.)				
Are Vegetation, Soil			mal Circumstances" present? Yes  No				
Are Vegetation, Soil		•	ed, explain any answers in Remarks.)				
		•					
Summary of Findings - A	<u>'</u>	g sampling point locati	ions, transects, important features, etc.				
Hydrophytic Vegetation Present?							
Hydric Soil Present?	Yes O No •	Is the Sampled Are	ea Yes ○ No •				
Wetland Hydrology Present?	Yes ○ No •	within a Wetland?					
Upland 013 point out to Wetland Hydrology							
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of			Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic P		Sparsely Vegetated Concave Surface (B8)				
☐ High Water Table (A2)☐ Saturation (A3)	☐ Hydrogen Sulfi		Drainage Patterns (B10)				
☐ Saturation (A3) ☐ Water Marks (B1)		spheres along Living Roots (C3) educed Iron (C4)					
Sediment Deposits (B2)		educed from (C4) eduction in Tilled Soils (C6)	Crayfish Burrows (C8)				
Drift deposits (B3)	☐ Thin Muck Surf	, ,	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain	, ,	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)	/ <del></del> ->		Geomorphic Position (D2)				
☐ Inundation Visible on Aerial Imag☐ Water-Stained Leaves (B9)	ery (B7)		Shallow Aquitard (D3)				
Aquatic Fauna (B13)			☐ Microtopographic Relief (D4) ☐ FAC-neutral Test (D5)				
Field Observations:			The hould rost (55)				
Surface Water Present? Yes	O No O Depth (inche	s):					
Water Table Present? Yes	O No Depth (inche	s):					
Saturation Present?  (includes capillary frings)  Yes	O No O Depth (inche		Hydrology Present? Yes ○ No •				
(includes capillary fringe)  Describe Recorded Data (stream			ıvailable:				
Remarks:							
No hydrology indicators present.							

			ominant becies? -		Sampling Point: upl-ibl-20201008-03
Tree Stratum (Plot size: _30')	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Liriodendron tulipifera	50	<b>✓</b>	58.8%	FACU	That are OBL, FACW, or FAC: (A)
2. Fraxinus americana	35	<b>✓</b>	41.2%	FACU	
3	0		0.0%		Total Number of Dominant Species Across All Strata: 7 (B)
4			0.0%		
5.			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 14.3% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 14.3% (A/B)
7			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
	85	= Tc	tal Cover	-	0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15'					FACW species 0 x 2 = 0
1. Rosa multiflora			58.3%	FACU	FAC speci es <u>5</u> x 3 = <u>15</u>
2. Fagus grandifolia		<b>✓</b>	41.7%	FACU	FACU speci es $170 \times 4 = 680$
3			0.0%		UPL species $\frac{50}{250}$ x 5 = $\frac{250}{250}$
4			0.0%		· · · · · · · · · · · · · · · · · · ·
5			0.0%		Column Totals: 225 (A) 945 (B)
6	0		0.0%		Prevalence Index = B/A = 4.200
7			0.0%		Hydrophytic Vegetation Indicators:
8	0	$\Box$	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ш	0.0%		Dominance Test is > 50%
10	0	Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
		. — = Tc	tal Cover	-	(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: 5' )		<b>✓</b>			Sapling/shrub stratum – Consists of woody plants, excluding
1. Elymus hystrix	50		66.7%	UPL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Ageratina altissima			33.3%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3		H	0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
4			0.0%		in height.
5	0		0.0%		
6			0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11			0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	0	Ц,	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )		_	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1. Toxicodendron radicans	5	✓	100.0%	FAC	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5.	0		0.0%		Lludrophytic
6	0		0.0%		Hydrophytic Vegetation
	5	= To	otal Cove	r	Present? Yes No •
Remarks: (Include photo numbers here or on a separate shee	et )				I
No hydrophytic vegetation indicators present, dominance test <50%,		inde	ex >3.0. Do	ominant spe	cies areFAC, FACU and UPL.

Sampling Point:

upl-jbl-20201008-03

Depth	Matrix			ox Features			
	or (moist)	%	Color (moist)		Loc <sup>2</sup> _	Texture	Remarks
<b>0-16</b> 10YF	3/3	100				Loam	
		. — — ·				· ·	
						-	
Type: C=Concentration	n. D=Depletio	n. RM=Reduc	ed Matrix, CS=Covered	or Coated Sand Grai	ns <sup>2</sup> Locati	ion: PL=Pore Lining. M=Matri	ix
Hydric Soil Indicato	-						
Histosol (A1)	3.		☐ Dark Surface (S	7)		Indicators for Problem	
Histic Epipedon (A:	2)			Surface (S8) (MLRA	147 148)	2 cm Muck (A10) (M	1LRA 147)
Black Histic (A3)	-/			e (S9) (MLRA 147, 14		Coast Prairie Redox	(A16)
Hydrogen Sulfide (	A4)		Loamy Gleyed M		/	(MLRA 147,148)	
Stratified Layers (A			Depleted Matrix			Piedmont Floodplair (MLRA 136, 147)	ı Soils (F19)
2 cm Muck (A10) (			Redox Dark Surf			Very Shallow Dark S	iurfaco (TE12)
Depleted Below Da		11)	☐ Depleted Dark S	, ,			
Thick Dark Surface		11)	Redox Depression			Other (Explain in Re	.marks)
Sandy Muck Minera		I		Masses (F12) (LRR N	I,		
MLRA 147, 148)	31 (31) (LKK IV	,	MLRA 136)	, ,			
Sandy Gleyed Matr	ix (S4)		Umbric Surface	(F13) (MLRA 136, 12	2)	2	
Sandy Redox (S5)			Piedmont Floodp	olain Soils (F19) (MLR	A 148)	<sup>3</sup> Indicators of hy	drophytic vegetation and ploopy must be present,
Stripped Matrix (Se	5)		Red Parent Mate	erial (F21) (MLRA 127	, 147)	unless distu	urbed or problematic.
Restrictive Layer (if	observed):						
Type:						Hydric Soil Present?	Yes ○ No ●
Depth (inches):						Trydric Son Tresent.	163 © 110 ©
Remarks:							
lo hydric soil indicate	ors present.						

Site: AEP (	Crooksville	-Newark Tline	Rater(s): J. Lubbe	rs; R. Massa	Date:	10/8/2020
				Field Id:	•	
	2 2	Metric 1. Wetla	ınd Area (size).	w-jbl-20201008-0	)3	
max 6 pts	subtotal	Select one size class a >50 acres (>20.2ha) (6 25 to <50 acres (10.1 to 10 to <25 acres (4 to <1 3 to <10 acres (1.2 to < x 0.3 to <3 acres (0.012 to 0.1 to <0.3 acres (0.044) <0.1 acres (0.04ha) (0 p	pts) <20.2ha) (5 pts) (0.1ha) (4 pts) 4ha) (3 pts) <1.2ha) (2pts) to <0.12ha) (1 pt)	0.92	acres	
	8 10	Metric 2. Uplar	nd buffers and surr	ounding land use.		
max 14 pts.	subtotal	WIDE. Buffers average x MEDIUM. Buffers average NARROW. Buffers aver VERY NARROW. Buffer 2b. Intensity of surrou x VERY LOW. 2nd growtl LOW. Old field (>10 yea MODERATELY HIGH. I	50m (164ft) or more around we ige 25m to <50m (82 to <164ft) rage 10m to <25m (32ft to <82f irs average <10m (<32ft) aroun <b>nding land use. Select one or</b> n or older forest, prairie, savanr ars), shrubland, young second of	around wetland perimeter (4) t) around wetland perimeter (1) d wetland perimeter (0) d wetland perimeter (0) r double check and average.  The control of the check and average and the check and average and the check and average and the check and average area. The check and average area area area area area area area		
1:	2.0 22.0	Metric 3. Hydro		ming, construction. (1)		
max 30 pts.	subtotal [	3a. Sources of Water.  High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent st Perennial surface water 3c. Maximum water de >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27. <0.4m (<15.7in) (1) 3e. Modifications to na None or none apparent Recovered (7) Recovering (3) Recent or no recovery (	Score all that apply.  (i)  (lake or stream) (5)  (bin) (2)  (atural hydrologic regime. Sco	Semi- to permanently inund x Regularly inundated/satura Seasonally inundated (2) x Seasonally saturated in up re one or double check and average Check all disturbances of x ditch x tile dike weir stormwater input	other human use (1) I. forest), complex (1) orridor (1) aturation. Score one or dbl ch dated/saturated (4) ted (3) per 30cm (12in) (1) e.	
max 20 pts.	subtotal	None or none apparent Recovered (3)  X Recovering (2) Recent or no recovery ( 4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)	1) Int. Select only one and assignt. Score one or double check as (9)	in score.	x shrub/sapling removal herbaceous/aquatic bed re x sedimentation x dredging farming nutrient enrichment	moval

ORAM\_w-jbl-20201008-03.xlsm | test\_Field

Site: AEP	Crooksville	e-Newark Tline	Rater(s):	J. Lubbers; F	R. N	Massa	Date:	10/8/2020
						Field Id:		
	30	1				w-jbl-20201008-03		
	subtotal this	1				•		
	0 30	=	ial Watland	łe				
		<b>.</b>						
max 10 pts.	subtotal	Check all that ap	ply and scor	e as indicated.				
		Bog (10) Fen (10)						
		Old growth forest (10)						
		Mature forested wetlar						
		Lake Erie coastal/tribu Lake Erie coastal/tribu			J)			
		Lake Plain Sand Prairi						
		Relict Wet Praires (10)		, ( )				
		Known occurrence sta				es (10)		
		Significant migratory se Category 1 Wetland. S						
	7 37			• , ,		on, microtopography.		
	7 37				131			
max 20pts.	subtotal	6a. Wetland Veg		nunities.	۰ ا	Vegetation Community Cove		
		Score all present using Aquatic bed	0 to 3 scale.	-		Absent or comprises <0.1ha (0.2471 ac Present and either comprises small par		
		0 Emergent			.	vegetation and is of moderate quality, o		
		0 Shrub		_		significant part but is of low quality		
		1 Forest			2	Present and either comprises significan		
		Mudflats Open water				vegetation and is of moderate quality or part and is of high quality	comprises a small	
		Other		=	3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan v	ew) Interspersio	n.	- 1	vegetation and is of high quality		
		Select only one.						
		High (5)  Moderately high(4)			ĺ	Narrative Description of Vegetation C Low spp diversity and/or predominance		
		Moderate (3)				disturbance tolerant native species	of Hormative of low	
		x Moderately low (2)				Native spp are dominant component of		
		Low (1)				although nonnative and/or disturbance		
		None (0) 6c. Coverage of invas	ive nlants Refer			can also be present, and species divers moderately high, but generallyw/o prese		
		Table 1 ORAM long fo				threatened or endangered spp to	Shoo of fairo	
		or deduct points for co				A predominance of native species, with		
		Extensive >75% cover	` '			and/or disturbance tolerant native spp a	,	
		Moderate 25-75% cover (-				absent, and high spp diversity and ofter the presence of rare, threatened, or end		
		Nearly absent <5% co			,	and production or rains, amountained, or one	anigorou opp	
		x Absent (1)				Mudflat and Open Water Class Qualit	ty	
		6d. Microtopography Score all present using		-		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/		=		Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		1 Coarse woody debris		=		High 4ha (9.88 acres) or more	/	
		1 Standing dead >25cm						
		1 Amphibian breeding po	ols		οl	Microtopography Cover Scale Absent		
				-		Present very small amounts or if more	common	
				_		of marginal quality		
M - 4151 - 4 C 1				_	2	Present in moderate amounts, but not o		
Modified Cate		TOTAL (		=		quality or in small amounts of highest quality		
	37 GRAN	TOTAL(max 100 pts	)		3	Present in moderate or greater amounts	3	
						and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 014

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 2

Facing North



## Wetland 014

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 014

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 2

Facing South



## Wetland 014

Date:

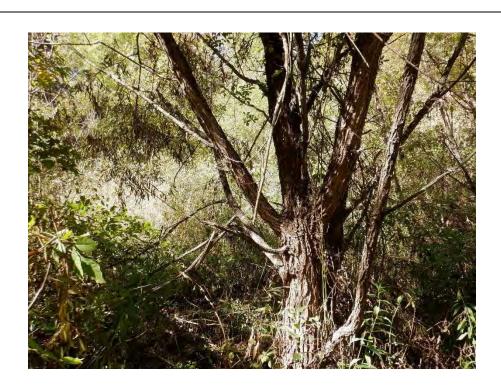
October 8, 2020

**Description:** 

PSS wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 014

Date:

October 8, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit



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

Project/Site: AEP Crooksville-Newark	City/County:	Perry County	Sampling Date: 08-Oct-20
Applicant/Owner: AEP		State: OH	Sampling Point: w-jbl-20201008-04
Investigator(s): jbl, rcm	Section, Towr	nship, Range: S 7	T_14N R_14W
Landform (hillslope, terrace, etc.): Swale	Local relief (cor	ncave, convex, none): co	oncave Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39,79921	Long.: -82.13	
Soil Map Unit Name: Bethesda-Pits, surface mir			classification: PUBF
Are climatic/hydrologic conditions on the site type			
Are Vegetation ☐ , Soil ✓ , or Hydrold		Are "Normal Circumstai	Van 📵 Na 🔘
Are Vegetation , Soil , or Hydrold			nies present.
Are vegetation, soil, of hydroid	gy 🗀 Haturany problematic?	(If needed, explain any	answers in Remarks.)
Summary of Findings - Attach site	map showing sampling po	int locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present? Yes   O	No O		
Hydric Soil Present? Yes   Yes		Sampled Area Yes N	In ()
Wetland Hydrology Present? Yes   O	No O within	a Wetland?	
Remarks:			
Sample point in to PEM Wetland 015, extends		swales in mining property	edisturbed soils, continues to east
outside study area connecting to NWI-mapped	PUBF wetland.		
Livelanda ev.			
Hydrology			
Wetland Hydrology Indicators:			Indicators (minimum of two required)
Primary Indicators (minimum of one required;			e Soil Cracks (B6)
<ul><li>✓ Surface Water (A1)</li><li>✓ High Water Table (A2)</li></ul>	<ul><li>☐ True Aquatic Plants (B14)</li><li>☐ Hydrogen Sulfide Odor (C1)</li></ul>		ly Vegetated Concave Surface (B8) ge Patterns (B10)
Saturation (A3)	✓ Oxidized Rhizospheres along Living R		rim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)		ason Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils		h Burrows (C8)
Drift deposits (B3)	☐ Thin Muck Surface (C7)	☐ Saturat	ion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted	d or Stressed Plants (D1)
☐ Iron Deposits (B5)			orphic Position (D2)
Inundation Visible on Aerial Imagery (B7)			v Aquitard (D3)
☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13)			opographic Relief (D4) eutral Test (D5)
Field Observations:		<u> </u>	uttai rest (bb)
Surface Water Present? Yes No	Depth (inches):		
Water Table Present? Yes  No	Depth (inches): 4		
Saturation Present? (includes expillent friege) Yes  No	Depth (inches):	Wetland Hydrology Prese	ent? Yes • No •
(includes capillary fringe)  Describe Recorded Data (stream gauge, monito		actions) if available:	
Describe Recorded Data (stream gauge, monito	Ting well, delial photos, previous insp	ections), ii available.	
Remarks:			
Multiple primary and secondary hydrology indic	ators present. Primary source of hydro	ology is concentration of pr	recipitation and surface runoff in
geomorphic position. Wetland drains to south to		area, that drains west to E	Buckeye Fork that flows north to
Jonathan Creek that flows east to Muskingum F	iver, a TNW.		
i e			

			ominant oecies? -		Sampling Point: w-jbl-20201008-04
Tree Stratum (Plot size: 10')	Absolute % Cover	R.	el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2	0		0.0%		T. I.I.N. also C.
3			0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0	= To	otal Cover	-	0BL speci es <u>25</u> x 1 = <u>25</u>
Sapling-Sapling/Shrub Stratum (Plot size: 10'	)		0.007		FACW species 30 x 2 = 60
1			0.0%		FAC speci es
2			0.0%		FACU speci es 0 x 4 = 0
3			0.0%		UPL species
4			0.0%		
5			0.0%		Column Totals:55_ (A)85_ (B)
6.			0.0%		Prevalence Index = B/A = 1.545
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		✓ Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10			0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)		= To	otal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' )	0	= To	otal Cover	-	(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
· · · · · · · · · · · · · · · · · · ·	30	<b>✓</b>	54.5%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
<b>^</b>	25	<b>▼</b>	45.5%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Eleocharis palustris     .	0		0.0%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4	0	П	0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
5	0	$\Box$	0.0%		in height.
6.	0	$\Box$	0.0%	$\overline{}$	
7	0		0.0%		Five Vegetation Strata:
•	0	$\Box$	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	$\Box$	0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
	0	$\Box$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11 12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
		ـــــ To =	otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 10' )					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1			0.0%		species, except woody vines, less than approximately 3 ft (1 m)
2			0.0%		in height.
3			0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5	0		0.0%		Hydrophytic
6		Ш	0.0%		Vegetation Var A Na O
	0	= T	otal Cove	r	Present? Yes Vivo V
Remarks: (Include photo numbers here or on a separate shee	et.)				
plot confined to swale, does not include adjacent hillside. Hydrophytic	c vegetation	indi	cator prese	ent as rapid	test. Dominant species are OBL and FACW.

Sampling Point: w-jbl-20201008-04

Profile Descrip		the depth ne				rm the al	bsence of indicators.)	
Depth -	Matrix	0/		edox Feature	1	1002	Toyturo	Domarka
(inches) 0-16	Color (moist) 10YR 4/1	<u>%</u> 75	Color (moist) 7.5YR 4/6		<u>Tvpe</u> ' <u> </u>	Loc <sup>2</sup>	Texture Sandy Clay Loam	Remarks distinct redox
			7.0110				Sandy Oldy Louin	concentrations
								·
								<u>,                                      </u>
	,			•				·
								<u>,                                      </u>
								<u> </u>
	,			1				`
		on. RM=Reduce	ed Matrix, CS=Cover	ed or Coated S	Sand Grains	<sup>2</sup> Locati	ion: PL=Pore Lining. M=	Matrix
Hydric Soil In							Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histosol (A			Dark Surface (	. ,			2 cm Muck (A1	0) (MLRA 147)
Histic Epipe			Polyvalue Belo				Coast Prairie Re	
Black Histic			☐ Thin Dark Surf		RA 147, 148	)	(MLRA 147,148	
Hydrogen S			Loamy Gleyed				Piedmont Floor	dplain Soils (F19)
Stratified La			✓ Depleted Matri				(MLRA 136, 14	
_	(A10) (LRR N)		Redox Dark Su	. ,			Very Shallow D	ark Surface (TF12)
	elow Dark Surface (A	11)	Depleted Dark				Other (Explain	in Remarks)
	Surface (A12)		Redox Depress		2) (LDD N			
Sandy Mucl MLRA 147,	k Mineral (S1) (LRR i 148)	٧,	☐ Iron-Mangane: MLRA 136)					
Sandy Gley	red Matrix (S4)		Umbric Surfac	e (F13) (MLRA	136, 122)		3	Charles I Paracologica
Sandy Redo	ox (S5)		☐ Piedmont Floo	dplain Soils (F	19) (MLRA	148)	vetland h	of hydrophytic vegetation and nydrology must be present,
Stripped Ma	atrix (S6)		Red Parent Ma	aterial (F21) (M	MLRA 127,	147)	unless	disturbed or problematic.
Restrictive Lav	yer (if observed):							
Туре:								
Depth (inche	es):						Hydric Soil Present?	Yes ● No O
Remarks:								
	cators present as	low chroma/	high value deplete	d matrix wi	ith require	d redox (	concentrations	
Tryanc son man	cators present as	iow chironia/	riigir valde deplete	a matrix wi	itirrequire	a redox (	concentrations.	

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

Project/Site: AEP Crooksville-Newark	City/County: Perry County Sampling Date: 08-Oct-20
Applicant/Owner: AEP	State: OH Sampling Point: upl-jbl-20201008-04
Investigator(s): jbl, rcm	Section, Township, Range: S 7 T 14N R 14W
Landform (hillslope, terrace, etc.): Mound	Local relief (concave, convex, none): convex Slope: 15.0% / 8.5 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.79957 Long.: -82.13131 Datum: NAD 83
Soil Map Unit Name: Bethesda-Pits, surface mine complex, 2	25 to 70 percent slopes, unreclaimed NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this t	ime of year? Yes  No O (If no, explain in Remarks.)
	gnificantly disturbed? Are "Normal Circumstances" present? Yes 💿 No 🔘
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 na	aturally problematic? (If needed, explain any answers in Remarks.)
	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No •	
Hydric Soil Present? Yes No	Is the Sampled Area Yes ○ No ● within a Wetland?
Wetland Hydrology Present? Yes ○ No •	within a wetland?
Not a wetland point as no wetland criteria met.  Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that  Surface Water (A1)  True Aqu	apply) Surface Soil Cracks (B6)  latic Plants (B14) Sparsely Vegetated Concave Surface (B8)
	n Sulfide Odor (C1) Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)
	Rhizospheres along Living Roots (C3)  Moss Trim Lines (B16)
	of Reduced Iron (C4) Dry Season Water Table (C2)
	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
	k Surface (C7) Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	xplain in Remarks)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present?  Yes No Depth (	(inches):
Water Table Present? Yes O No O Depth (	(inches):
Saturation Present?	(inches): Wetland Hydrology Present? Yes No •
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aer	
Remarks:	
No hydrology indicators present.	

			ominant		Sampling Point: upl-ibl-20201008-04
Tree Stratum (Plot size: 30' )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:  0 (A)
2	0		0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata:3 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15'	0	= Tc	otal Cover	-	0BL speci es x 1 =
4 1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25	<b>✓</b>	100.0%	EACH	FACW speci es x 2 =0
1. Liriodendron tulipifera			0.0%	FACU	FAC species $15 \times 3 = 45$
2			0.0%		FACU speci es x 4 =320
3			0.0%		UPL speci es $\frac{30}{100}$ x 5 = $\frac{150}{100}$
4			0.0%		Col umn Total s: 125 (A) 515 (B)
5			0.0%		
6			0.0%		Prevalence Index = B/A = 4.120
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9					Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1			0.0%		data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2			0.0%		
3			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			0.0%		
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' )		= Tc	otal Cover	-	of height.
1. Festuca arundinacea	30	✓	30.0%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Daucus carota	30	<b>✓</b>	30.0%	UPL	Herb stratum - Consists of all herbaceous (non-woody) plants,
3. Euthamia graminifolia	15		15.0%	FAC	regardless of size, and all other plants less than 3.28 ft tall.
4. Solidago altissima	15		15.0%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Symphyotrichum ericoides	10		10.0%	FACU	in no.gna
6	0		0.0%		Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )	100	= Tc	otal Cover	-	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2.	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Lludrophutio
6	0		0.0%		Hydrophytic Vegetation
	0	= To	otal Cove	r	Present? Yes No
Remarks: (Include photo numbers here or on a separate shee	et.)				I
No hydrophytic vegetation indicators present, dominance test <50%,	,	inde	ex >3.0. Do	ominant spe	ecies are FACU and UPL.

Soil

Sampling Point:

upl-jbl-20201008-04

Depth (inches) 0-16	Matrix		Redox Features	absence of indicators.)
0.16	Color (moist)	%	Color (moist) % Type 1 Loc2	
0-10	10YR 3/3	100		Sandy Clay Loam
				· · · · · · · · · · · · · · · · · · ·
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				· · · · · · · · · · · · · · · · · · ·
	,			
				<del> </del>
Type: C=Concer	ntration. D=Depletio	n. RM=Reducec	Matrix, CS=Covered or Coated Sand Grains <sup>2</sup> Loc	ation: PL=Pore Lining. M=Matrix
Hydric Soil Inc				
Histosol (A1)			☐ Dark Surface (S7)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histic Epiped			Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)
Black Histic			Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16)
				(MLRA 147,148)
Hydrogen Su			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Lay			Depleted Matrix (F3)	(MLRA 136, 147)
	A10) (LRR N)		Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF12)
	low Dark Surface (A	.11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark S	Gurface (A12)		Redox Depressions (F8)	
Sandy Muck MLRA 147, 1	Mineral (S1) (LRR N 48)	١,	Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleye	d Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox			Piedmont Floodplain Soils (F19) (MLRA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and
Stripped Mat			Red Parent Material (F21) (MLRA 127, 147)	wetland hydrology must be present, unless disturbed or problematic.
Restrictive Lay	er (if observed):			
Туре:				
Depth (inches	s):			Hydric Soil Present? Yes No 💿
Remarks:				-
	dicators procent			
la budria sail ir	idicators present			
o hydric soil ir	aloatoro procenti			
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Site: AE	P Crooksvil	le-Newark Tline	Rater(s): J. Lubb	ers; R. Massa	Date:	10/8/2020
			. , ,	Field Id:	<u>.</u>	
	2	2 Metric 1. Wet	tland Area (size).	w-jbl-20201008-	04	
max 6 pts	subtotal	Select one size clas	(6 pts) 1 to <20.2ha) (5 pts) <10.1ha) (4 pts) 2 <4ha) (3 pts) to <1.2ha) (2pts)	0.31	acres	
	4	<ul><li>&lt;0.1 acres (0.04ha) (</li><li>Metric 2. Upl</li></ul>	<sup>() pts)</sup> and buffers and sur	rounding land use		
				_		
max 14 pts.	subtotal	WIDE. Buffers avera MEDIUM. Buffers av x NARROW. Buffers a	ge 50m (164ft) or more around v erage 25m to <50m (82 to <164	ft) around wetland perimeter (4) 2ft) around wetland perimeter (1)	песк.	
		VERY LOW. 2nd gro x LOW. Old field (>10 moderately High	ounding land use. Select one with or older forest, prairie, sava years), shrubland, young second . Residential, fenced pasture, prial, open pasture, row cropping,	nnah, wildlife area, etc. (7) d growth forest. (5) ark, conservation tillage, new fallow fie	old. (3)	
	9.5 15.	Metric 3. Hyd	Irology.			
max 30 pts.	subtotal	High pH groundwater Other groundwater (3 x Precipitation (1) x Seasonal/Intermitten Perennial surface wa 3c. Maximum water >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 2 x <0.4m (<15.7in) (1) 3e. Modifications to None or none appare Recovered (7) Recovering (3) x Recent or no recover	t surface water (3) ter (lake or stream) (5) depth. Select one.  27.6in) (2) natural hydrologic regime. Sent (12)	Semi- to permanently inun  x Regularly inundated/sature x Seasonally inundated (2) Seasonally saturated in up core one or double check and average Check all disturbances of x ditch title dike weir stormwater input	other human use (1) g. forest), complex (1) corridor (1) saturation. Score one or dbl ch dated/saturated (4) ated (3) oper 30cm (12in) (1) ge.	
		<b>_</b>		•		
max 20 pts.	subtotal	None or none appare Recovered (3) X Recovering (2) X Recent or no recover 4b. Habitat develope Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteratio None or none appare Recovered (6) X Recovered (6) X Recent or no recover	ny (1) ment. Select only one and ass n. Score one or double check ent (9)	ign score.	served  x shrub/sapling removal herbaceous/aquatic bed re x sedimentation x dredging farming nutrient enrichment	emoval
	22 subtotal th	<b>2</b> is page ORAM v. 5.0 Field Fo	orm Quantitative Rating			

ORAM\_w-jbl-20201008-04.xlsm | test\_Field

Site: AEP	Crooksvill	e-Newark Tline	Rater(s): J. Lu	bbers; R. I	Massa	Date:	10/8/2020
			<u>.</u>		Field Id:		
	22	2			w-jbl-20201008-04		
	subtotal thi	s page					
	0 22	Metric 5. Spec	ial Wetlands.				
max 10 pts.	subtotal		ply and score as in	dicated.			
		Bog (10) Fen (10)					
		Old growth forest (10)					
		Mature forested wetlar					
			ary wetland-unrestricted harry wetland-restricted hyd				
			es (Oak Openings) (10)	iiology (o)			
		Relict Wet Praires (10)					
			te/federal threatened or er		ies (10)		
			ongbird/water fowl habitat ee Question 5 Qualitative				
	4 26	~ .		• , ,	ion, microtopography.		
max 20pts.	subtotal		etation Communitie	=	Vegetation Community Cove	er Scale	
		Score all present using			Absent or comprises <0.1ha (0.2471 ad		
		Aquatic bed		1	Present and either comprises small par		
		1 Emergent			vegetation and is of moderate quality, o	or comprises a	
		Shrub Forest		2	significant part but is of low quality  Present and either comprises significan	nt nart of wetland's 2	
		Mudflats		-	vegetation and is of moderate quality of		
		Open water			part and is of high quality		
		Other	<del></del> .	3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan v Select only one.	ew) interspersion.		vegetation and is of high quality		
		High (5)			Narrative Description of Vegetation (	Quality	
		Moderately high(4)			Low spp diversity and/or predominance		
		Moderate (3)			disturbance tolerant native species		
		Moderately low (2) Low (1)			Native spp are dominant component of although nonnative and/or disturbance	•	
		x None (0)			can also be present, and species divers	• • •	
		6c. Coverage of invas	ive plants. Refer		moderately high, but generallyw/o prese		
		Table 1 ORAM long for			threatened or endangered spp to		
		or deduct points for co	•		A predominance of native species, with		
		Extensive >75% cover Moderate 25-75% cover			and/or disturbance tolerant native spp a absent, and high spp diversity and often		
		Sparse 5-25% cover (-			the presence of rare, threatened, or end		
		Nearly absent <5% co	ver (0)			• .,	
		X Absent (1)			Mudflat and Open Water Class Quali	ty	
		6d. Microtopography Score all present using		1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/			Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		1 Coarse woody debris >			High 4ha (9.88 acres) or more	,	
		0 Standing dead >25cm					
		1 Amphibian breeding po	ools	0	Microtopography Cover Scale Absent		
				1	Present very small amounts or if more	common	
					of marginal quality		
				2	Present in moderate amounts, but not o	•	
Category 1					quality or in small amounts of highest q		
	26 GRAN	D TOTAL(max 100 pts	)	3	Present in moderate or greater amount	s	
					and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 015

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing North



## Wetland 015

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 015

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing South



## Wetland 015

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 015

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



# Wetland 016 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Crooksville-Ne	wark	City/County: Perry County	Sampling Date: 08-Oct-20
Applicant/Owner: AEP		State:	OH Sampling Point: w-jbl-20201008-05
Investigator(s): jbl, rcm		Section, Township, Range:	S 7 T 14N R 14W
Landform (hillslope, terrace, etc.	.): Hillside	Local relief (concave, convex	x, none): concave Slope: 5.0% / 2.9 °
Subregion (LRR or MLRA): LR	RR N Lat	<b>-</b> t.: 39.79993	Long.: -82.13227 Datum: NAD 83
Soil Map Unit Name: GwD - Gu	uernsey-Westmoreland silt loams, 15		NWI classification: N/A
Are climatic/hydrologic conditio	ons on the site typical for this time of	year? Yes • No O (If	no, explain in Remarks.)
Are Vegetation . , Soil	_		mal Circumstances" present? Yes   No
Are Vegetation . , Soil	, or Hydrology 🗌 naturally	y problematic? (If neede	ed, explain any answers in Remarks.)
Summary of Findings -		sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Presen			
Hydric Soil Present?	Yes O No O	Is the Sampled Area	a Yes  ● No ○
Wetland Hydrology Present?	Yes ● No O	within a Wetland?	
Potentially isolated.		Tillistae seep. vrenana rang as.	elineated, in prior strip-mined land = disturbed soils.
Hydrology			
Surface Water (A1)  ✓ High Water Table (A2)  ✓ Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Im  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  (includes capillary fringe)	of one required; check all that apply  True Aquatic Pla Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Thin Muck Surfa Other (Explain in	ants (B14) le Odor (C1) pheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ace (C7) n Remarks)  ):  0  Wetland Hy	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Describe Recorded Data (stream	m gauge, monitoring well, aerial pho	otos, previous inspections), if av	vailable:
	y hydrology indicators present. Prima e, no defined feature, no defined cor		roundwater seepage and precipitation. Hydrologic es. Potentially isolated.

			ominant		Sampling Point: <b>w-ibl-20201008-05</b>
Tree Stratum (Plot size: 30' )	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  (A)
2	0		0.0%		Total Number of Dominant
3	0	$\square$	0.0%		Species Across All Strata: 3 (B)
4		$\square$	0.0%		Demonstrati demolerant Consulta
5		$\square$	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		
7			0.0%		Prevalence Index worksheet:
8	0	Ш,	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15'	0	= 10	otal Cover	-	0BL speciles
1	0		0.0%		FACW species $25 \times 2 = 50$
2			0.0%		FAC speciles x 3 =
3.			0.0%		FACU speci es x 4 =
4.			0.0%		UPL speci es
5			0.0%		Col umn Total s: 100 (A) 125 (B)
6			0.0%		Prevalence Index = B/A = 1.250
7	0	$\square$	0.0%		Hydrophytic Vegetation Indicators:
8	0	Щ	0.0%		Rapid Test for Hydrophytic Vegetation
9.		$\square$	0.0%		✓ Dominance Test is > 50%
10		Ш	0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)		= Tc	otal Cover	-	☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3		$\square$	0.0%	,	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4	0	Щ	0.0%		be present, unless disturbed or problematic.
5		$\square$	0.0%	,	Definition of Vegetation Strata:
6	0		0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5')	0 :	= To	otal Cover	-	of height.
1. Leersia oryzoides	50	<b>✓</b>	50.0%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus atrovirens	25	<b>V</b>	25.0%	OBL	Herb stratum - Consists of all herbaceous (non-woody) plants,
3. Eupatorium perfoliatum	25	<b>V</b>	25.0%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4			0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0	$\square$	0.0%		
6.	0		0.0%		Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0 0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11 12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	_	. ت To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1			0.0%		species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0 0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5	0 0		0.0%		Hydrophytic
6		, لـــا 	0.0% otal Cove		Vegetation Present? Yes No O
		- 10	Jiai COVE		L
Remarks: (Include photo numbers here or on a separate sheethydrophytic vegetation indicator present as rapid test. Dominant spec	,	and	I FACW.		

Sampling Point: w-jbl-20201008-05

rofile Description: (Describe to the Depth Matrix		t the indicator or coredox Features	iiirm the a	usence or indicators.)	
(inches) Color (moist)	% Color (moist)		_Loc <sup>2</sup> _	Texture	Remarks
<b>0-2</b> 10YR 3/2	100			Silty Clay Loam	
<b>2-18</b> 10YR 4/1	80 10YR 4/6	20 C	PL	Silty Clay Loam	distinct redox concentrations
		•			·
					·
					· ·
					,
		· · · · · · · · · · · · · · · · · · ·			
					· ·
					<u>.</u>
Type: C=Concentration. D=Depletion.	RM=Reduced Matrix, CS=Cover	ed or Coated Sand Grai	ns <sup>2</sup> Locat	ion: PL=Pore Lining. M=	Matrix
Hydric Soil Indicators:				Indicators for Prob	olematic Hydric Soils <sup>3</sup> :
Histosol (A1)	☐ Dark Surface	(S7)		2 cm Muck (A1	
Histic Epipedon (A2)	Polyvalue Beld	ow Surface (S8) (MLRA	147,148)	. <u></u>	
Black Histic (A3)	☐ Thin Dark Sur	face (S9) (MLRA 147, 14	48)	Coast Prairie Re (MLRA 147,148	
Hydrogen Sulfide (A4)	Loamy Gleyed	Matrix (F2)		_ `	, Iplain Soils (F19)
Stratified Layers (A5)	✓ Depleted Matr	ix (F3)		(MLRA 136, 14	
2 cm Muck (A10) (LRR N)	Redox Dark Si	, ,		Very Shallow D	ark Surface (TF12)
Depleted Below Dark Surface (A11	) Depleted Dark	Surface (F7)		Other (Explain	in Remarks)
Thick Dark Surface (A12)	Redox Depres				
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	☐ Iron-Mangane MLRA 136)	se Masses (F12) (LRR N	Ι,		
Sandy Gleyed Matrix (S4)		e (F13) (MLRA 136, 12	2)		
Sandy Redox (S5)		odplain Soils (F19) (MLR		<sup>3</sup> Indicators	of hydrophytic vegetation and
Stripped Matrix (S6)		aterial (F21) (MLRA 127		wetland h	ydrology must be present, disturbed or problematic.
	Red relient w	atorial (121) (MEIV 127	, , , , ,		
estrictive Layer (if observed):					
Type:				Ukudaia Cail Dasaasa	Yes ● No ○
Depth (inches):				Hydric Soil Present?	Yes 🔍 No 🔾
Remarks:					
ydric soil indicators present as lov	w chroma/high value deplete	ed matrix with requir	ed redox c	concentrations.	

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Crooksville-Newark	City/Co	ounty: Perry County	Sampling Date: 08-Oct-20
Applicant/Owner: AEP		State: OH	Sampling Point: upl-jbl-20201008-05
Investigator(s): jbl, rcm	Sectio	n, Township, Range: S	7 T 14N R 14W
Landform (hillslope, terrace, etc.): Hills	side Local re	lief (concave, convex, nor	ne): flat Slope: <u>15.0%</u> / 8.5 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.799	)01 Long	.: -82.13216 Datum: NAD 83
Soil Map Unit Name: GwD - Guernsey-W			NWI classification: N/A
	site typical for this time of year? Y Hydrology  significantly distur	bed? Are "Normal Ci	xplain in Remarks.) ircumstances" present? Yes  No  plain any answers in Remarks.)
Summary of Findings - Attach	n site map showing sampli	ng point locations	, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	s O No •		
Hydric Soil Present? Yes	s O No •	Is the Sampled Area	res ○ No •
3	s O No O	within a Wetland?	es O No O
Remarks:			
Hydrology			
Wetland Hydrology Indicators:			Connection (minimum of two required)
Primary Indicators (minimum of one req	utired: check all that apply)	<u> </u>	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along	Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (0	24)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Till	ed Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface (C7)	L	Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	Other (Explain in Remarks)	L	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery (B7)☐		L	Geomorphic Position (D2)
Water-Stained Leaves (B9)		L	☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:			
	Depth (inches):		
	Depth (inches):	_	
		Wetland Hydrol	logy Present? Yes O No 🖲
(includes capillally fringe)			
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previo	us inspections), if availab	ble:
Remarks:			
No hydrology indicators present.			

			ominant becies? =		Sampling Point: upl-ibl-20201008-05
Tree Stratum (Plot size: 30')	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
2	0		0.0%		T. I.I.N. also C.
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4			0.0%		
5			0.0%		Percent of dominant Species
6.			0.0%	1	That Are OBL, FACW, or FAC: 25.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0	= Tc	tal Cover		0BL speci es
Sapling-Sapling/Shrub Stratum (Plot size: 15'					FACW speci es 15 x 2 = 30
1. Rosa multiflora		<b>✓</b>	57.1%	FACU	FAC speciles 20 x 3 = 60
2. Platanus occidentalis		<b>✓</b>	42.9%	FACW	FACU species $\frac{120}{120}$ x 4 = $\frac{480}{120}$
3	0		0.0%		
4			0.0%		
5	0		0.0%		Column Totals: <u>155</u> (A) <u>570</u> (B)
6			0.0%		Prevalence Index = B/A = 3.677
7		Ш	0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.		$\Box$	0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
5	0	$\Box$	0.0%		Four Vegetation Strata:
6	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	_	— – Та	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5'</u> )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Solidago canadensis	50	<b>✓</b>	41.7%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Festuca arundinacea		<b>✓</b>	25.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Symphyotrichum pilosum			16.7%	FAC	' '
4. Tridens flavus			16.7%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		0.0%		
6			0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9			0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0	Ш	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30')	120	= Tc	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5	0		0.0%		
6	0		0.0%		Hydrophytic Vegetation
·.		= To	otal Cove	-	Present? Yes No •
Demarker (Include photo numbers here as a second					I
Remarks: (Include photo numbers here or on a separate sheet No hydrophytic vegetation indicators present, dominance test <50%,		inde	ex >3.0. Do	ominant spe	ecies are FACW and FACU.

Sampling Point: upl-jbl-20201008-05

	ption: (De	escribe to Matrix	the depth r		the indicator or co dox Features	ntirm the a	bsence of indicators.)		
Depth (inches)	Color	(moist)	%	Color (moist)		Loc <sup>2</sup>	Texture	Remarks	
0-16	10YR	3/2	100				Sandy Clay		_
		`						*	
								•	
								·,	
		`			•		`		
		`						,	
								,	
								<u>.</u>	
Tuno: C. Cono	ontrotion [	) Doplotic	n DM Dodu	and Matrix CC Cavara	d or Cooted Cond Cra	inc 21 cost	ion. Di Doro Lining M A	Antriv	
		J=Depletic	n. Rivi=Redu	ced Matrix, CS=Covere	d or Coated Sand Gra	iins ²Locati	ion: PL=Pore Lining. M=N		
Hydric Soil II				□ <b>-</b>			Indicators for Prob	lematic Hydric Soils <sup>3</sup> :	
Histosol (A				☐ Dark Surface (\$		4.7.4.0)	2 cm Muck (A10	) (MLRA 147)	
Histic Epip					v Surface (S8) (MLRA		Coast Prairie Red	dox (A16)	
<ul><li>☐ Black Histi</li><li>☐ Hydrogen</li></ul>		`			ice (S9) (MLRA 147, 1	48)	(MLRA 147,148)	, ,	
Stratified L		)		Loamy Gleyed			Piedmont Floodp		
		D NI)		Depleted Matrix Redox Dark Su			(MLRA 136, 147		
2 cm Muck			a a \	Depleted Dark	, ,		☐ Very Shallow Da		
Depleted E			.11)	Redox Depress			Other (Explain in	n Remarks)	
☐ Thick Dark					e Masses (F12) (LRR	NI			
Sandy Muc MLRA 147	ck Mineral ( . 148)	S1) (LRR I	١,	MLRA 136)	e Masses (FTZ) (ERR	IV,			
Sandy Gle		(S4)		Umbric Surface	(F13) (MLRA 136, 12	22)			
Sandy Rec		,		Piedmont Floor	Iplain Soils (F19) (MLI	RA 148)	<sup>3</sup> Indicators o	f hydrophytic vegetation a ydrology must be present,	and
Stripped M				Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless o	disturbed or problematic.	
						,			
Restrictive La	yer (if ob	served):							
Type:							Hydric Soil Present?	yes ○ No •	
Depth (inch	es):						Tiyunc 3011 Fresent?	res O INO O	
Remarks:									
lo hydric soil	indicators	present.							

Site: AE	P Crooksvil	le-Newark Tline	Rater(s): J. Lubbe	ers; R. Massa	Date:	10/8/2020
<u> </u>			· · · · ·	Field Id:	•	
	0	0 Metric 1. Wet	land Area (size).	w-jbl-20201008-05		
max 6 pts	subtotal	Select one size clas	s and assign score.			
		>50 acres (>20.2ha)	• ,	0.04 acr	res	
		25 to <50 acres (10.1 10 to <25 acres (4 to	, , , ,			
		3 to <10 acres (1.2 to				
		0.3 to <3 acres (0.12				
		0.1 to <0.3 acres (0.0 x <0.1 acres (0.04ha) (				
	4 4		and buffers and sur	rounding land uso		
L				_	1.	
max 14 pts.	subtotal		e butter width. Select only on ge 50m (164ft) or more around w	e and assign score. Do not double chec	cK.	
			erage 25m to <50m (82 to <164f			
				2ft) around wetland perimeter (1)		
		VERY NARROW. Bu	ffers average <10m (<32ft) arou	nd wetland perimeter (0)		
			ounding land use. Select one of			
			wth or older forest, prairie, savar			
			rears), shrubland, young second	ark, conservation tillage, new fallow field. (	(3)	
			al, open pasture, row cropping,	_	(0)	
	7.0 11.0	Metric 3. Hyd	rology	.,		
max 30 pts.	subtotal		r. Score all that apply.	3b. Connectivity. Score all t	hat annly	
max oo pio.	oubtotal	High pH groundwater		100 year floodplain (1)		
		Other groundwater (3	)	x Between stream/lake and other		
		x Precipitation (1)	curface water (2)	Part of wetland/upland (e.g. fo		
		Seasonal/Intermittent Perennial surface wa	ter (lake or stream) (5)	Part of riparian or upland corri 3d. Duration inundation/satu		eck.
		3c. Maximum water		Semi- to permanently inundate	ed/saturated (4)	
		>0.7 (27.6in) (3)	7.0:\ (0)	x Regularly inundated/saturated	1 (3)	
		0.4 to 0.7m (15.7 to 2 x <0.4m (<15.7in) (1)	7.6IN) (2)	Seasonally inundated (2)  x Seasonally saturated in upper	30cm (12in) (1)	
			natural hydrologic regime. Sc	ore one or double check and average.		
		None or none appare	nt (12)	Check all disturbances obse		,
		Recovered (7) x Recovering (3)		x ditch	point source (nonstormwat filling/grading	er)
		x Recent or no recover	y (1)	dike	— *.* <u> </u>	
		<u> </u>		weir	dredging	
		_		stormwater input	Other: cattle	
	6.5 17.	5 Metric 4. Hab	itat Alteration and D	evelopment.		
max 20 pts.	subtotal		bance. Score one or double ch	neck and average.		
		None or none appare Recovered (3)	nt (4)			
		x Recovering (2)				
		x Recent or no recover				
		4b. Habitat developr Excellent (7)	nent. Select only one and assi	gn score.		
		Very good (6)				
		Good (5)				
		Moderately good (4) x Fair (3)				
		Poor to fair (2)				
		Poor (1)				
			n. Score one or double check a		red.	
		None or none appare Recovered (6)	iii (a)	Check all disturbances observ		
		x Recovering (3)		grazing	herbaceous/aquatic bed re	moval
		x Recent or no recover	y (1)	x clearcutting x		
				x selective cutting x woody debris removal	dredging farming	
		_		x toxic pollutants	nutrient enrichment	
	17.	5			_	
		DRAM V E O Field Fo	erm Ougantitativa Pating			

Site: AEP	Crooksville	e-Newark Tline	Rater(s): J. Lubbe	rs; R. I	Massa	Date:	10/8/2020
					Field Id:		<u> </u>
	17.5	]			w-jbl-20201008-05		
	subtotal this	page					
	0 17.5	Metric 5. Spe	cial Wetlands.				
max 10 pts.	subtotal	Check all that a	pply and score as indica	ited.			
		Bog (10)					
		Fen (10) Old growth forest (10)					
		Mature forested wetla					
			utary wetland-unrestricted hydrol	ogy (10)			
			utary wetland-restricted hydrolog	y (5)			
			ries (Oak Openings) (10)				
		Relict Wet Praires (1	ບ) tate/federal threatened or endang	ered speci	es (10)		
			songbird/water fowl habitat or us		55 (15)		
			See Question 5 Qualitative Ratin				
	2 19.5	Metric 6. Plai	nt communities, inte	rspers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland Ve	getation Communities.		Vegetation Community Cove		
		Score all present using	ng 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 ac		
		Aquatic bed 1 Emergent		1	Present and either comprises small par vegetation and is of moderate quality, or		
		Shrub			significant part but is of low quality	i comprises a	
		Forest		2	Present and either comprises significan	t part of wetland's 2	
		Mudflats			vegetation and is of moderate quality or	comprises a small	
		Open water Other			part and is of high quality  Present and comprises significant part,	ar mara of watlandla 2	
			view) Interspersion.	3	vegetation and is of high quality	or more, or welland's 3	
		Select only one.	,		g,		
		High (5)			Narrative Description of Vegetation 0		
		Moderately high(4)			Low spp diversity and/or predominance	of nonnative or low	
		Moderate (3)  Moderately low (2)			disturbance tolerant native species  Native spp are dominant component of	the vegetation, mod	
		Low (1)			although nonnative and/or disturbance	•	
		x None (0)			can also be present, and species divers		
		6c. Coverage of inv			moderately high, but generallyw/o prese	ence of rare	
		Table 1 ORAM long for deduct points for deduct points.			threatened or endangered spp to  A predominance of native species, with	nonnative can high	
		Extensive >75% cov			and/or disturbance tolerant native spe		
		Moderate 25-75% co	. ,		absent, and high spp diversity and ofter	•	
		Sparse 5-25% cover	. ,		the presence of rare, threatened, or end	dangered spp	
		Nearly absent <5% c x Absent (1)	over (0)		Mudflat and Open Water Class Quality	h.	
		6d. Microtopograph	IV.	0	Absent <0.1ha (0.247 acres)	ıy	
		Score all present using			Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummuck			Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		0 Coarse woody debris		3	High 4ha (9.88 acres) or more		
		Standing dead >25cr     Amphibian breeding			Microtopography Cover Scale		
		,psian brooding	r =	0	Absent		
				1	Present very small amounts or if more	common	
					of marginal quality	of high ant	
Category 1				2	Present in moderate amounts, but not of quality or in small amounts of highest q		
	19.5 GRAND	TOTAL(max 100 pt	s)	3	Present in moderate or greater amounts		
	. U.U OINAINE	- 101AE(max 100 pt	~,	3		<b>-</b>	
					land of highest quality		



**Client Name:** 

Site Location:

Project No.

60616110

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Wetland 016

Date:

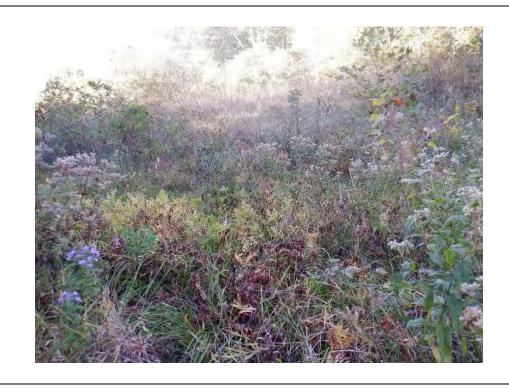
October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing North



## Wetland 016

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 016

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing South



## Wetland 016

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 016

Date:

October 8, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



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

Project/Site: AEP Crooksville-Newark		City/County: Perry County	Sampling Date: 07-Oct-20				
Applicant/Owner: AEP		State: (	OH Sampling Point: w-jbl-20201007-01				
Investigator(s): jbl, rcm		Section, Township, Range:					
Landform (hillslope, terrace, etc.):	Valley bottom	Local relief (concave, convex	, none): concave Slope: 0.0% / 0.0 °				
Subregion (LRR or MLRA): LRR N	Lat.:	39.80357 L	ong.: -82.13859 Datum: NAD 83				
Soil Map Unit Name: Ne - Newark si			NWI classification: PEM1A				
Are climatic/hydrologic conditions on	the site typical for this time of ye	ear? Yes O No O (If n	no, explain in Remarks.)				
Are Vegetation , Soil ,			nal Circumstances" present? Yes  No				
Are Vegetation , Soil ,	, or Hydrology  naturally p		d, explain any answers in Remarks.)				
Summary of Findings - Att	ach site map showing s	sampling point location	ons, transects, important features, etc.				
Hydrophytic Vegetation Present?	Yes ● No O						
Hydric Soil Present?	Yes   No	Is the Sampled Area	Yes ● No ○				
Wetland Hydrology Present?	Yes   No	within a Wetland?	,66 - 1.6 -				
Remarks:  Sample point (w-jbl-20201007-01) in of pem valley bottom Wetland 017. Wetland extends to northeast and southwest outside study area, intercepts channel of NHD mapped stream.							
Hydrology							
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Aquatic Fauna (B13)  Field Observations: Surface Water Present? Yes Water Table Present?	True Aquatic Plant: Hydrogen Sulfide ( Voxidized Rhizospho Presence of Reduct Recent Iron Reduct Thin Muck Surface Other (Explain in Re)  (B7)  No Depth (inches):	Odor (C1) eres along Living Roots (C3) sed Iron (C4) stion in Tilled Soils (C6) c (C7) Remarks)  0 0	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Image: Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)				
Saturation Present?  (includes confident frings)  Yes	No Depth (inches):	Wetland Hy	/drology Present? Yes ● No ○				
Describe Recorded Data (stream gau Remarks: One primary and several secondary	uge, monitoring well, aerial photo	mary sources of hydrology are	e intermittent stream inflow and concentration of e Fork that flows north to Jonathan Creek the flows				

			ominant becies? =		Sampling Point: w-ibl-20201007-01
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2	00		0.0%		Total Musels on af Density and
3			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 66.7% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0	= To	otal Cover		0BL speci es60 x 1 =60
Sapling-Sapling/Shrub Stratum (Plot size: 15'				=	FACW species 50 x 2 = 100
1. Rosa multiflora		<b>✓</b>	100.0%	FACU	FAC speci es 0 x 3 = 0
2			0.0%		FACU species $10 \times 4 = 40$
3			0.0%		UPL species $0 \times 5 = 0$
4			0.0%		1
5			0.0%		Col umn Total s:120 (A)200 (B)
6			0.0%		Prevalence Index = B/A = 1.667
7			0.0%		Hydrophytic Vegetation Indicators:
8	0		0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ш	0.0%		✓ Dominance Test is > 50%
10	0	Ш	0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)		= To	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1			0.0%		data in Remarks or on a separate sheet)
2			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	_		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0	$\Box$	0.0%		Four Vegetation Strata:
	0	$\Box$	0.0%		Tree stratum - Consists of woody plants, excluding vines, 3 in.
7	_	 = To	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: 5' )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Typha angustifolia	60	<b>✓</b>	54.5%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Symphyotrichum novae-angliae	30		27.3%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Juncus effusus			18.2%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
4	_		0.0%		in height.
5.			0.0%		
6	_		0.0%		Five Vegetation Strata:
7	_		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	_		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	_		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	_		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11			0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	0	$\Box$	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )	110	= 10	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5	0		0.0%		Lludrophutio
6	0		0.0%		Hydrophytic Vegetation
	0	= T	otal Cove		Present? Yes No O
Remarks: (Include photo numbers here or on a separate shee	et )				I.
Hydrophytic vegetation indicator present as dominance test > 50%. I		ecie	s are OBL,	FACW and	FACU.

Sampling Point: w-jbl-20201007-01

Profile Descri	ption: (Describe to	the depth ne	eded to document	the indica	ator or con	firm the al	osence of indicators	.)	
Depth	Matrix		Re	dox Featu	res				
_(inches)_	Color (moist)		Color (moist)	%	_ <u>Tvpe_</u> 1	Loc <sup>2</sup>	Texture		narks
0-16	10YR 4/1	80	7.5YR 4/6	20	С	М	Loam	distinct r concentrat	redox cions in pore
								'	
								4	
								<del></del>	
			<u></u>						
			<del></del>						
				. —					
			<u></u>					·	
			<del></del>					•	
								<del></del>	
<sup>1</sup> Type: C=Cond	entration. D=Depletio	n. RM=Reduce	d Matrix. CS=Covere	ed or Coate	d Sand Grain	ns ²Locati	on: PL=Pore Lining. N	l=Matrix	
Hydric Soil I	·								3
Histosol (A			☐ Dark Surface (	S7)			Indicators for Pr		c Soils ":
Histosof (A			Polyvalue Belov		SQ) (MI DA 1	17 1/0\	2 cm Muck (A	A10) (MLRA 147)	
							Coast Prairie	Redox (A16)	
Black Histi			Thin Dark Surfa		LKA 147, 14	18)	(MLRA 147,1		
	Sulfide (A4)		Loamy Gleyed					odplain Soils (F19)	
	_ayers (A5)		✓ Depleted Matri:				(MLRA 136, 1	147)	
2 cm Muck	(A10) (LRR N)		Redox Dark Su				Very Shallow	Dark Surface (TF1	2)
Depleted B	Below Dark Surface (A	11)	Depleted Dark	•	)		Other (Explai	n in Remarks)	
☐ Thick Dark	Surface (A12)		Redox Depress						
Sandy Muo MLRA 147	ck Mineral (S1) (LRR N , 148)	I,	Iron-Manganes MLRA 136)	e Masses (I	F12) (LRR N	l,			
Sandy Gle	yed Matrix (S4)		Umbric Surface	e (F13) (ML	RA 136, 122	2)	2		
Sandy Red	dox (S5)		Piedmont Floor	dplain Soils	(F19) (MLR.	A 148)	<sup>3</sup> Indicator	s of hydrophytic ve d hydrology must b	egetation and
Stripped M	Matrix (S6)		Red Parent Ma	terial (F21)	(MLRA 127	, 147)		ss disturbed or pro	
					`	,			
Restrictive La	yer (if observed):								
Type:							Ukadaia Cail Danasa	+2 V (a)	No O
Depth (inch	nes):						Hydric Soil Presen	t? Yes 💿	No U
Remarks:									
Hydric soil inc	licator present as lo	w chroma/hi	ah value depleted	matrix wi	th require	d redox co	ncentrations.		
			gri valdo dopiotod		oquo	a . oao oo			

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Crooksville-Newark	Sampling Date: 07-Oct-20
Applicant/Owner: AEP	State: OH Sampling Point: upl-jbl-20201007-01
Investigator(s): jbl, rcm	Section, Township, Range: S 12 T 16N R 15W
Landform (hillslope, terrace, etc.): Hillside Lo	ocal relief (concave, convex, none): none Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N Lat.:	39.80359 Long.: -82.13848 Datum: NAD 83
Soil Map Unit Name: Ne - Newark silt loam, 0 to 3 percent slopes, freq	
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation U, Soil U, or Hydrology U significantly	disturbed? Are "Normal Circumstances" present? Yes ♥ No ♥
Are Vegetation , Soil , or Hydrology naturally pro	blematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes O No •	
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	Is the Sampled Area yes ○ No ● within a Wetland?
Remarks:	
Upland 016 point out to Wetland 017, about 3 feet east of boundary.	Not a wetland point, no wetland criteria met
opiana o ro point out to wetland o rr, about o reet east or boardary.	Not a Wettaria point, no Wettaria anteria met.
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (	B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Hydrogen Sulfide Odd	or (C1) Drainage Patterns (B10)
	es along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2)  Recent Iron Reduction	
☐ Drift deposits (B3) ☐ Thin Muck Surface (C ☐ Algal Mat or Crust (B4) ☐ Other (Explain in Ren	
☐ Algal Mat or Crust (B4) ☐ Other (Explain in Ren ☐ Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes O No O Depth (inches):	Wetland Hydrology Present? Yes ○ No •
Saturation Present? (includes capillary fringe)  Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ●
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	
No hydrology indicators present.	

		Do	!0		Sampling Point: upl-ibl-20201007-01
Tree Stratum (Plot size: 30' )	Absolute % Cover	R	oecies? - el.Strat. over	Indicator Status	
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:  (A)
2.	0		0.0%		
3			0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
6	0		0.0%		That Are OBL, FACW, or FAC.
7	0		0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15'	)	= To	otal Cover	r	0BL speci es x 1 =
1. Rosa multiflora	<b>—'</b> 15	<b>✓</b>	100.0%	FACU	FACW speci es x 2 =
2.		$\Box$	0.0%	17100	FAC speci es x 3 =
3.			0.0%		FACU speci es $\frac{105}{100}$ x 4 = $\frac{420}{100}$
4.			0.0%		UPL species $\frac{10}{2}$ x 5 = $\frac{50}{2}$
5.			0.0%		Column Totals: 115 (A) 470 (B)
6			0.0%		Prevalence Index = B/A =
7			0.0%		
8			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
0	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	15	= To	tal Cove	r	Morphological Adaptations <sup>1</sup> (Provide supporting
1			0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			0.0%	`	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%	•	be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' )	0 :	= To	otal Cover	r	of height.
1. Solidago altissima	90	<b>✓</b>	90.0%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Daucus carota	10		10.0%	UPL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3	0		0.0%		regardless of size, and all other plants less than 3.28 ft tall.
4	0		0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
5	0		0.0%		in height.
6.	0		0.0%		Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
0	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
1	0		0.0%		3 in. (7.6 cm) DBH.
2	0	Ш	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )	100	= To	otal Cover	r	Herb stratum - Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation Vac O Na O
	0	_		-	Present? Yes VIVO
	0	=	otal Cove	:1	

Sampling Point:

upl-jbl-20201007-01

	ption: (De	escribe to Matrix	tne depth ne	eeded to d		the indic lox Featu		ntirm the al	bsence of indicators.)		
Depth (inches)	Color	(moist)		Color (r			Tvpe_1	Loc <sup>2</sup>	Texture	Ren	narks
0-17	10YR	3/3	100	00101 (1	HOISO				Clay Loam	RCH	Idi Ko
		•									
										L.	
		`			-					4	
					-						
<sup>1</sup> Type: C=Cond	entration. I	D=Depletio	n. RM=Reduc	ed Matrix, C	CS=Coverer	d or Coate	d Sand Grai	ns <sup>2</sup> Locati	ion: PL=Pore Lining. M=M	atrix	
Hydric Soil II											a Caila 3.
Histosol (A				☐ Dark	Surface (S	7)			Indicators for Probl		U JUNS .
Histic Epip					,	•	(S8) (MLRA	147,148)	2 cm Muck (A10)		
☐ Black Histi							/LRA 147, 1		Coast Prairie Rec	ox (A16)	
	Sulfide (A4	)			ny Gleyed N			,	(MLRA 147,148)		
	_ayers (A5)				eted Matrix				Piedmont Floodp (MLRA 136, 147)		
	(A10) (LR				x Dark Surf				Very Shallow Dai		2)
	Below Dark		11)		eted Dark S		7)				2)
	selow bark Surface (A		11)	_	x Depressi		• /		Other (Explain in	Remarks)	
							(F12) (LRR N	J			
MLRA 147	ck Mineral ( , 148)	,51) (LRR IV	1	MLRA	4 136)	,doodo (	, , , , , , , , , , , , , , , , , , , ,	•1			
	yed Matrix	(S4)		Umbi	ric Surface	(F13) (ML	_RA 136, 12	2)			
Sandy Rec		(- )		☐ Piedr	mont Flood	plain Soils	(F19) (MLR	RA 148)	<sup>3</sup> Indicators of	hydrophytic ve	egetation and
Stripped M							) (MLRA 127		wetland hy unless d	drology must b isturbed or pro	pe present, oblematic.
							(1112101127	, ,			
Restrictive La	ayer (if ob:	served):									
Туре:									11 11 6 11 6 11 6	· ·	
Depth (inch	nes):								Hydric Soil Present?	Yes O	No 🛡
Remarks:											
No hydric soil	indicators	present.									
9											

Site: AEI	P Crooksville	e-Newark Tline	Rater(s): J. Lubbe	ers; L. Bilski	Date:	10/7/2020
			·	Field Id:	•	
	2 2	Metric 1. Wet	land Area (size).	w-jbl-20201007-0	1	
max 6 pts	subtotal	Select one size clas  >50 acres (>20.2ha)  25 to <50 acres (10.1  10 to <25 acres (4 to 3 to <10 acres (1.2 to x 0.3 to <3 acres (0.12  0.1 to <0.3 acres (0.04  <0.1 acres (0.04ha) (0	(6 pts) to <20.2ha) (5 pts) <10.1ha) (4 pts) o <4ha) (3 pts) to <1.2ha) (2pts) 14 to <0.12ha) (1 pt)	1.40a	icres	
	7 9	Metric 2. Upl	and buffers and sur	rounding land use.		
max 14 pts.	subtotal	WIDE. Buffers avera  x MEDIUM. Buffers av. NARROW. Buffers a VERY NARROW. Bu  2b. Intensity of surr VERY LOW. 2nd gro x LOW. Old field (>10 MODERATELY HIGH	ge 50m (164ft) or more around verage 25m to <50m (82 to <164ft verage 10m to <25m (32ft to <82ft ffers average <10m (<32ft) arou ounding land use. Select one owth or older forest, prairie, savar years), shrubland, young second	t) around wetland perimeter (4) 2ft) around wetland perimeter (1) nd wetland perimeter (0) or double check and average. nnah, wildlife area, etc. (7) growth forest. (5) ark, conservation tillage, new fallow field		
	12.0 21.0			mining, constituction. (1)		
max 30 pts.	subtotal	3a. Sources of Wate High pH groundwater (3	or. Score all that apply.  (5)  surface water (3)  ter (lake or stream) (5)  depth. Select one.  (7.6in) (2)  natural hydrologic regime. Scont (12)	Semi- to permanently inund:  X Regularly inundated/saturate  Seasonally inundated (2)  Seasonally saturated in upp ore one or double check and average  Check all disturbances ob  X ditch X tile dike weir stormwater input	ther human use (1) forest), complex (1) rridor (1) turation. Score one or dbl cherated/saturated (4) ed (3) er 30cm (12in) (1)	
max 20 pts.	subtotal	None or none appare Recovered (3)  X Recovering (2)  X Recent or no recover 4b. Habitat develope Excellent (7)  Very good (6) Good (5)  Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	y (1) ment. Select only one and assi n. Score one or double check and (9)	gn score.  and average.  Check all disturbances observing grazing x clearcutting selective cutting woody debris removal	x shrub/sapling removal herbaceous/aquatic bed rem x sedimentation dredging farming	ioval
	26.5	page ORAM v. 5.0 Field Fo	orm Quantitative Rating	x toxic pollutants	nutrient enrichment	

ORAM\_w-jbl-20201007-01.xlsm | test\_Field

Site: AEP	Crooksville	-Newark Tline	Rater(s): J. Lubbers;	L. E	Bilski	Date:	10/7/2020
-					Field Id:		
	26.5				w-jbl-20201007-01		
	subtotal this p						
	0 26.5	Metric 5. Spec	cial Wetlands.				
max 10 pts.	subtotal	Check all that ap	pply and score as indicated				
	ŀ	Fen (10)					
		Old growth forest (10)					
	-	Mature forested wetlar		40)			
	-		tary wetland-unrestricted hydrology ( tary wetland-restricted hydrology (5)	10)			
	-		es (Oak Openings) (10)				
		Relict Wet Praires (10)					
			te/federal threatened or endangered		es (10)		
	-		ongbird/water fowl habitat or usage ( see Question 5 Qualitative Rating (-1				
	-1 25.5		t communities, intersp		ion, microtopography.		
max 20pts.	subtotal		etation Communities.		Vegetation Community Cov	er Scale	
		Score all present using			Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed		1	Present and either comprises small par		
		1 Emergent			vegetation and is of moderate quality, o	or comprises a	
	-	Shrub Forest		2	significant part but is of low quality  Present and either comprises significant	nt nart of wetland's 2	
	•	Mudflats		-	vegetation and is of moderate quality o		
		Open water			part and is of high quality		
		Other	<del></del> .	3	Present and comprises significant part	or more, of wetland's 3	
		6b. horizontal (plan v Select only one.	iew) Interspersion.		vegetation and is of high quality		
	İ	High (5)			Narrative Description of Vegetation	Quality	
	•	Moderately high(4)			Low spp diversity and/or predominance		
		Moderate (3)			disturbance tolerant native species		
		Moderately low (2)			Native spp are dominant component of		
	-	Low (1) x None (0)			although nonnative and/or disturbance can also be present, and species diver		
	L	6c. Coverage of invas	sive plants. Refer		moderately high, but generallyw/o pres		
		Table 1 ORAM long fo			threatened or endangered spp to		
	-	or deduct points for co			A predominance of native species, with		
		Extensive >75% cover	• •		and/or disturbance tolerant native spp	•	
	•	x Moderate 25-75% cover (- Sparse 5-25% cover (-			absent, and high spp diversity and ofte the presence of rare, threatened, or en		
	•	Nearly absent <5% co	•		are precented or rare, amedicinea, or on	aangoroa opp	
		Absent (1)	. ,		Mudflat and Open Water Class Quali	ty	
		6d. Microtopography			Absent <0.1ha (0.247 acres)		
	Γ	Score all present using 0 Vegetated hummucks/			Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres	<u> </u>	
	-	Coarse woody debris >			High 4ha (9.88 acres) or more	·/	
	ŀ	0 Standing dead >25cm			[g (e.ee =====) =		
		Amphibian breeding po	pols		Microtopography Cover Scale		
					Absent		
				1	Present very small amounts or if more of marginal quality	CONTIMON	
				2	Present in moderate amounts, but not	of highest	
Category 1				_	quality or in small amounts of highest q		
	25.5 GRAND	TOTAL(max 100 pts	)	3	Present in moderate or greater amount	s	
					and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 017

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing North



## Wetland 017

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 017

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing South



## Wetland 017

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 017

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



Project/Site: AEP Crooksville-Newark

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region City/County: Perry County

Applicant/Owner: AEP	State: OH Sampling Point: w-jbl-20201007-02
Investigator(s): jbl, rcm Section	on, Township, Range: S 1 T 16N R 15W
Landform (hillslope, terrace, etc.): Lowland Local re	elief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N Lat.: 39.81	270 Long.: -82.14757 Datum: NAD 83
Soil Map Unit Name: WmD - Westmoreland silt loam, 15 to 25 percent slope	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year?  Are Vegetation , Soil , or Hydrology significantly disturdance Vegetation , Soil , or Hydrology naturally problems  Summary of Findings - Attach site map showing sample	rbed? Are "Normal Circumstances" present? Yes   No   No   atic? (If needed, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes No O	Is the Sampled Area Yes  No O
Wetland Hydrology Present? Yes   No	within a Wetland?
Sample point (w-jbl-20201007-02) in to pem Wetland 018. Old culvert appearream 021 downstream. Wetland fully delineated.	ears to have been blocked. Runoff from Wetland flows over berm into
Hydrology	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water Stained Leaves (B9)  Aquatic Fauna (B13)  True Aquatic Plants (B14)  Hydrogen Sulfide Odor (C1)  Presence of Reduced Iron ( Recent Iron Reduction in Ti  Other (Explain in Remarks)  Other (Explain in Remarks)	g Living Roots (C3)  Moss Trim Lines (B16)  C(4)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Yes No Depth (inches):	Wetland Hydrology Present? Yes ● No ○
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous Remarks:  Multiple primary and secondary hydrology indicators present. Primary source precipitation and surface runoff. Wetland abuts intermittent stream 021 that flows north to Jonathan Creek the flows east to Muskingum River, a TNW.	es of hydrology are intermittent stream inflow and concentration of

Sampling Date: 07-Oct-20

			minant		Sampling Point: w-ibl-20201007-02
Tree Stratum (Plot size: 30' )	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:5(A)
2	0		0.0%		Total Number of Dominant
3	0	$\square$	0.0%		Species Across All Strata:5(B)
4		$\square$	0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		That Are OBL, FACW, OF FAC:
7	0	$\sqcup$	0.0%		Prevalence Index worksheet:
8	0	$\square$	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15'		= Tc	tal Cover		0BL speci es <u>40</u> x 1 = <u>40</u>
4 - 1 to 1 o o 1 o o o to	10	<b>✓</b>	66.7%	FAC	FACW speci es
Lindera benzoin     Gleditsia triacanthos		<b>✓</b>	33.3%	FAC	FAC speciles $\underline{15}$ x 3 = $\underline{45}$
			0.0%	1710	FACU speci es x 4 =
3		$\Box$	0.0%		UPL speci es x 5 =
4		$\Box$	0.0%		Column Totals:115_ (A)205_ (B)
5		$\Box$	0.0%		
6		$\Box$	0.0%		Prevalence Index = B/A = 1.783
7		$\Box$	0.0%		Hydrophytic Vegetation Indicators:
8		$\Box$	0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10		ш,	tal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1		Н.	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2		Η.	0.0%		
3.		$\square$	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		$\square$	0.0%		
5	0	$\square$	0.0%		Definition of Vegetation Strata:
6	0	$\sqcup$	0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш.	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5')	0	= Tc	tal Cover		of height.
1. Impatiens capensis	35_	<b>✓</b>	35.0%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Carex Iurida	30	✓.	30.0%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Eupatorium perfoliatum	25	✓.	25.0%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Carex vulpinoidea	10		10.0%	OBL	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		0.0%		in neight.
6	0	Ш.	0.0%		Five Vegetation Strata:
7	0	$\sqcup$	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0	$\square$	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	$\sqcup$	0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0	$\sqcup$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0	$\square$	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
	100	= Tc	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5.	0		0.0%		
6	0		0.0%		Hydrophytic Vegetation
J	0	 = To	otal Cove	-	Present? Yes No
Remarks: (Include photo numbers here or on a separate shee					<u> </u>
Hydrophytic vegetation indicator present as dominance test > 50%.		ecies	s are OBL,	FACW and	FAC.

Sampling Point:

w-jbl-20201007-02

Depth -		Matrix				edox Featu	1			
inches)		(moist)	%		(moist)	%_	Tvpe_	Loc2_	Texture	Remarks
0-4	10YR	4/2	95	10YR	4/6	5	С	PL	Silty Clay Loam	
4-16	10YR	4/1	85	10YR	4/6	15	C	M	Silty Clay Loam	
		`				•			,	
		·				•				
		`								
		·								
e: C=Concen	ntration.	D=Depletio	n. RM=Reduc	ed Matrix,	CS=Cover	ed or Coate	ed Sand Grai	ns <sup>2</sup> Locat	ion: PL=Pore Lining. M=Matrix	
dric Soil Ind	licators:								Indicators for Problematic	Hydric Soils 3.
Histosol (A1)	)			☐ Dar	rk Surface (	(S7)			2 cm Muck (A10) (MLRA	
Histic Epiped	don (A2)			Pol	yvalue Belo	w Surface	(S8) (MLRA	147,148)		
Black Histic (	(A3)			Thi	n Dark Surf	face (S9) (N	ЛLRA 147, 1	48)	Coast Prairie Redox (A16 (MLRA 147,148)	o)
Hydrogen Su	ulfide (A4	.)		Loa	ımy Gleyed	Matrix (F2)	)		Piedmont Floodplain Soil	s (F19)
Stratified Lay	yers (A5)			<b>✓</b> Dep	oleted Matr	ix (F3)			(MLRA 136, 147)	3 (1 1 / )
2 cm Muck (A	A10) (LR	R N)			dox Dark Su				Very Shallow Dark Surfa	ce (TF12)
Depleted Bel	low Dark	Surface (A	11)			Surface (F	7)		Other (Explain in Remark	ks)
Thick Dark S	iurface (A	A12)			dox Depress				_ 、,	,
Sandy Muck MLRA 147, 1	Mineral 48)	(S1) (LRR N	l,		n-Mangane: RA 136)	se Masses (	(F12) (LRR N	١,		
Sandy Gleyed	d Matrix	(S4)		Um	nbric Surfac	e (F13) (MI	LRA 136, 12:	2)	2	
Sandy Redox	(S5)			☐ Pie	dmont Floo	dplain Soils	s (F19) (MLR	A 148)	<sup>3</sup> Indicators of hydrop wetland hydrology	hytic vegetation and
Stripped Mat	rix (S6)			Red	d Parent Ma	aterial (F21)	) (MLRA 127	, 147)	unless disturbed	or problematic.
strictive Laye	or (if ob	con (od):								
туре:	21 (11 00	serveu).								
Depth (inches	-).								Hydric Soil Present? Yes	s O No O
•	o)								•	
marks:										
ric soil indica	ator pre	esent as Ic	w chroma/l	nigh value	e depleted	d matrix w	vith require	d redox co	oncentrations.	

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Crooksville-Newark		rty/County: Perry County	Sampling Date: 07-Oct-20
Applicant/Owner: AEP		State: 0	Sampling Point: upl-jbl-20201007-02
Investigator(s): jbl, rcm	S	Section, Township, Range: S	S 1 T 16N R 15W
Landform (hillslope, terrace, etc.):	Hillside Loc	cal relief (concave, convex,	none): flat Slope: 15.0% / 8.5 °
Subregion (LRR or MLRA): LRR N		9.81279 Lo	ong.: -82.14765 Datum: NAD 83
Soil Map Unit Name: WmD - Westm			NWI classification: N/A
Are climatic/hydrologic conditions or			p, explain in Remarks.)
			· · · · · · · · · · · · · · · · · · ·
	, or Hydrology significantly o		ar orreamstances present.
Are Vegetation, Soil	, or Hydrology  unaturally prob	olematic? (If needed,	, explain any answers in Remarks.)
Summary of Findings - Att	tach site map showing sar	npling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes ○ No ●		
Hydric Soil Present?	Yes ○ No •	Is the Sampled Area	
, and the second	Yes ○ No ●	within a Wetland?	Yes ○ No •
Wetland Hydrology Present?  Remarks:	163 0 110 0		
	110 shout 10 fast parth of boundary	Not a watland point, no w	intland critoria mat
Upiand 017 point out to wetiand o	118, about 10 feet north of boundary	. Not a wetiand point, no w	etland criteria met.
Hydrology			
Wetland Hydrology Indicators:  Primary Indicators (minimum of on	o required, check all that apply)		Secondary Indicators (minimum of two required)
Surface Water (A1)	True Aquatic Plants (B	11/1	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor		☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)
Saturation (A3)		along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced I	0 0 , ,	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	, ,	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface (C7	, ,	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rema	•	Stunted or Stressed Plants (D1)
Iron Deposits (B5)			Geomorphic Position (D2)
Inundation Visible on Aerial Imagery	/ (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present?  Yes	) No O Depth (inches):		
	_	Wetland Hyd	drology Present? Yes O No 💿
(includes capillary fringe) Yes			
Describe Recorded Data (stream ga	uge, monitoring well, aerial photos, p	orevious inspections), if ava	ilable:
Remarks:			
No hydrology indicators present.			

			ominant		Sampling Point: <u>upl-ibl-20201007-02</u>
	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:  O (A)
2	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		Species Across Air Strata.
		$\Box$	0.0%		Percent of dominant Species
5		$\Box$	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
6					
7			0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15'	0	= Tc	otal Cover		OBL species 0 x 1 = 0
1	0		0.0%		FACW speci es 0 x 2 = 0
2			0.0%		FAC species $0 \times 3 = 0$
			0.0%		FACU speci es $100$ x 4 = $400$
3			0.0%		UPL species
4					Column Totals:100_ (A)400_ (B)
5			0.0%		
6			0.0%		Prevalence Index = B/A = 4.000
7					Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9		$\square$	0.0%		Dominance Test is > 50%
10	0	Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
6					Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш,	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5'	0		otal Cover		of height.  Sapling/shrub stratum – Consists of woody plants, excluding
1. Festuca arundinacea	35	<b>V</b>	35.0%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Solidago canadensis	35	✓	35.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Schizachyrium scoparium	20	✓	20.0%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Symphyotrichum ericoides	10	Ш	10.0%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		0.0%		in neight.
6	0		0.0%		Five Vegetation Strata:
7	0		0.0%		
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
	0		0.0%		diameter at breast height (DBH).
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	_				Shrub stratum – Consists of woody plants, excluding woody
12	100	<u>ب</u>	0.0% otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' )		= 10			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1			0.0%		species, except woody vines, less than approximately 3 ft (1 m)
2		$\square$	0.0%		in height.
3	0	$\square$	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	$\square$	0.0%		height.
5	0		0.0%		Hydrophytic
6.	0		0.0%		Hydrophytic Vegetation
	0	= To	otal Cover		Present? Yes No
Remarks: (Include photo numbers here or on a separate shee	at )				
No hydrophytic vegetation indicators present, dominance test <50%,		indo	7X ≥3 U D⊂	minant spo	ories are FACII
The figure prigne regulation indicators present, dominance test < 5076,	Prevalence	iiiuc	,, , J.U. DC	annant spe	alo mot

Sampling Point: upl-jbl-20201007-02

	ption: (De	escribe to Matrix	the depth r		the indicator or co dox Features	nfirm the a	bsence of indicators.)	
Depth (inches)	Color	(moist)		Color (moist)	%Tvpe_1	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR	3/3	100	00101 111101017			Silt Loam	TO THE TO
		`						
		`			`			
					<u>,                                    </u>			
					<u>,</u>			
		•						
1								
			n. RM=Redu	ced Matrix, CS=Covere	ed or Coated Sand Gra	ains <sup>2</sup> Locat	ion: PL=Pore Lining. M=Ma	ıtrix
Hydric Soil I							Indicators for Proble	ematic Hydric Soils <sup>3</sup> :
Histosol (A				Dark Surface (			2 cm Muck (A10)	(MLRA 147)
Histic Epip					w Surface (S8) (MLRA		Coast Prairie Redo	
☐ Black Histi					ace (S9) (MLRA 147, 1	148)	(MLRA 147,148)	,, (1110)
_	Sulfide (A4			Loamy Gleyed			Piedmont Floodpla	ain Soils (F19)
	_ayers (A5)			Depleted Matri			(MLRA 136, 147)	
	(A10) (LR			Redox Dark Su			Very Shallow Dark	Surface (TF12)
	Below Dark		11)	Depleted Dark			Other (Explain in	Remarks)
	K Surface (A			Redox Depress				
Sandy Mu MLRA 147	ck Mineral (	(S1) (LRR N	١,	☐ Iron-Manganes MLRA 136)	se Masses (F12) (LRR	N,		
		(C 4)		_	e (F13) (MLRA 136, 12	22)		
	yed Matrix	(54)			dplain Soils (F19) (ML		<sup>3</sup> Indicators of	hydrophytic vegetation and
Sandy Red							wetland hvd	Irology must be present, sturbed or problematic.
Stripped iv	nati ix (30)			Red Parent Ma	terial (F21) (MLRA 12	7, 147)	uriless dis	sturbed or problematic.
Restrictive La	ayer (if ob:	served):						
Туре:								
Depth (inch	nes):						Hydric Soil Present?	Yes ○ No •
Remarks:							1	
No hydric soil	indicators	nresent						
TVO TIYOTIC SOII	indicators	present.						

Field Id:  a (size). w-jbl-20201007-02  score.  0.10 acres  is pts) (s) (s) (1 pt)  ars and surrounding land use.  b. Select only one and assign score. Do not double check.  or more around wetland perimeter (7)  Sign (82 to < 164ft) around wetland perimeter.	
score.  0.10  acres  ipts) s)  is) (s) (1) (1) (rs and surrounding land use.  a. Select only one and assign score. Do not double check. or more around wetland perimeter (7)	
o pts)  spin (spin	
n. Select only one and assign score. Do not double check. or more around wetland perimeter (7)	
or more around wetland perimeter (7)	
<25m (32ft to <82ft) around wetland perimeter (1) 10m (<32ft) around wetland perimeter (0)	
est, prairie, savannah, wildlife area, etc. (7) nd, young second growth forest. (5) fenced pasture, park, conservation tillage, new fallow field. (3)	
100 year floodplain (1)  x Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1)  x Part of riparian or upland corridor (1)  3d. Duration inundation/saturation. Score one or dbl check.  Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3)  x Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1)	
ation and Development.	
or double check and average.  Check all disturbances observed  mowing grazing x clearcutting x selective cutting woody debris removal farming	
	Som (82 to <164ft) around wetland perimeter (4)

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: AEF	Crooksvill	e-Newark Tline	Rater(s):	J. Lubbers; F	R. N	Massa	Date:	10/7/2020
						Field Id:	-	
	22.5	5				w-jbl-20201007-02		
	subtotal this	s page						
	0 22.5	Metric 5. Spec	ial Wetland	ls.				
max 10 pts.	subtotal	Check all that ap	ply and score	e as indicated.				
		Bog (10)						
		Fen (10) Old growth forest (10)						
		Mature forested wetlar						
		Lake Erie coastal/tribu Lake Erie coastal/tribu			0)			
		Lake Plain Sand Prairi						
		Relict Wet Praires (10	)	, , ,				
		Known occurrence sta Significant migratory s				s (10)		
		Category 1 Wetland. S						
	4 26.5	Metric 6. Plan	t communit	ies, interspe	ersi	on, microtopography.		
max 20pts.	subtotal	6a. Wetland Veg	etation Comm	unities.		Vegetation Community Cove	er Scale	
		Score all present using	0 to 3 scale.	-		Absent or comprises <0.1ha (0.2471 ac		
		Aquatic bed 2 Emergent				Present and either comprises small par vegetation and is of moderate quality, o		
		Shrub		_		significant part but is of low quality	r comprises a	
		Forest		-		Present and either comprises significan		
		Mudflats Open water				vegetation and is of moderate quality or part and is of high quality	comprises a small	
		Other		-	3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan v Select only one.	iew) Interspersio	n.		vegetation and is of high quality		
		High (5)				Narrative Description of Vegetation C		
		Moderately high(4) Moderate (3)				Low spp diversity and/or predominance disturbance tolerant native species	of nonnative or low	
		Moderately low (2)			-	Native spe are dominant component of	the vegetation, mod	
		Low (1)				although nonnative and/or disturbance	tolerant native spp	
		None (0)  6c. Coverage of invas	ivo plante Pofor			can also be present, and species divers moderately high, but generallyw/o prese		
		Table 1 ORAM long fo				threatened or endangered spp to	ence or rare	
		or deduct points for co	•			A predominance of native species, with		
		Extensive >75% cover Moderate 25-75% cov				and/or disturbance tolerant native spp a absent, and high spp diversity and ofter		
		Sparse 5-25% cover (-				the presence of rare, threatened, or end		
		Nearly absent <5% co	ver (0)					
		Absent (1)  6d. Microtopography	_			Mudflat and Open Water Class Qualit Absent <0.1ha (0.247 acres)	ty	
		Score all present using		-		Low 0.1 to <1ha (0.247 to 2.47 acres)		
		0 Vegetated hummucks/		-		Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		0 Coarse woody debris 3 0 Standing dead >25cm			3	High 4ha (9.88 acres) or more		
		1 Amphibian breeding po				Microtopography Cover Scale		
				· <del>-</del>		Absent Present very small amounts or if more	common	
				<u>-</u>		of marginal quality		
Catagory 4						Present in moderate amounts, but not o		
Category 1	26 5 GDANI	D TOTAL (may 100 sto	`	-		quality or in small amounts of highest quality or in small amounts of highest quality are greater amounts.		
	20.5 GRANI	D TOTAL(max 100 pts	,			Present in moderate or greater amounts	S	
						and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 018

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing North



## Wetland 018

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 018

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing South



## Wetland 018

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

## Wetland 018

Date:

October 7, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



#### Wetland 019

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

Project/Site: Crooksville-Nort	th Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP		State: OH	Sampling Point: w-bl-20200602-01
Investigator(s): BL, SKM		Section, Township, Range: S	2 T 16N R 15W
Landform (hillslope, terrace, e	etc.): Toeslope	Local relief (concave, convex, no	one): concave Slope: 3.0 % / 71.6 °
Subregion (LRR or MLRA):	LRR N Lat	.: 39.81858 Long	- NADO3
Soil Map Unit Name: <u>AfC - A</u>	Alford silt loam, 8 to 15 percent slopes		NWI classification: N/A
Are climatic/hydrologic condi	tions on the site typical for this time of	year? Yes O No O (If no, e	explain in Remarks.)
Are Vegetation , Soil		•	Circumstances" present? Yes  No
Are Vegetation , Soil	, or Hydrology naturally	y problematic? (If needed, ex	xplain any answers in Remarks.)
Summary of Findings	s - Attach site map showing	sampling point locations	s, transects, important features, etc.
Hydrophytic Vegetation Pres			
Hydric Soil Present?	Yes O No O	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present?	yes ⊙ No O	within a Wetland?	
	etland 019. Wetland is wet meadow sw. study area, no feature readily visible acr		200602-01), flows to subsurface drain to east
Hydrology			·
✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	m of one required; check all that apply)  True Aquatic Pla Hydrogen Sulfide  Oxidized Rhizosp Presence of Red Recent Iron Red Thin Muck Surfae Other (Explain in	onts (B14) e Odor (C1) oheres along Living Roots (C3) luced Iron (C4) luction in Tilled Soils (C6) ce (C7) in Remarks)  i: U  Wetland Hydro	
	ream gauge, monitoring well, aerial pho	otos, previous inspections), if availa	ible:
			From agricultural pond p-bl-20200602-01, drains to n of nearby large stream; potentially isolated.

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

			ominant		Sampling Point: <b>w-bl-20200602-01</b>
_Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	oecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:3 (A)
2	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4		$\Box$	0.0%		Species Across All Strata: 3 (B)
		$\Box$	0.0%		Percent of dominant Species
5		$\Box$	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6		$\Box$	0.0%		Prevalence Index worksheet:
7					Total % Cover of: Multiply by:
8			0.0%		
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	) —	= 10	otal Cover		0BL speci es 35 x 1 = 35
1			0.0%		FACW speci es 38 x 2 = 76
2.			0.0%	•	FAC speci es $0 \times 3 = 0$
3.			0.0%		FACU speci es $25$ x 4 = $100$
4		$\Box$	0.0%		UPL speci es
		$\Box$	0.0%		Column Totals: 98 (A) 211 (B)
5			0.0%		
6			0.0%		Prevalence Index = B/A = 2.153
7					Hydrophytic Vegetation Indicators:
8	0		0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10		Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0	= To	otal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5.			0.0%	•	Definition of Vegetation Strata:
6.		$\Box$	0.0%		Four Vegetation Strata:
	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		ات To	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' r</u> )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Agrostis gigantea		<b>✓</b>	20.4%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus atrovirens		<b>✓</b>	20.4%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Carex vulpinoidea	15	<b>✓</b>	15.3%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Schedonorus arundinaceus	10		10.2%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Poa compressa	10		10.2%	FACU	
6. Leersia virginica	10		10.2%	FACW	Five Vegetation Strata:
7. Juncus effusus	5	$\sqcup$	5.1%	FACW	Tree - Woody plants, excluding woody vines, approximately 20
8. Cirsium arvense	5		5.1%	FACU	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9. Phalaris arundinacea	3		3.1%	FACW	diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	98	= To	tal Cover	-	vines, approximately 3 to 20 ft (1 to 6 m) in height.
	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1					species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3			0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation
	0	= T	otal Cove	r	Present? Yes W No U
Remarks: (Include photo numbers here or on a separate shee	et.)				
Hydrophytic vegetation indicators present as rapid test, dominant spe	,	and	FACW		

Soil Sampling Point: w-bi-20200602-01

Profile Descri	iption: (Describe to	o the depth	needed to d	documen	t the indic	cator or co	nfirm the a	bsence of indicators.	)		
Depth	Matrix			Re	edox Feati	ures					
(inches)	Color (moist)	%	Color	moist)	_ %	Tvpe_1	Loc <sup>2</sup>	Texture	Remarks		
0-6	10YR 4/2	90	10YR	4/4	10	С	PL	Sandy Clay Loam	distinct redox concentrations		
6-15	10YR 4/1	90	10YR	4/6	10	С	PL	Sandy Clay Loam	distinct redox		
								-	concentrations		
									<del>,</del>		
									· ·		
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									<u>,</u>		
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						·.			· ·		
									·		
<sup>1</sup> Type: C=Cond	centration. D=Depleti	ion. RM=Redi	uced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	ins <sup>2</sup> Locat	tion: PL=Pore Lining. M	=Matrix		
Hydric Soil I	ndicators:							Indicators for Pro	oblematic Hydric Soils <sup>3</sup> :		
☐ Histosol (A	A1)		☐ Darl	Surface (	(S7)						
Histic Epip	pedon (A2)		Poly	value Belo	w Surface	(S8) (MLRA	147,148)		10) (MLRA 147)		
☐ Black Histi	ic (A3)		Thin	Dark Surf	ace (S9) (N	MLRA 147, 1	48)	Coast Prairie F (MLRA 147,14			
☐ Hydrogen	Sulfide (A4)		Loar	ny Gleyed	Matrix (F2	)		_ `	odplain Soils (F19)		
Stratified I	Layers (A5)		☐ Dep	eted Matr	ix (F3)			(MLRA 136, 1			
2 cm Muck	k (A10) (LRR N)		Red	ox Dark Su	urface (F6)				Dark Surface (TF12)		
Depleted I	Below Dark Surface (	A11)	☐ Dep	eted Dark	Surface (F	7)			Other (Explain in Remarks)		
☐ Thick Darl	k Surface (A12)	,	Red	ox Depres	sions (F8)			Other (Explain	Tirriteriarksy		
Sandy Mu	ck Mineral (S1) (LRR	N,	☐ Iron	-Mangane	se Masses	(F12) (LRR	N,				
MLRÁ 147	MLRA 147, 148) MLRA 136)										
-	yed Matrix (S4)		Uml	oric Surfac	e (F13) (M	LRA 136, 12	22)	3	or Charles I and the constaller and I		
✓ Sandy Red	dox (S5)		☐ Piec	mont Floc	dplain Soils	s (F19) (MLI	RA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,			
Stripped N	Matrix (S6)		Red	Parent Ma	aterial (F21	) (MLRA 12	7, 147)	unless disturbed or problematic.			
Postrictivo La	ayer (if observed):										
Type:	ayer (II observed).										
	200).							Hydric Soil Present	? Yes • No O		
Depth (inch	les)										
Remarks:											
-	dicator present as	depleted ma	atrix in sand	dy soils s	tarting les	ss than or	equal to 6	" depth with distinct r	redox concentrations as pore		
linings.											

## Upland 018 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmissi	ion Line City/County: Perry	Sampling Date: 02-Jun-20		
Applicant/Owner: AEP	State:	OH Sampling Point: upl-bl-20200602-01		
nvestigator(s): BL, SKM	Section, Township, Range:	S 2 T 16N R 15W		
andform (hillslope, terrace, etc.): Hillside	Local relief (concave, conve	x, none): convex Slope: 10.0 % / 84.3 °		
Subregion (LRR or MLRA): LRR N	Lat.: 39.81858	Long.: -82.15399 Datum: NAD83		
Soil Map Unit Name: AfC - Alford silt loam, 8 to 15 p		NWI classification: N/A		
Are climatic/hydrologic conditions on the site typical for				
		no, explain in Remarks.)		
— constraint — con		mar circumstances present:		
Are Vegetation	naturally problematic? (If neede	ed, explain any answers in Remarks.)		
Summary of Findings - Attach site ma	p showing sampling point locati	ions, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes O No				
Hydric Soil Present? Yes No (	Is the Sampled Area	ra Yes ○ No •		
Wetland Hydrology Present? Yes O No (		Yes O No O		
Remarks:				
no wetland criteria met.	t south of wetland boundary at higher elevat	tion in undistirbed old pasture. Not a wetland point as		
Hydrology				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one required; check	all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)		
	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)		
	Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)		
	Presence of Reduced Iron (C4)	Dry Season Water Table (C2)		
	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)		
	Thin Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1)		
☐ Iron Deposits (B5)	Other (Explain in Remarks)	Geomorphic Position (D2)		
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)		
Water-Stained Leaves (B9)		Microtopographic Relief (D4)		
Aquatic Fauna (B13)		FAC-neutral Test (D5)		
Field Observations:  Surface Water Present?  Yes No  No				
	Depth (inches): 0			
Water Table Present? Yes No •	Depth (inches):	Hydrology Present? Yes ○ No •		
Saturation Present? (includes capillary fringe)  Yes No   No	Depth (inches):	rydrology Present? Tes C No C		
Describe Recorded Data (stream gauge, monitoring v	vell, aerial photos, previous inspections), if a	vailable:		
Remarks:				
No hydrology indicators present.				

### Upland 018

			ominant		Sampling Point: <b>_upl-bl-20200602-01</b>
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:  O (A)
2			0.0%		
3			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4.			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.			0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )	Ο :	= To	otal Cover		0BL speci es
			0.0%		FACW species 5 x 2 = 10
1			0.0%		FAC speciles 12 x 3 = 36
2			0.0%		FACU speci es 80 x 4 = 320
3			0.0%		UPL speci es x 5 =
4			0.0%		Column Totals: 97 (A) 366 (B)
5			0.0%		(1)
6			0.0%		Prevalence Index = B/A = 3.773
7					Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10		Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover		☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0	Ш	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= To	otal Cover		of height.
1. Schedonorus arundinaceus	30	<b>✓</b>	30.9%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Poa compressa	20	<b>✓</b>	20.6%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Festuca rubra	20	<b>✓</b>	20.6%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Cirsium arvense	10		10.3%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Juncus tenuis	10		10.3%	FAC	in height.
6. Agrostis gigantea	5		5.2%	FACW	Five Vegetation Strata:
7. Rumex crispus	2		2.1%	FAC	Tree - Woody plants, excluding woody vines, approximately 20
8.			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	97	= To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody
2.	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		
6	0		0.0%		Hydrophytic Vegetation
U	0	_ _ T	otal Cover		Present? Yes No
December 11 to 1		- '	50 (0)		
Remarks: (Include photo numbers here or on a separate shee No hydrophytic vegetation indicators present, dominant species are F.	,				

Upland 018

Soil

Sampling Point:

upl-bl-20200602-01

inches)	Matrix			Redox Featur				_	
0.7	Color (moist)		Color (moist		Type	Loc <sup>2</sup>	Texture	Rem	narks
0-7	10YR 4/3		10YR 4/6	10			Sandy Clay Loam		
7-15	10YR 4/2	60	10YR 4/6	40	. <u> </u>		Sandy Clay	,	
			,						
			<del></del>						
			<del></del>						
e: C=Conce	entration. D=Deplet	ion. RM=Reduc	ed Matrix, CS=Co	vered or Coatec	Sand Grains	<sup>2</sup> Locati	on: PL=Pore Lining. M=Ma	ntrix	
dric Soil In	dicators:						Indicators for Proble	matic Hydrid	r Soils <sup>3</sup> .
Histosol (A1			☐ Dark Surfa	ce (S7)					2 30113 .
Histic Epipe	edon (A2)		Polyvalue E	elow Surface (S	88) (MLRA 14	7,148)	2 cm Muck (A10)		
Black Histic	(A3)		☐ Thin Dark S	Surface (S9) (ML	_RA 147, 148	)	Coast Prairie Redo (MLRA 147,148)	ox (A16)	
Hydrogen S	Sulfide (A4)		Loamy Gley	ved Matrix (F2)			Piedmont Floodpla	oin Coile (F10)	
Stratified La	ayers (A5)		☐ Depleted M	atrix (F3)			(MLRA 136, 147)	aiii 30iiS (F 19)	
2 cm Muck	(A10) (LRR N)		Redox Dark	Surface (F6)			Very Shallow Dark	s Surface (TF1	2)
Depleted Be	elow Dark Surface (	(A11)	Depleted D	ark Surface (F7)	)		Other (Explain in		,
	Surface (A12)		Redox Dep	ressions (F8)			Other (Explain in	rterriarks)	
	k Mineral (S1) (LRR	. N,	Iron-Manga MLRA 136)	inese Masses (F	12) (LRR N,				
Sandy Gley	ed Matrix (S4)		Umbric Sur	face (F13) (MLF	RA 136, 122)		2		
Sandy Redo			☐ Piedmont F	loodplain Soils	(F19) (MLRA	148)	<sup>3</sup> Indicators of	hydrophytic ve Irology must b	egetation and
Stripped Ma			Red Parent	Material (F21)	(MLRA 127,	147)	unless di	sturbed or pro	blematic.
1.2.121									
	yer (if observed):								
Type:							Hydric Soil Present?	Yes O	No •
Depth (inche	÷S):							103 0	110 0
narks:									
vdric soil i	ndicators presen	t, low chroma	and low value	layer starts be	elow 6" dep	th and d	loes not contain redox c	oncentration	s as soft masses
e linings.									

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 019

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Date: June 2, 2020

	ie-North Newark 138 KV Transmission L	ine Rebuild Project	Date: June 2, 2020
<b>Netland:</b> w	r-bl-20200602-01		Rater: BL, SM
0 0 ubtotal Points	Metric 1. Wetland Area (size). (ma  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) 10 to <25 acres (4 to <10.1ha) ( 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12to <	a) (5 pts) 4 pts) ots) (2pts)	
3 3 ubtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one WIDE. Buffers average 50m (1) MEDIUM. Buffers average 25m x NARROW. Buffers average 10i VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select of the surrounding land use) VERY LOW. 2nd growth or older LOW. Old field (>10 years), shr	e, do not double check) 64ft) or more around wetlar 1 to <50m (82 to <164ft) aro m to <25m (32ft to <82ft) a age <10m (<32ft) around we me or double check & avera er forest, prairie, savannah,	and perimeter (7) bund wetland perimeter (4) burd wetland perimeter (1) retland perimeter (0)  age) wildlife area, etc. (7)
21 18 ubtotal Points	x MODERATELY HIGH. Residen x HIGH. Urban, industrial, open p  Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.	tial, fenced pasture, park, c pasture, row cropping, minin	conservation tillage, new fallow field. (3) ng, construction. (1)  Connectivity. Score all that apply.
	High pH groundwater (5) Other groundwater (3)  X Precipitation (1) Seasonal/Intermittent surface w  X Perennial surface water (lake or  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2)  X <0.4m (<15.7in) (1)	stream) (5)	100 year floodplain (1)  x 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. (select one or double check & average)  Semi- to permanently inundated/saturated (4)  x Regularly inundated/saturated (3) Seasonally inundated (2)
	3e. Modifications to natural hydrologic regime.  (select one or double check & average  None or none apparent (12)  x Recovered (7)  Recovering (3)  Recent or no recovery (1)	9)	Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch point source (nonstormwater) dike filling/grading tile road bed/RR track weir dredging stormwater input other- list
29 8 ubtotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or dou  None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)	ble check and average.	Habitat alteration. Score one or double check and average.  None or none apparent (9)  Recovered (6)  x Recovering (3)  Recent or no recovery (1)
	Good (5)  Moderately good (4)  Fair (3)  x Poor to fair (2)  Poor (1)		□ shrub/sapling removal □ herbaceous/aquatic bed removal □ sedimentation □ dredging □ farming □ nutrient emrichment

Site: Crooksville-	North Newark 138 kV Transmission Line Rebuil	Date:	June 2, 2020
	I-20200602-01	Rater:	BL, SM
			2_, c
29 subtotal first pa	age		
	M. 4.5. 5. 0		
29 0	Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points	Check all that apply and score as indicated		
	Bog (10 pts)		
	Fen (10 pts)		
	Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		(40.11)
	Lake Erie coastal/tributary wetland-unre	· -	
	Lake Erie coastal/tributary wetland-restr		y (5 pts)
	Lake Plain Sand Prairies (Oak Openings	s) (10 pts)	
	Relict Wet Prairies (10 pts)		and marine (10)
	Known occurrence state/federal threater	_	
	Significant migatory songbird/waterfowl Category 1 Wetland. See Question 1 of		
	Category I Wetland. See Question I of	Qualitative	aurig. (-10 pis)
31 2	Metric 6. Plant Communities, interspersion	, microtop	ography. (max 20 pts.)
Subtotal Points	6a. Wetland Vegetation Communities	,	
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale
	0 Aquatic bed		Al
	1 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	0 Shrub		
	0 Forest	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
	0 Mudflats		of moderate quality, of comprises a significant part but is of low quality
	0 Open water		Present and either comprises significant part of wetland's vegetation
	Other (list)	2	and is of moderate quality or comprises a small part and is of high
			quality
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
	Select only one		and is of high quality
	High (5)  Moderately high (4)	Narrative	Description of Vegetation Quality
	Moderate (3)	- Turrutivo	Low spp diversity and/or predominance of nonnative or disturbance
	Moderately low (2)	low	tolerant native species
	Low (1)		Native spp are dominant component of the vegetation, although
	x None (0)		nonnative and/or disturbance tolerant native spp can also be present,
		moderate	and species diversity moderate to moderately high, but generally w/o
	6c. Coverage of invasive plants.		presence of rare threatened or endangered spp
	Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or
	Add or deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp
	Extensive >75 % cover (-5)	ing.	diversity and often, but not always, the presence of rare, threatened, or
	Moderate 25-75% cover (-3)		endangered spp
	Sparse 5-25% cover (-1)	Na £ _4 _	and One on Western Oleran Oscalists
	x Nearly Absent <5% cover (0)		nd Open Water Class Quality
	Absent (1)	0	Absent <0.1 ha (0.2471 acres)
		1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopography Socre all present using 0 to 3 cools	3	High 4 ha (9.88 acres) or more
	Score all present using 0 to 3 scale  1 Vegetated hummocks/tussocks	Microtone	ography Cover Scale
	0 Coarse woody debris >15 cm (6")	0	Absent
	0 Standing dead > 25 cm (10") dbh		
	0 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
			Present in moderate amounts, but not of highest quality or in small
		2	amounts of highest quality
		3	Present in moderate or greater amounts and of highest quality
		J	resent in moderate of greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 019

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing North



#### Wetland 019

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 019

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing South



#### Wetland 019

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing West





### PHOTOGRAPHIC RECORD

**WETLANDS** 

**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 019

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 020

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH	Sampling Point: w-bl-20200602-02
Investigator(s): BL, SKM	Section, Township, Range: S	2 T 16N R 15W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, ne	one): concave Slope: 3.0 % / 71.6 °
Subregion (LRR or MLRA): LRR N Lat.	:: 39.81888 Lon	g.: -82.1547 Datum: NAD83
Soil Map Unit Name: AfC - Alford silt loam, 8 to 15 percent slopes		NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes • No O (If no,	explain in Remarks.)
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 significan	ntly disturbed? Are "Normal	Circumstances" present? Yes   ● No ○
Are Vegetation . , Soil . , or Hydrology . naturally	y problematic? (If needed, e	explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes O No O		
Hydric Soil Present? Yes  No  No	Is the Sampled Area	Yes   No
Wetland Hydrology Present? Yes   No	within a Wetland?	
Sample point in for PEM wetland 020. Wetland is located on 2 side west outside study area. Pond drains to east to wetland w-bl-2020 goes to east to floodplain of large creek.	1 1	0 1
Hydrology		
Water Marks (B1) Presence of Redu	e Odor (C1) cheres along Living Roots (C3) luced Iron (C4) luction in Tilled Soils (C6) ce (C7) in Remarks)	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Remarks:		
Multiple primary and secondary hydrology indicators present. Prima drainage swale and overflow from agricultural pond p-bl-20200602 to outside study area to subsurface drain (field tile or buried culverting).	-01, drains to pond that drains to	east to wetland w-bl-20200602-01 that drains east

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

			minant		Sampling Point: <b>w-bl-20200602-02</b>
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Salix interior	5	<b>✓</b>	100.0%	FACW	That are OBL, FACW, or FAC:
2	0		0.0%		Tabel Niverbase of Descious
3			0.0%		Total Number of Dominant Species Across All Strata:6(B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)
6		$\square$	0.0%		That Are OBE, FACW, OF FAC.
7		$\square$	0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r		= Tc	tal Cover	-	0BL speci es <u>29</u> x 1 = <u>29</u>
1. Rosa multiflora	E	<b>✓</b>	71.4%	FACU	FACW species <u>64</u> x 2 = <u>128</u>
2. Salix nigra	1		14.3%	OBL	FAC speci es x 3 =
3. Fraxinus pennsylvanica			14.3%	FACW	FACU speci es $\frac{5}{}$ x 4 = $\frac{20}{}$
4			0.0%		UPL speci es x 5 =
5.			0.0%		Column Totals: <u>98</u> (A) <u>177</u> (B)
6.			0.0%		Prevalence Index = B/A = 1.806
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%	`	Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	30	<b>✓</b>	34.9%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
0	10		11.6%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Juncus errusus   Leersia virginica	10	<b>✓</b>	11.6%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Najas minor	10	<b>✓</b>	11.6%	OBL	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Carex vulpinoidea	5		5.8%	OBL	in height.
6. Onoclea sensibilis	5		5.8%	FACW	Five Vegetation Streets
7. Lemna minor	5		5.8%	OBL	Five Vegetation Strata:
8. Wolffia globosa	5		5.8%	OBL	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9. Agrostis gigantea	3		3.5%	FACW	diameter at breast height (DBH).
10. Typha latifolia	3		3.5%	OBL	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15'r )	86	= Tc	tal Cover	-	vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
3.	0	$\Box$	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
	0		0.0%		
5	0		0.0%		Hydrophytic Vegetation
U			otal Cove	r	Present? Yes No
Remarks: (Include photo numbers here or on a separate shee					I
Hydrophytic vegetation indicators present as dominance test > 50%,		pecie	es are OBL	, FACW and	FACU.

<sup>\*</sup>Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: w-bl-20200602-02

Profile Descr	iption: (D		the depth	needed to				firm the a	bsence of indicators.)				
Depth (inches)	Color	Matrix (moist)	%	Color	Re (moist)	edox Feat	ures1	Loc <sup>2</sup>	Texture	Remarks			
0-4	10YR	4/2	100		(IIIOISI)				Sandy Loam	Remarks			
				10\/D	4/4	10							
4-16	10Y	4/1	90	10YR	4/4	10	C	PL_	Silty Clay Loam				
		`											
					-								
										·			
						_							
1													
			on. RM=Red	uced Matrix,	CS=Cover	ed or Coate	ed Sand Grai	ns <sup>2</sup> Locat	ion: PL=Pore Lining. M=M				
Hydric Soil I		:				(0-)			Indicators for Proble	ematic Hydric Soils <sup>3</sup> :			
Histosol (					k Surface (		(00) (11) 51		2 cm Muck (A10)	(MLRA 147)			
	pedon (A2)			_			(S8) (MLRA		Coast Prairie Red	ox (A16)			
Black Hist		1)					MLRA 147, 1	48)	(MLRA 147,148)	, ,			
	Sulfide (A4					Matrix (F2	)		Piedmont Floodpl	ain Soils (F19)			
	Layers (A5)				leted Matr				(MLRA 136, 147)				
	k (A10) (LR					urface (F6)	-7\		Very Shallow Dar	k Surface (TF12)			
	□ Depleted Below Dark Surface (A11) □ Depleted Dark Surface (F7) □ Thick Dark Surface (A12) □ Redox Depressions (F8)								Other (Explain in Remarks)				
	k Surface (						(E12) (LDD N						
Sandy Mu MLRA 14	uck Mineral	(S1) (LRR	N,	MLR	i-Mangane RA 136)	se Masses	(F12) (LRR N	1,					
Sandy Gleyed Matrix (S4)  Umbric Surface (F13) (MLRA 136, 122)					2)								
Sandy Re		(34)					s (F19) (MLR		<sup>3</sup> Indicators of hydrophytic vegetation and				
	Matrix (S6)						) (MLRA 127		wetland hydrology must be present, unless disturbed or problematic.				
	Wati ix (50)				T arent ivid	ateriai (i z i	) (IVILIVA 127	, 147)	diliess di	starbed or problematic.			
Restrictive L	ayer (if ob	served):											
Туре:									Hydric Soil Present?	Yes ⊙ No ○			
Depth (inc	hes):								Hydric 3011 Present?	Yes S No C			
Remarks:													
				rix in loamy	soils sta	rting less	than or eq	ual to 12"	depth, also having redo	x concentrations in pore linings			
with low chro	oma/low v	alue matr	ix										

### Upland 019 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: C	OH Sampling Point: upl-bl-20200602-02
Investigator(s): BL, SKM	Section, Township, Range:	S 2 T 16N R 15W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex,	none): convex Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.8189 Lo	ong.: -82.15466 Datum: NAD83
Soil Map Unit Name: AfC - Alford silt loam, 8 to 15 percent slo	opes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this tir	me of year? Yes  No (If no	o, explain in Remarks.)
Are Vegetation , Soil , or Hydrology sign	nificantly disturbed? Are "Norma	al Circumstances" present? Yes   No
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 nat	rurally problematic? (If needed	, explain any answers in Remarks.)
Summary of Findings - Attach site map show	ving sampling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes O No •		
Hydric Soil Present? Yes No •	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present? Yes ○ No •	within a Wetland?	
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that a		Surface Soil Cracks (B6)
	atic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
	Sulfide Odor (C1) Rhizospheres along Living Roots (C3)	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
	of Reduced Iron (C4)	Dry Season Water Table (C2)
	on Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Surface (C7)	Saturation Visible on Aerial Imagery (C9)
· ·	olain in Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:		
	nches): 0	
Water Table Present? Yes No Depth (ii	nches):	drology Present? Yes O No 💿
Saturation Present? (includes capillary fringe)  Yes No Depth (in	nches):	arology Fresent: 103 C No C
Describe Recorded Data (stream gauge, monitoring well, aeria	photos, previous inspections), if available	ailable:
Remarks:		
No hydrology indicators present.		

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

			ominant		Sampling Point: upl-bl-20200602-02
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	or. otrat.	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  1 (A)
2	0		0.0%		Total Number of Deminant
3			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 33.3% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 33.3% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0 =	= Tc	otal Cover		0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )			400.00/	E4011	FACW species 25 x 2 = 50
1. Rosa multiflora		<b>✓</b>	100.0%	FACU	FAC speciles 5 x 3 = 15
2			0.0%		FACU speci es $62 \times 4 = 248$
3			0.0%		UPL species
4			0.0%		<u> </u>
5			0.0%		72 (1)
6			0.0%		Prevalence Index = B/A = 3.402
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9		$\square$	0.0%		Dominance Test is > 50%
10	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		 = Tc	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: _5' r)					Sapling/shrub stratum – Consists of woody plants, excluding
1. Schedonorus arundinaceus	30		33.3%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Agrostis gigantea		<b>✓</b>	22.2%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Festuca rubra	15	$\mathbb{H}$	16.7%	FACU	' ' '
4. Cirsium arvense	15		16.7%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Elymus virginicus	5		5.6%	FACW	
6. Rumex crispus	5		5.6%	FAC	Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10			0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11			0.0%		3 in. (7.6 cm) DBH.
12	0	$\square$	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15'r )	90	= Tc	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2			0.0%		in height.
3		Ц	0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		noight.
5	0		0.0%		Hydrophytic
6	0	Ш	0.0%		Vegetation Present?  Yes No   No
	0	= To	otal Cover	r	Present? Yes UNO U
Remarks: (Include photo numbers here or on a separate shee	et.)				
No hydrophytic vegetation indicators present, dominant species are F.	ACW and FA	₹CU.			

	Uplan	d 019
Soil	Sampling Point:	upl-bl-20200602-02
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of in	ndicators.)	

Depth		atrix			Redox Featu	1 -				
(inches)	Color (mo		Col	or (moist)	%	<u>Tvpe</u> .	Loc <sup>2</sup>	Texture	Ren	narks
0-7	10YR 4/							Sandy Loam		
7-16	10YR 5/	/1 80	10YI	R 4/2	20	D	M	Sandy Loam		
									`	
					_	` '			•	
		——							· ·	
									•	
						<u> </u>				
									<u>.</u>	
vno: C-Con	contration D_D	nonlotion PM_1	Poducod Mate	-iv CS_Cov	orod or Coate	nd Sand Crain	s 21 ocati	ion: PL=Pore Lining. W	1_Matrix	
		epietion. Rivi=r	Neduced Mati	ix, C3=C0V6	sied oi coate	su Sariu Graii	is -Locati			2
lydric Soil I ] Histosol ( <i>I</i>				Dark Surface	(97)			Indicators for Pr	oblematic Hydri	c Soils <sup>3</sup> :
	pedon (A2)					(S8) (MLRA 1	47 148)	2 cm Muck (A	A10) (MLRA 147)	
Black Hist						/ILRA 147, 14		Coast Prairie		
_	Sulfide (A4)				d Matrix (F2)		٥,	(MLRA 147,1	•	
	Layers (A5)			Depleted Ma		,		Piedmont Flo (MLRA 136, 1	odplain Soils (F19)	
2 cm Muck	k (A10) (LRR N)			Redox Dark S				_	Dark Surface (TF1	2)
_	Below Dark Surf			Depleted Dar	k Surface (F	7)			n in Remarks)	
	k Surface (A12)			Redox Depre	ssions (F8)			Other (Explai	II III Keiliaiks)	
_	ck Mineral (S1)			ron-Mangan JLRA 136)	ese Masses (	(F12) (LRR N	,			
Sandy Gle	yed Matrix (S4)			Jmbric Surfa	nce (F13) (MI	LRA 136, 122	)	2		
Sandy Red	dox (S5)			Piedmont Flo	odplain Soils	s (F19) (MLR/	A 148)	<sup>3</sup> Indicator	rs of hydrophytic vo d hydrology must b	egetation and
Stripped N	Matrix (S6)			Red Parent N	Material (F21)	) (MLRA 127,	147)	unles	ss disturbed or pro	blematic.
ostrictivo La	ayer (if observ	rod):								
Type:	ayer (II observ	eu).								
Depth (inch	nes).							Hydric Soil Presen	t? Yes O	No •
emarks:	103).									
	indicators pr	ocont								
nyanc son	indicators pre	esent.								

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 020

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Date: June 2, 2020

	ie-North Newark 138 kV Transmission L	ine Rebuild Project	<b>Date:</b> June 2, 2020
Wetland: w	-bl-20200602-02		Rater: BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha)  10 to <25 acres (4 to <10.1ha) (-3 to <10 acres (1.2 to <4ha) (3 pt)  0.3 to <3 acres (0.12 to <1.2ha)  0.1 to <0.3 acres (0.04 to <0.12to <0.12	a) (5 pts) 4 pts) ots) (2pts)	
2 2 Subtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  WIDE. Buffers average 50m (16  MEDIUM. Buffers average 25m  NARROW. Buffers average 10r  X VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select one)  VERY LOW. 2nd growth or older  LOW. Old field (>10 years), shrift  X MODERATELY HIGH. Resident  X HIGH. Urban, industrial, open p	e, do not double check) 64ft) or more around wetlan 1 to <50m (82 to <164ft) around 1 to <25m (32ft to <82ft) ar 1 age <10m (<32ft) around we 1 ne or double check & avera 1 are forest, prairie, savannah, 1 ubland, young second grow 1 tial, fenced pasture, park, co	d perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0)  lige) wildlife area, etc. (7) th forest. (5) onservation tillage, new fallow field. (3)
24 22 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  X Precipitation (1)  X Seasonal/Intermittent surface water (lake or 2)  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  X <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime. (select one or double check & average None or none apparent (12)  X Recovered (7)  Recovering (3)  Recent or no recovery (1)	ater (3) stream) (5)  3d.	
33 9 Subtotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or dou  None or none apparent (4)  x Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  x Fair (3)  Poor to fair (2)  Poor (1)	ble check and average.	Habitat alteration. Score one or double check and average.  None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)  Ces observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

ORAM v. 5.0 Field Form Quantita			-	
	North Newark	138 kV Transmission Line Rebui	Date:	June 2, 2020
Wetland: w-bl-	-20200602-02		Rater:	BL, SM
33 subtotal first pa	qe			
33 0	Metric 5. Sp	ecial Wetlands. (max 10 pts.)		
Subtotal Points	•	ply and score as indicated		
	- I I I I I I I I I I I I I I I I I I I	Bog (10 pts)		
		Fen (10 pts)		
		Old Growth Forest (10 pts)		
		Mature forested wetland (5 pts)		
		Lake Erie coastal/tributary wetland-unre	etricted hydrol	logy (10 nts)
		Lake Erie coastal/tributary wetland-rest	-	
		Lake Plain Sand Prairies (Oak Opening		y (0 pts)
			3) (10 pts)	
		Relict Wet Prairies (10 pts)	nod or ondona	vared energies (10)
		Known occurrence state/federal threate	_	
		Significant migatory songbird/waterfowl		
	<u> </u>	Category 1 Wetland. See Question 1 o	i Qualitative Ra	aung. (-10 pts)
35 2	Motric 6 Dia	ant Communities, interspersior	mioroton	ography (may 20 nto )
		•	i, iiiicrotop	ography. (max 20 pts.)
Subtotal Points		getation Communities	Variatio.	n Community Cover Cools
	· -	using 0 to 3 scale	vegetatio	n Community Cover Scale
	0	Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	1	Emergent		
	0	Shrub		Present and either comprises small part of wetland's vegetation and is
	0	Forest	1	of moderate quality, or comprises a significant part but is of low quality
	0	Mudflats		
	0	Open water		Present and either comprises significant part of wetland's vegetation
		Other (list)	2	and is of moderate quality or comprises a small part and is of high
				quality
	6b. Horizontal (p	olan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
	Select only one	1		and is of high quality
		High (5)		
		Moderately high (4)	Narrative	Description of Vegetation Quality
		Moderate (3)	low	Low spp diversity and/or predominance of nonnative or disturbance
	х	Moderately low (2)		tolerant native species
		Low (1)		Native spp are dominant component of the vegetation, although
		None (0)	moderate	nonnative and/or disturbance tolerant native spp can also be present,
			moderate	and species diversity moderate to moderately high, but generally w/o
	6c. Coverage of	invasive plants.		presence of rare threatened or endangered spp
		ORAM long form for list.		A predominance of native species, with nonnative spp and/or
	Add or deduct po	ints for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp
		Extensive >75 % cover (-5)	iligii	diversity and often, but not always, the presence of rare, threatened, or
	х	Moderate 25-75% cover (-3)		endangered spp
		Sparse 5-25% cover (-1)		
		Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality
		Absent (1)	0	Absent <0.1 ha (0.2471 acres)
	<u>-</u>	-	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
			2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopogra	aphy	3	High 4 ha (9.88 acres) or more
		using 0 to 3 scale		
	1	Vegetated hummocks/tussocks	Microtopo	ography Cover Scale
	0	Coarse woody debris >15 cm (6")	0	Absent
	0	Standing dead > 25 cm (10") dbh		
	1	Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
	<u> </u>		_	Present in moderate amounts, but not of highest quality or in small
			2	amounts of highest quality
			_	,
			3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 020

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing North



#### Wetland 020

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 020

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing South



#### Wetland 020

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 020

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH	Sampling Point: w-bl-20200602-03
Investigator(s): BL, SKM	Section, Township, Range: S	35 T 17N R 15W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, nor	ne): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N Lat.:	39.82059 Long.	: -82.1567 Datum: NAD83
Soil Map Unit Name: WuE2 - Westmoreland-Guernsey silt loams, 25	to 40 percent slopes, eroded	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	ear? Yes • No O (If no, e	xplain in Remarks.)
		ircumstances" present? Yes   No
Are Vegetation , Soil , or Hydrology naturally p	problematic? (If needed, ex	plain any answers in Remarks.)
Summary of Findings - Attach site map showing s	ampling point locations	, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No		
Hydric Soil Present? Yes   No   No	Is the Sampled Area	es   No
Wetland Hydrology Present? Yes   No   No	within a Wetland? '	
Sample point in for PSS wetland 021. Wetland is located on terrace evident. Wetland fully delineated by topography.	of intermittent stream s-bl-20200	302-01 both banks with groundwater seepage
Hydrology		
Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13)	s (B14)  Odor (C1) eres along Living Roots (C3)  ed Iron (C4)  tition in Tilled Soils (C6)  (C7)  Remarks)	Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes  No  Depth (inches):	1	
Water Table Present? Yes  No O Depth (inches):	10	
Saturation Present?  (includes expillent friend)  Yes No Depth (inches):	Wetland Hydrol	ogy Present? Yes • No O
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo  Remarks:  Multiple primary and secondary hydrology indicators present. Primary intermittent stream s-bl-20200602-01.	os, previous inspections), if availab	

#### Wetland 021

			ominant		Sampling Point: <b>w-bl-20200602-03</b>
	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2			0.0%		T. I. I. N. J. J. C. D. J. J. J.
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4.			0.0%		
5			0.0%		Percent of dominant Species
6			0.0%		That Are OBL, FACW, or FAC: 75.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.			0.0%		Total % Cover of: Multiply by:
	0	= Tc	tal Cover		0BL speci es 20 x 1 = 20
Sapling-Sapling/Shrub Stratum (Plot size: 15' r					FACW species 28 x 2 = 56
1. Ulmus americana			75.0%	FACW	FAC speciles 10 x 3 = 30
2. Fraxinus americana			25.0%	FACU	FACU species $\frac{16}{10} \times 4 = \frac{64}{10}$
3			0.0%		
4			0.0%		(5)
5	0		0.0%		Column Totals:
6	0		0.0%		Prevalence Index = B/A = 2.468
7	0		0.0%		Hydrophytic Vegetation Indicators:
8	0		0.0%		Rapid Test for Hydrophytic Vegetation
9	0		0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0	$\Box$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.		$\Box$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
		$\Box$	0.0%		be present, unless disturbed or problematic.
4			0.0%		Definition of Vegetation Strata:
5		$\Box$	0.0%		Four Vegetation Strata:
6	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7			tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' r</u> )	0		itai Covei		Sapling/shrub stratum – Consists of woody plants, excluding
1. Carex Iurida	20	<b>✓</b>	26.7%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Agrostis gigantea	10	<b>✓</b>	13.3%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Poa compressa	15	<b>✓</b>	20.0%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Lysimachia nummularia	10	<b>✓</b>	13.3%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Eupatorium perfoliatum	5		6.7%	FACW	
6. Valerianella umbilicata	5		6.7%	FAC	Five Vegetation Strata:
7. Carex gracilescens	5		6.7%	UPL	Tree - Woody plants, excluding woody vines, approximately 20
8. Symphyotrichum prenanthoides	5		6.7%	FAC	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	Ш	0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	75	= To	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2.	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5.			0.0%		
6	0	$\Box$	0.0%		Hydrophytic Vegetation
U	0	 	otal Cove	·——	Present? Yes No
		. 17	ciai covei		<u>I</u>
Remarks: (Include photo numbers here or on a separate shee Hydrophytic vegetation indicators present as dominance test > 50%,	,	pecie	es are OBL,	FACW and	FACU.

Sampling Point:

w-bl-20200602-03

Depth =		Matrix		Redox Features			Toyturo						
inches)	Color (r		%		(moist)	%_	Tvpe	Loc <sup>2</sup>	Texture		Rem gleyed mat	narks tri x	
0-4		4/1	95	10YR	4/3	5	C	PL	Silt Loam		9 9		
4-14	10Y	3/1	90	10YR	3/3	10	C	PL_	Silty Clay Loam				
	•				•		•			· ·			
	,				•	`	•			,			
e: C=Conce	ntration D-	- Danlatio	n PM-Pedur	ad Matrix	CS-Cover	ed or Coate	nd Sand Grai	ns 21 ocat	ion: PL=Pore Linir	na M-Mat	riv		
		- Depletioi	II. KIVI-KEUU	eu Matrix,	C3=C0Ver	eu or coate	u Sanu Grai	is -Lucai				2	
dric Soil In Histosol (A1				☐ Darl	k Surface (	(\$7)			Indicators fo			c Soils <sup>3</sup> :	
Histic Epipe							(S8) (MLRA	47 148)	2 cm Mu	ıck (A10) (	MLRA 147)		
Black Histic							1LRA 147, 1			airie Redo:	x (A16)		
Hydrogen S						Matrix (F2)		,	(MLRA 1				
Stratified La					leted Matri					it Floodpla 36, 147)	in Soils (F19)		
	(A10) (LRR	N)				urface (F6)					Surface (TF1	2)	
	elow Dark Si		11)	☐ Dep	leted Dark	Surface (F	7)		<ul><li>✓ Very Shallow Dark Surface (TF12)</li><li>✓ Other (Explain in Remarks)</li></ul>				
Thick Dark	Surface (A1:	2)		Red	ox Depress	sions (F8)			Other (E	.хріант ін т	ciriarks)		
Sandy Muck MLRA 147,	k Mineral (S1 148)	1) (LRR N	,		i-Mangane: (A 136)	se Masses (	(F12) (LRR N	l,					
Sandy Gley	ed Matrix (S	4)		Umb	bric Surfac	e (F13) (MI	RA 136, 12	2)	2				
	(0-)			☐ Pied	dmont Floo	dplain Soils	(F19) (MLR	A 148)	ا Indic we	cators of h tland hydr	iydrophytic ve ology must b	egetation and be present.	
Sandy Redo	ox (S5)				D	aterial (F21	) (MLRA 127	, 147)		unless dis	turbed or pro	blematic.	
Sandy Redo Stripped Ma				☐ Red	Parent Ma								
Stripped Ma	atrix (S6)	erved).		☐ Red	Parent Ma								
Stripped Ma	atrix (S6)	erved):		L Red	Parent Ma			<u> </u>					
Stripped Matrictive Lay	atrix (S6) yer (if obse	erved):		☐ Red	Parent Ma				Hydric Soil Pre	esent?	Yes •	No O	
Stripped Ma trictive Lay Type: Depth (inche	atrix (S6) yer (if obse	erved):		∐ Red	Parent Ma			_	Hydric Soil Pre	esent?	Yes •	No O	
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6) yer (if obse		oved matrix				than or og						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq		Hydric Soil Pre				
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Ma crictive Lay Type: Depth (inchestants: ic soil indicates)	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Marictive Lay	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Marictive Lay	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Ma strictive Lay Type: Depth (inche marks: ric soil indic	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Mastrictive Lay Type: Depth (inchese	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Ma strictive Lay Type: Depth (inche marks: ric soil indic	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Ma strictive Lay Type: Depth (inche marks: ric soil indic	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inches marks:	atrix (S6)  yer (if obse	ent as gl					than or eq						
Stripped Matrictive Lay Type: Depth (inchesenarks:	atrix (S6)  yer (if obse	ent as gl					than or eq						

### Upland 020 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmissio	n Line City/County: Muskingum	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH	Sampling Point: upl-bl-20200602-03
nvestigator(s): BL, SKM	Section, Township, Range: S 35	T 17N R 15W
andform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none):	convex Slope: 20.0 % / 87.1 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.82055 Long.: -{	82.15666 Datum: NAD83
Soil Map Unit Name: WuE2 - Westmoreland-Guernsey	silt loams, 25 to 40 percent slopes, eroded	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical fo	this time of year? Yes No (If no, expla	in in Remarks.)
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🛭		mstances" present? Yes   No
Are Vegetation	naturally problematic? (If needed, explain	n any answers in Remarks.)
Summary of Findings - Attach site map	showing sampling point locations, tr	ansects, important features, etc.
Hydrophytic Vegetation Present? Yes No 🕞		
Hydric Soil Present? Yes   No C	VAS (	○ No •
Wetland Hydrology Present? Yes O No ©	within a Wetland?	
Point out to wetland 021 (Upland 020), about 5 east		, J,
Hydrology		
Wetland Hydrology Indicators:	· · · · · · · · · · · · · · · · · · ·	ndary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check a		urface Soil Cracks (B6)
		parsely Vegetated Concave Surface (B8) rainage Patterns (B10)
		loss Trim Lines (B16)
		ry Season Water Table (C2)
Sediment Deposits (B2)	ecent Iron Reduction in Tilled Soils (C6)	rayfish Burrows (C8)
	hin Muck Surface (C7)	aturation Visible on Aerial Imagery (C9)
	The (Explain in tername)	tunted or Stressed Plants (D1)
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)		eomorphic Position (D2)
Water-Stained Leaves (B9)		hallow Aquitard (D3) Iicrotopographic Relief (D4)
Aquatic Fauna (B13)		AC-neutral Test (D5)
Field Observations:		
	Depth (inches): 0	
	Depth (inches): Wetland Hydrology	Present? Yes ○ No ●
Saturation Present? (includes capillary fringe)  Yes  No	Depth (inches):	Present? res O No O
Describe Recorded Data (stream gauge, monitoring we	aerial photos, previous inspections), if available:	
Remarks:		
No hydrology indicators present.		
3 03		

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

			ominant		Sampling Point: upl-bl-20200602-03
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	Ji. Oti at.	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  1 (A)
2	0		0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata:3 (B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
6			0.0%		That Are OBE, FACW, OF FAC.
7	0		0.0%		Prevalence Index worksheet:
8	0	Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	0	= Tc	otal Cover		0BL speci es x 1 =
Juglans nigra	_	<b>✓</b>	100.0%	FACU	FACW speci es 10 x 2 = 20
2			0.0%		FAC speci es <u>35</u> x 3 = <u>105</u>
3			0.0%		FACU speci es $38 \times 4 = 152$
4			0.0%		UPL speci es $\frac{10}{2}$ x 5 = $\frac{50}{2}$
5.			0.0%		Column Totals: 93 (A) 327 (B)
6.			0.0%		Prevalence Index = B/A = 3.516
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		
10			0.0%		Dominance Test is > 50%  Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		
	0		0.0%		Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1. 2.	0	$\Box$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0	$\Box$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.		$\Box$	0.0%		Definition of Vegetation Strata:
6.	0	$\Box$	0.0%		Four Vegetation Strata:
7	0	$\Box$	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' r )		— . = Тс	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	30	<b>✓</b>	34.1%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding
Valerianella umbilicata     Schedonorus arundinaceus	15		17.0%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Schedonorus arundinaceus     Solidago altissima	10		11.4%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
Daucus carota	10	П	11.4%	UPL	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Impatiens pallida	10		11.4%	FACW	in height.
6. Barbarea vulgaris	5		5.7%	FACU	Fire We notation Charter
7. Symphyotrichum pilosum	5		5.7%	FAC	Five Vegetation Strata:
8. Erigeron philadelphicus	3		3.4%	FACU	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	88	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0	$\Box$	0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0		0.0%		Woody vines – Consists of all woody vines, regardless of
3 4	0		0.0%		height.
	0		0.0%		
5 6	0		0.0%		Hydrophytic Vegetation
U		. ب Tr =	otal Cover		Present? Yes No
Demorks: (Include place acceptance)		1 (			l
Remarks: (Include photo numbers here or on a separate shee No hydrophytic vegetation indicators present, dominant species are F		U.			

Upland 020

Soil

Sampling Point: upl-bl-20200602-03

	ofile Description: (Describe to the depth needed to document the indicator or confirm the  Depth Redox Features Redox Features										
(inches)		(moist)	%	Color (		%	_Tvpe_1	Loc <sup>2</sup>	Texture	Rem	narks
0-6	10YR	4/3	90	10YR	5/1	10	D	M	Sandy Loam	al oyed mat	-rl v
6-15	10Y	4/1	80	10YR	4/3	20	C	М	Sandy Clay Loam	gleyed mat	.FT X
		`								· ·	
		,								· · · · · · · · · · · · · · · · · · ·	
					-					· · · · · · · · · · · · · · · · · · ·	
										· · · · · · · · · · · · · · · · · · ·	
may C. Canay	antrotion [	) Doplotic	on DM Dodu	and Matrix (	C Course	ad ar Caata	d Cond Croi	21 and	ion. Di Doro Lining	M. Motriy	
		J=Depletio	on. Rivi=Redui	cea Matrix, C	22=Cover	ed of Coate	a Sand Graii	is ²Locai	ion: PL=Pore Lining.		
ydric Soil In ] Histosol (A <sup>.</sup>				□ Dork	: Surface (	(57)			Indicators for F	Problematic Hydrid	c Soils <sup>3</sup> :
Histosof (A Histic Epipe						(57) ow Surface (!	S9) (MI DA 1	17 119)	2 cm Muck	(A10) (MLRA 147)	
Black Histic						ace (S9) (M				e Redox (A16)	
Hydrogen S		)				Matrix (F2)	LIVY III, I	.0)	(MLRA 147,	•	
Stratified La		,			eted Matri				☐ Piedmont F (MLRA 136,	loodplain Soils (F19)	
2 cm Muck		R N)		_		urface (F6)			`	w Dark Surface (TF1	2)
Depleted B			A11)			Surface (F7	)		_	ain in Remarks)	2)
Thick Dark			,		x Depress				☐ Other (Expi	alli ili Remarks)	
Sandy Mucl			N,	☐ Iron-	-Mangane:	se Masses (I	12) (LRR N	,			
MLRÁ 147,	148)				A 136)						
Sandy Gley		(S4)				e (F13) (ML			3 Indicate	ors of hydrophytic ve	actation and
Sandy Redu	ox (S5)			☐ Pied	mont Floo	odplain Soils	(F19) (MLR	A 148)	wetla	nd hydrology must b	e present,
1				1 1	Parent Ma	aterial (F21)	(MLRA 127	, 147)	unl	ess disturbed or pro	blematic.
Stripped Ma	atrix (S6)			☐ Red	i di citt ivic						
		served):		∟ Red	T di Citt ivic						
Stripped Masstrictive Lay		served):		∐ Red	r drone we	<u> </u>					
strictive Lay	yer (if ob:	served):		L Red	T di Gire ivie				Hydric Soil Prese	ent? Yes •	No O
strictive Lag	yer (if ob:	served):		∟ Red	T di Giri ivic			_	Hydric Soil Prese	ent? Yes •	No O
strictive Lay Type: Depth (inche	yer (if obs		aleved matri				han or equ				
strictive Lay Type: Depth (inche marks: Iric soil indi	yer (if observed):	sent as ç	gleyed matri:				han or equ	ual to 6" c	Hydric Soil Prese lepth. Possible relic		
strictive Lay Type: Depth (incher marks:	yer (if observed):	sent as ç	gleyed matri.				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: Iric soil indi	yer (if observed):	sent as ç	gleyed matri: S.				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri: S.				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri.				han or equ	ual to 6" c			
trictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri.				han or equ	ual to 6" c			
trictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri: 5.				han or equ	ual to 6" c			
trictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri: S.				han or equ	ual to 6" c			
trictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri.				han or equ	ual to 6" c			
trictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri: S.				han or equ	ual to 6" c			
strictive Lay Type: Depth (incher marks:	yer (if observed):	sent as ç	gleyed matri.				han or equ	ual to 6" c			
strictive Lay Type: Depth (incher marks:	yer (if observed):	sent as ç	gleyed matri				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche	yer (if observed):	sent as ç	gleyed matri				han or equ	ual to 6" c			
strictive Lay Type: Depth (incher marks:	yer (if observed):	sent as ç	gleyed matri				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: Iric soil indi	yer (if observed):	sent as ç	gleyed matri				han or equ	ual to 6" c			
strictive Lay Type: Depth (inche marks: ric soil indi	yer (if observed):	sent as ç	gleyed matri:				han or equ	ual to 6" c			

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 021

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Date: June 2, 2020

-North Newark 130 kV Transmission L	ine Rebuild Froject	<b>Date:</b> June 2, 2020
ol-20200602-03		Rater: BL, SM
` ' '	x 6 pts)	
>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2h. 10 to <25 acres (4 to <10.1ha) ( 3 to <10 acres (1.2 to <4ha) (3 pt) 0.3 to <3 acres (0.12 to <1.2ha)	4 pts) ots) (2pts)	
Za. Calculate average buffer width (select one     X WIDE. Buffers average 50m (1)     MEDIUM. Buffers average 25m     NARROW. Buffers average 10ii	e, do not double check) 64ft) or more around wetlan 1 to <50m (82 to <164ft) aro m to <25m (32ft to <82ft) a	nd perimeter (7) bund wetland perimeter (4) around wetland perimeter (1)
VERY LOW. 2nd growth or olde x LOW. Old field (>10 years), shr MODERATELY HIGH. Residen	er forest, prairie, savannah, ubland, young second grov tial, fenced pasture, park, c	, wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallow field. (3)
Metric 3. Hydrology. (max 30 pts)		
Perennial surface water (lake or  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  x <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime	ater (3) stream) (5)  3d.	Connectivity. Score all that apply.  100 year floodplain (1) Between stream/lake and other human use (1)  x Part of wetland/upland (e.g. forest), complex (1)  x Part of riparian or upland corridor (1)  Duration inundation/saturation. (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) x Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch  point source (nonstormwater) dike  filling/grading tile  noad bed/RR track
Recent or no recovery (1)	1=	weir  dredging stormwater input  ather list
	evelopment. (max 20 sble check and average.	Opts.)  Habitat alteration. Score one or double check and average.  None or none apparent (9)  Recovered (6)  x Recovering (3)  Recent or no recovery (1)  nces observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging
	Metric 1. Wetland Area (size). (ma  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2h 10 to <25 acres (4 to <10.1ha) (3 to <10 acres (0.12 to <4ha) (3 to <10 acres (0.04 to <0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12 to <1.2ha) 0.1 to <0.3 acres (0.04ha) (0 pts)  Metric 2. Upland buffers and surro 2a. Calculate average buffer width (select one  X WIDE. Buffers average 50m (1 MEDIUM. Buffers average 50m (1 MEDIUM. Buffers average 50m (1 MEDIUM. Buffers average 10 VERY NARROW. Buffers average 10 VERY LOW. 2nd growth or olde X LOW. Old field (>10 years), shr MODERATELY HIGH. Residen HIGH. Urban, industrial, open p  Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface w Perennial surface water (lake or  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X (0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime (select one or double check & average None or none apparent (12) X Recovered (7) Recovering (3) Recent or no recovery (1)  Metric 4. Habitat Alteration and D  4a. Substrate disturbance. Score one or double check & average None or none apparent (4) X Recovered (7) Recovering (2) Recent or no recovery (1)  Metric 4. Habitat Alteration and D  4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	Metric 1. Wetland Area (size). (max 6 pts)  Select one size class and assign score.    500 acres (>20.2ha) (6 pts)   25 to <50 acres (10.1 to <20.2ha) (5 pts)   10 to <25 acres (4 to <10.1ha) (4 pts)   3 to <10 acres (1.2 to <4ha) (3 pts)   0.3 to <3 acres (0.12 to <12ha) (2pts)   0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)   x <0.1 acres (0.04ha) (0 pts)  Metric 2. Upland buffers and surrounding land use. (max 2. Calculate average buffer width (select one, do not double check)   x

Site: Crooksville-	North Newark 138 kV Transmission Line Rebui	<b>Date:</b> June 2, 2020							
Wetland: w-bl-20200602-03			BL, SM						
- 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3		Rater:	, -···						
36 subtotal first page									
36 0	Metric 5. Special Wetlands. (max 10 pts.)								
Subtotal Points	Check all that apply and score as indicated								
	Bog (10 pts)								
		Fen (10 pts)							
		Old Growth Forest (10 pts)  Mature forested wetland (5 pts)							
	· · · · · ·	Mature forested wetland (5 pts)  Lake Frie coastal/tributary wetland-unrestricted hydrology (10 pts)							
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)  Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)								
	Lake Plain Sand Prairies (Oak Opening								
	Relict Wet Prairies (10 pts)	5) (10 pts)							
	Known occurrence state/federal threate	ned or endand	ered species (10)						
	Significant migatory songbird/waterfowl	_							
	Category 1 Wetland. See Question 1 o								
42 6	Metric 6. Plant Communities, interspersion	n, microtop	ography. (max 20 pts.)						
Subtotal Points	6a. Wetland Vegetation Communities								
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale						
	0 Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area						
	2 Emergent		7						
	0 Shrub		Present and either comprises small part of wetland's vegetation and is						
	0 Forest	1	of moderate quality, or comprises a significant part but is of low quality						
	0 Mudflats								
	0 Open water	0	Present and either comprises significant part of wetland's vegetation						
	Other (list)	2	and is of moderate quality or comprises a small part and is of high quality						
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation						
	Select only one	3	and is of high quality						
	High (5)	Nametica Decembring of Variation Ovality							
	Moderately high (4)	Narrative Description of Vegetation Quality							
	Moderate (3)  x Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species						
	Low (1)		·						
	None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,						
		moderate	and species diversity moderate to moderately high, but generally w/o						
	6c. Coverage of invasive plants.		presence of rare threatened or endangered spp						
	Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or						
	Add or deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp						
	Extensive >75 % cover (-5)	riigii	diversity and often, but not always, the presence of rare, threatened, or						
	Moderate 25-75% cover (-3)		endangered spp						
	Sparse 5-25% cover (-1)	B. 161.4	. 10						
	Nearly Absent <5% cover (0)		nd Open Water Class Quality						
	x Absent (1)	0	Absent <0.1 ha (0.2471 acres)						
		1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)  Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)						
	6d Migratonography	3	High 4 ha (9.88 acres) or more						
	6d. Microtopography Score all present using 0 to 3 scale	3	Tright 4 ha (9.00 acres) of more						
1 Vegetated hummocks/tussocks		Microtono	ography Cover Scale						
	0 Coarse woody debris >15 cm (6")	0	Absent						
	0 Standing dead > 25 cm (10") dbh								
	0 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality						
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality						
		3	Present in moderate or greater amounts and of highest quality						



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 021

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing North



#### Wetland 021

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 021

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing South



#### Wetland 021

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 021

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit



#### Wetland 022

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20							
Applicant/Owner: AEP	State: OH	Sampling Point: w-bl-20200601-05							
Investigator(s): BL, SKM	Section, Township, Range: S	35 T 17N R 15W							
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, non	ne): concave Slope: 15.0 % / 86.2 °							
Subregion (LRR or MLRA): LRR N L	at.: <u>38.82142</u> Long.:	: -82.15778 Datum: NAD83							
Soil Map Unit Name: WuE2 - Westmoreland-Guernsey silt loams,	25 to 40 percent slopes, eroded	NWI classification:							
Are climatic/hydrologic conditions on the site typical for this time (	of year? Yes  No  (If no, ex	xplain in Remarks.)							
Are Vegetation . Soil . , or Hydrology . significantly disturbed? Are "Normal Circumstances" present? Yes . No .									
Are Vegetation . , Soil . , or Hydrology . natura	Ily problematic? (If needed, exp	olain any answers in Remarks.)							
Summary of Findings - Attach site map showin	g sampling point locations,	transects, important features, etc.							
Hydrophytic Vegetation Present? Yes No									
Hydric Soil Present? Yes No	Is the Sampled Area	es  No							
Wetland Hydrology Present? Yes   No	within a Wetland?								
Sample point in for wetland 022 (w-bl-20200601-05), located within 2 swales on hillside. Wetland is fully delineated and drains to a upland drainage feature downslope to perennial stream s-bl-20200601-06.									
Hydrology  Wetland Underland Indicators									
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that app		econdary Indicators (minimum of two required)  Surface Soil Cracks (B6)							
✓ Surface Water (A1)  True Aquatic F	_	Sparsely Vegetated Concave Surface (B8)							
High Water Table (A2)		Drainage Patterns (B10)							
	ospheres along Living Roots (C3)	Moss Trim Lines (B16)							
	educed Iron (C4)	Dry Season Water Table (C2)							
	eduction in Tilled Soils (C6)	Crayfish Burrows (C8)							
☐ Drift deposits (B3) ☐ Thin Muck Sur ☐ Algal Mat or Crust (B4) ☐ Other (Explain	` '	Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Other (Explain ☐ Iron Deposits (B5)	· · · · · · · · · · · · · · · · · · ·	Geomorphic Position (D2)							
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)							
Water-Stained Leaves (B9)		Microtopographic Relief (D4)							
Aquatic Fauna (B13)	<u></u>	FAC-neutral Test (D5)							
Field Observations: Surface Water Present?  Yes  No  Depth (inche	es): 1								
Water Table Present? Yes O No O Depth (inche									
Saturation Present?	Wetland Hydrolo	ogy Present? Yes 💿 No 🔾							
(includes capillary fringe)  Ves No Depth (inches)  Describe Recorded Data (stream gauge, monitoring well, aerial pl		ام							
Describe Recorded Data (stream gauge, monitoring wen, acriai pi	110t05, previous irispections), ir availae	ic.							
Remarks:									
Multiple primary hydrology indicators present. Primary source of		tion and surface runoff in geomorphic position							
and abutting farm pond. Drains to northeast via UDF offsite to pe	erenniai stream s-bi-202000 i-06.								

			minant		Sampling Point: <b>w-bl-20200601-05</b>
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: 2 (A)
2	0		0.0%		Total Number of Descious
3			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 66.7% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0 :	= Tc	tal Cover	-	0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15' r					FACW species 50 x 2 = 100
1		Η.	0.0%		FAC speci es 15 x 3 = 45
2		Η.	0.0%		FACU speci es $20 \times 4 = 80$
3		Η.	0.0%		UPL species
4		Н.	0.0%		
5		Н.	0.0%		Col umn Total s:105 (A)245 (B)
6	0	$\square$	0.0%		Prevalence Index = B/A = 2.333
7		$\sqcup$	0.0%		Hydrophytic Vegetation Indicators:
8	0	$\sqsubseteq$	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	$\sqsubseteq$	0.0%		✓ Dominance Test is > 50%
10	0	Ш,	0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)		= Tc	tal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' r )		= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	30	<b>✓</b>	28.6%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
1. Onoclea sensibilis			19.0%		vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Carex frankii				OBL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Poa compressa	15		14.3%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft
4. Phalaris arundinacea	10	H.	9.5%	FACW	in height.
5. Impatiens pallida	10	$\Box$	9.5%	FAC	
6. Carex spicata	5	$\Box$	4.8%	FACU	Five Vegetation Strata:
7. Schedonorus arundinaceus	5	Η.	4.8%	FAC	Tree - Woody plants, excluding woody vines, approximately 20
8. Valerianella umbilicata	0	Η.		FAC	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		Η.	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0	Η.	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0	Η.	0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	105	Ш, То	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )		= 10	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	Ш.	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%	,,	Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Hydrophytic
6.	0		0.0%		Vegetation Vegetation
		= To	otal Cove	_ <del></del>	Present? Yes No O
Remarks: (Include photo numbers here or on a separate shee	et.)				1
Hydrophytic vegetation indicator present as dominance test > 50%, or		ecies	are OBL,	FACW and F	FACU

Sampling Point: w-bl-20200601-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
DepthMatrixRedox Features											
(inches) 0-3	<u>Color (moist)</u> 10Y 4/1	100	Color (moist)	%	_Tvpe_	Loc <sup>2</sup>	Texture Clay Loam	gleyed ma	narks tri x		
3-18	10Y 5/1	90	10YR 5/6	10	C	PL	Clay Loam	gleyed ma	trix		
							City Learn				
					_	=					
						_					
	centration. D=Depletio	n. RM=Reduce	d Matrix, CS=Covere	ed or Coated	d Sand Grai	ns <sup>2</sup> Locati					
Hydric Soil I							Indicators for P	roblematic Hydri	c Soils <sup>3</sup> :		
Histosol (			Dark Surface (S7)				2 cm Muck (A10) (MLRA 147)				
Histic Epir Black Hist	pedon (A2) ic (A3)			☐ Polyvalue Below Surface (S8) (MLRA 147,148) ☐ Thin Dark Surface (S9) (MLRA 147, 148)				Coast Prairie Redox (A16)			
	Sulfide (A4)		✓ Loamy Gleyed			,	(MLRA 147,1				
Stratified	Layers (A5)		<b>✓</b> Depleted Matri	x (F3)			(MLRA 136,				
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow	2)			
	Below Dark Surface (A	11)	☐ Depleted Dark		)		Other (Expla				
	k Surface (A12)		Redox Depress		-10) (LDD N						
Sandy Mu MLRA 147	ick Mineral (S1) (LRR N 7, 148)	1,	☐ Iron-Manganes MLRA 136)								
	eyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)				<sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy Re			☐ Piedmont Floo				wetlan	pe present,			
Stripped N	Matrix (S6)		Red Parent Ma	iterial (F21)	(MLRA 127	, 147)	unless disturbed or problematic.				
	ayer (if observed):										
Type: Depth (incl	has).						Hydric Soil Present? Yes ● No ○				
Remarks:	iles)						-				
	dicators present as q	gleyed matrix	with redox conce	entrations i	in pore lin	ings					

Site: Crooksv	rille-North Newark 138 kV Transmission Lir	ne Rebuild Project	<b>Date:</b> June 1, 2020	
Wetland:	w-bl-20200601-05		Rater: BL, SM	
1 1 Subtotal Points	Metric 1. Wetland Area (size). (max  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha)  10 to <25 acres (4 to <10.1ha) (4  3 to <10 acres (1.2 to <4ha) (3 pts  0.3 to <3 acres (0.12 to <1.2ha) (2  x 0.1 to <0.3 acres (0.04 to <0.12ha  <0.1 acres (0.04ha) (0 pts)	(5 pts) pts) s) 2pts)		
9 8 Subtotal Points	Metric 2. Upland buffers and surrou  2a. Calculate average buffer width (select one,  WIDE. Buffers average 50m (164  x MEDIUM. Buffers average 25m to NARROW. Buffers average 10m VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select one)  VERY LOW. 2nd growth or older  x LOW. Old field (>10 years), shrut	do not double check) 4ft) or more around wetla o <50m (82 to <164ft) are to <25m (32ft to <82ft) are e <10m (<32ft) around we e or double check & aver forest, prairie, savannah	and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0)  rage  n, wildlife area, etc. (7)	
28.5 19.5	x MODERATELY HIGH. Residential HIGH. Urban, industrial, open particles and the Metric 3. Hydrology. (max 30 pts)	al, fenced pasture, park, sture, row cropping, mini	conservation tillage, new fallow field. (3) ing, construction. (1)	
Subtotal Points	3a. Sources of Water. Score all that apply.  High pH groundwater (5)  X Other groundwater (3)  Precipitation (1) Seasonal/Intermittent surface wat Perennial surface water (lake or s	er (3) tream) (5)	b. Connectivity. Score all that apply.  100 year floodplain (1)  Between stream/lake and other human use  x Part of wetland/upland (e.g. forest), complex  Part of riparian or upland corridor (1)  d. Duration inundation/saturation.	
	3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  x <0.4m (<15.7in) (1)		(select one or double check & average)  Semi- to permanently inundated/saturated ( Regularly inundated/saturated (3)  x Seasonally inundated (2)  x Seasonally saturated in upper 30cm (12in) (	
	3e. Modifications to natural hydrologic regime.  (select one or double check & average)  x None or none apparent (12)  Recovered (7)  Recovering (3)  Recent or no recovery (1)		Check all disturbances observed  I ditch	er)
38.5 10 Subtotal Points	Metric 4. Habitat Alteration and Dev  4a. Substrate disturbance. Score one or double    X	le check and average.	C. Habitat alteration. Score one or double check and  None or none apparent (9)  Recovered (6)	average.
	Moderately good (4)  x Fair (3)  Poor to fair (2)  Poor (1)	Check all disturbate  ☐ mowing ☐ grazing ☐ clearcutting ☐ selective cutting ☐ woody debris removation toxic pollutants	Recent or no recovery (1)  Inces observed  Shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging	

38.5 subtotal this page

DRAM v. 5.0 Field Form Quantita			-	
	North Newark	138 kV Transmission Line Rebui	Date:	June 1, 2020
Wetland: Wet	land 022		Rater:	BL, SM
38.5 subtotal first pa	ge			
·				
38.5 0	Metric 5. Sp	ecial Wetlands. (max 10 pts.)		
Subtotal Points	•	ply and score as indicated		
Cubicial 1 cints	Oncer an that up	Bog (10 pts)		
		Fen (10 pts)		
		Old Growth Forest (10 pts)		
		Mature forested wetland (5 pts)  Lake Erie coastal/tributary wetland-unre	atriated budge	logy (10 pto)
	-		•	
		Lake Erie coastal/tributary wetland-restr	, ,	y (5 pis)
		Lake Plain Sand Prairies (Oak Opening	s) (10 pts)	
		Relict Wet Prairies (10 pts)		
		Known occurrence state/federal threate	_	
		Significant migatory songbird/waterfowl		
		Category 1 Wetland. See Question 1 o	f Qualitative Ra	ating. (-10 pts)
40.5				
40.5 2	Metric 6. Pla	int Communities, interspersior	i, microtop	ography. (max 20 pts.)
Subtotal Points	6a. Wetland Veg	getation Communities		
	Score all present	using 0 to 3 scale	Vegetatio	n Community Cover Scale
		Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	2	Emergent		7 Desire St. 55p.1655 - 61.114 (6.2.11 ) 40.55/ 55.14gasas 4.54
		Shrub		Present and either comprises small part of wetland's vegetation and is
		Forest	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
		Mudflats		of moderate quality, or comprises a significant part but is or low quality
		Open water		Present and either comprises significant part of wetland's vegetation
		Other (list)	2	and is of moderate quality or comprises a small part and is of high
				quality
	6b. Horizontal (p	olan view) interspersion	•	Present and comprises significant part, or more, of wetland's vegetation
	Select only one		3	and is of high quality
	<u> </u>	High (5)		
		Moderately high (4)	Narrative	<b>Description of Vegetation Quality</b>
		Moderate (3)		Low spp diversity and/or predominance of nonnative or disturbance
		Moderately low (2)	low	tolerant native species
		Low (1)		Native ann are deminant companent of the vegetation, although
	×	None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,
	_ ^	Trono (o)	moderate	and species diversity moderate to moderately high, but generally w/o
	6c. Coverage of	invasivo plants		presence of rare threatened or endangered spp
		ORAM long form for list.		- ''
	Add or deduct po	•		A predominance of native species, with nonnative spp and/or
	<u> </u>	Extensive >75 % cover (-5)	high	disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or
		` ′		endangered spp
		Moderate 25-75% cover (-3)		<u> </u>
	X	Sparse 5-25% cover (-1)	Mudfloto	nd Open Water Class Quality
		Nearly Absent <5% cover (0)		
		Absent (1)	0	Absent <0.1 ha (0.2471 acres)
			1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
			2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopogra		3	High 4 ha (9.88 acres) or more
		using 0 to 3 scale		
	1	Vegetated hummocks/tussocks		ography Cover Scale
	0	Coarse woody debris >15 cm (6")	0	Absent
	0	Standing dead > 25 cm (10") dbh	1	Present very small amounts or if more common of marginal quality
	0	Amphibian breeding pools		. 1999. 1977 Small amounts of himore common of marginal quality
			2	Present in moderate amounts, but not of highest quality or in small
				amounts of highest quality
			3	Present in moderate or greater amounts and of highest quality
			3	n resent in moderate or greater amounts and or nignest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 022

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 022

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 022

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 022

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing West





WEILAN

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Site Location:

**Project No.** 60616110

### Wetland 022

**Client Name:** 

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 023

Project/Site: Crooksville-North Newar	rk 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20
Applicant/Owner: AEP		State: OI	Sampling Point: w-bl-20200601-04
Investigator(s): BL, SKM		Section, Township, Range: S	35 T 17N R 15W
Landform (hillslope, terrace, etc.):	Swale L	Local relief (concave, convex, i	none): concave Slope: 15.0 % / 86.2 °
Subregion (LRR or MLRA): LRR N	Lat.:	38.82378 Loi	ng.: -82.160403 Datum: NAD83
Soil Map Unit Name: WuE2 - Westr			NWI classification: N/A
Are climatic/hydrologic conditions or	n the site typical for this time of yea	ar? Yes • No O (If no	, explain in Remarks.)
Are Vegetation  , Soil .			l Circumstances" present? Yes  No
Are Vegetation . , Soil .	, or Hydrology   naturally pro	oblematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - At	, ,	ampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No O		
Hydric Soil Present?	Yes No O	Is the Sampled Area	Yes  ● No ○
Wetland Hydrology Present?	Yes ● No O	within a Wetland?	
time of survey. Wetland is potential connected and above stream terral	ally isolated, drains downslope to no		lly delineated. Groundwater seepage observed at inial stream s-bl-20200601-06, not directly
Hydrology			
Wetland Hydrology Indicators:  Primary Indicators (minimum of on  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  Field Observations:  Surface Water Present?  Water Table Present?  Yes	True Aquatic Plants  Hydrogen Sulfide Oc  Oxidized Rhizospher  Presence of Reducet  Recent Iron Reducti  Thin Muck Surface (  Other (Explain in Re	dor (C1) res along Living Roots (C3) d Iron (C4) ion in Tilled Soils (C6) (C7) emarks)	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
			rology Present? Yes   No
(includes capillary fringe)  Describe Recorded Data (stream ga		o previous inspections), if avai	lahle:
Describe Recorded Data (Stream ga	age, mornioring well, acrial photos	, previous inspections), it avai	idble.
Remarks: multiple primary hydrology indicato Drains to northeast downslope off-s			oitation and surface runoff in geomorphic position.

			ominant		Sampling Point: <b>w-bl-20200601-04</b>
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  2 (A)
2			0.0%		Total Number of Dominant
3	0		0.0%		Species Across All Strata: 2 (B)
4			0.0%		Devent of devices Consider
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		
7			0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	)	= 10	otal Cover	•	0BL species <u>45</u> x 1 = <u>45</u>
1. Rubus idaeus	2		100.0%	FAC	FACW species $50 \times 2 = 100$
2.			0.0%		FAC speciles $4 \times 3 = 12$
3			0.0%		FACU speci es x 4 =
4			0.0%		UPL speci es
5.			0.0%		Column Totals: 99 (A) 157 (B)
6.			0.0%		Prevalence Index = $B/A = 1.586$
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= Tc	otal Cover	-	of height.
1. Phalaris arundinacea	30	<b>✓</b>	30.9%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus atrovirens	30	<b>✓</b>	30.9%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Carex frankii	15		15.5%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Poa palustris	15		15.5%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Impatiens pallida	5		5.2%	FACW	in height.
6. Valerianella umbilicata	2		2.1%	FAC	Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15'r )	97	= Tc	otal Cover	-	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4			0.0%		height.
5	0		0.0%		Hydrophytic
6.	0		0.0%		Vegetation Vegetation
	0	= To	otal Cove	<u> </u>	Present? Yes INO U
Remarks: (Include photo numbers here or on a separate she	et.)				
$\label{eq:hydrophytic} \mbox{Hydrophytic vegetation indicator present as dominance test} > 50\%,$	dominant sp	ecies	s are OBL a	and FACW	

Sampling Point: w-bl-20200601-04

Profile Descr	iption: (De	escribe to	the depth	needed to	documen	t the indi	cator or cor	firm the a	absence of indicators.)	,	
Depth		Matrix			R	edox Feat	ures				
_(inches)_		(moist)	%	Color	(moist)	%	Tvpe_	Loc <sup>2</sup>	Texture	Remarks	
0-3	10YR	4/2	100						Silt Loam		
3-10	10YR	4/1	90	10YR	4/3	10	C	PL	Silty Clay Loam		
10-16	5Y	5/2	60	5Y	5/6	20	C	M	Clay Loam	,	
				10YR	3/2	20	D	M		,	
		,									
		`									
		`									
					-						
		-	-								
				. ——							
			on. RM=Red	uced Matrix,	CS=Cover	ed or Coat	ed Sand Grai	ns <sup>2</sup> Loca	tion: PL=Pore Lining. M=Ma	atrix	
Hydric Soil I									Indicators for Proble	ematic Hydric Soils <sup>3</sup> :	
Histosol (					k Surface		(00) (111 51		2 cm Muck (A10)	(MLRA 147)	
Black Hist	bedon (A2)						(S8) (MLRA 1 MLRA 147, 1		Coast Prairie Red	ox (A16)	
	Sulfide (A4	)				race (59) (i I Matrix (F2		48)	(MLRA 147,148)		
	Layers (A5)				leted Matr		:)		Piedmont Floodpl (MLRA 136, 147)		
	k (A10) (LR					urface (F6)			Very Shallow Dar		
	Below Dark		A11)			Surface (F			Other (Explain in		
	k Surface (A		,			sions (F8)			Ciriei (Expidiii iii	Kerriai KS)	
	ck Mineral	(S1) (LRR I	٧,	☐ Iron	-Mangane	ese Masses	(F12) (LRR N	1,			
MLRA 147	,	(0.1)			(A 136)	o (E12) (N	ILRA 136, 12:	2)			
Sandy Gle	eyed Matrix	(S4)					s (F19) (MLR		<sup>3</sup> Indicators of hydrophytic vegetation and		
	Matrix (S6)						s (F19) (IVILR 1) (MLRA 127		wetland hydrology must be present, unless disturbed or problematic.		
Stripped i	watiix (50)			□ Keu	Parent IVI	ateriai (FZ)	I) (IVILKA 127	, 147)	uriless ui	starbed or problematic.	
Restrictive L	ayer (if ob	served):									
Type:									Hydric Soil Present?	Yes ● No ○	
Depth (inc	nes):								.,,	163 0 110 0	
Remarks:											
Hydric soil ind	dicators pr	esent as	depleted n	natrix with	ow chro	ma and lo	w value ha	ving redo	x concentrations in pore	linings.	

## Upland 022

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20		
Applicant/Owner: AEP	State: OH	Sampling Point: upl-bl-20200601-05		
Investigator(s): BL, SKM	Section, Township, Range: S	35 T 17N R 15W		
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, no	ne): convex Slope: 10.0 % / 84.3 °		
Subregion (LRR or MLRA): LRR N Lat	: 38.82363 Long	:: -82.16026 Datum: NAD83		
Soil Map Unit Name: WuE2 - Westmoreland-Guernsey silt loams, 2	5 to 40 percent slopes, eroded	NWI classification: N/A		
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes ⊙ No O (If no, ∈	explain in Remarks.)		
Are Vegetation $\ \square$ , Soil $\ \square$ , or Hydrology $\ \square$ significant	ntly disturbed? Are "Normal C	Circumstances" present? Yes   No		
Are Vegetation $\ \square$ , Soil $\ \square$ , or Hydrology $\ \square$ naturally	problematic? (If needed, ex	xplain any answers in Remarks.)		
Summary of Findings - Attach site map showing	sampling point locations	, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes No •				
Hydric Soil Present? Yes No •	Is the Sampled Area	∕es ○ No •		
Wetland Hydrology Present? Yes No •	within a Wetland?			
Remarks: Point out to wetland 023 (w-bl-20200601-04), located about 25 fe	et east of houndary at equal eleva	tion. Not a wetland point as hydric soil and		
hydrology criteria not met.	et east of bournary at equal eleval	tion. Not a wettand point as riyund son and		
Hydrology				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)		
Surface Water (A1)  True Aquatic Pla	_	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)  Hydrogen Sulfide	_	Drainage Patterns (B10)		
	pheres along Living Roots (C3)	Moss Trim Lines (B16)		
Water Marks (B1) Presence of Red	` ′	Dry Season Water Table (C2)		
	uction in Tilled Soils (C6)	Crayfish Burrows (C8)		
Drift deposits (B3)  Thin Muck Surface	· ` ´	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)  Other (Explain in	Remarks)	Stunted or Stressed Plants (D1)		
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)	L	Geomorphic Position (D2)		
Water-Stained Leaves (B9)	L	Shallow Aquitard (D3)		
Aquatic Fauna (B13)	L [	☐ Microtopographic Relief (D4) ☐ FAC-neutral Test (D5)		
Field Observations:	L			
Surface Water Present? Yes O No O Depth (inches)	:0			
Water Table Present? Yes O No O Depth (inches)	<u> </u>	0 6		
Saturation Present? (includes capillary fringe) Yes No Depth (inches)	: Wetland Hydro	logy Present? Yes O No 💿		
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if availab	ole:		
Remarks:				
No hydrology indicators present.				

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

			ominant		Sampling Point: upl-bl-20200601-05
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2			0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata: 4 (B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
6	0		0.0%		Hidt Are Obc, FACTV, OF FAC.
7	0		0.0%		Prevalence Index worksheet:
8	0	Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	)	= Tc	otal Cover		0BL speci es x 1 =
Rubus occidentalis	, 15	<b>✓</b>	55.6%	UPL	FACW species 0 x 2 = 0
Juglans nigra	10	<b>✓</b>	37.0%	FACU	FAC speci es <u>92</u> x 3 = <u>276</u>
0.5			7.4%	FACU	FACU speci es x 4 =68
0.1			0.0%		UPL speci es $\frac{20}{100}$ x 5 = $\frac{100}{100}$
4	_ —		0.0%		Column Total s:129 (A)444 (B)
5 6			0.0%		
			0.0%		
7 8			0.0%		Hydrophytic Vegetation Indicators:
9			0.0%		Rapid Test for Hydrophytic Vegetation
	0		0.0%		☐ Dominance Test is > 50%
10		 – Тс	otal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)					Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2			0.0%		
3			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			0.0%		
5			0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7			0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0		otal Cover		of height.  Sapling/shrub stratum – Consists of woody plants, excluding
1. Valerianella umbilicata	40	<b>✓</b>	39.2%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Dichanthelium clandestinum	30	<b>✓</b>	29.4%	FAC	Herb stratum - Consists of all herbaceous (non-woody) plants,
3. Carex spicata	10		9.8%	FAC	regardless of size, and all other plants less than 3.28 ft tall.
4. Vernonia gigantea	10		9.8%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Lamium purpureum	5		4.9%	UPL	
6. Solidago altissima	5		4.9%	FACU	Five Vegetation Strata:
7. Verbesina alternifolia	2		2.0%	FAC	Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
_Woody Vine Stratum (Plot size: _15' r)	102	= Tc	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2.	0		0.0%	,	species, except woody vines, less than approximately 3 ft (1 m) in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%	·	height.
5.	0		0.0%		
6.	0		0.0%		Hydrophytic Vegetation
0.		= T	otal Cover	-	Present? Yes No
Describe (Include abote numbers here or on a congrete she					
Remarks: (Include photo numbers here or on a separate shee No hydrophytic vegetation indicators present.	et. <i>)</i>				

Upland 022

Soil

Sampling Point: upl-bl-20200601-05

Profile Descri	ption: (Describe to	the depth ne	eded to documen	t the indic	ator or cor	nfirm the a	bsence of indicators.)	
Depth	Matrix		Re	edox Featu	ıres			
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc2	Texture	Remarks
0-10	10YR 3/3	100					Silt Loam	
10-14	10YR 4/4	80	10YR 4/2	20	D		Silt Loam	·
				•	•			
								•
<sup>1</sup> Type: C=Cond	entration. D=Depletio	n. RM=Reduce	ed Matrix, CS=Cover	ed or Coate	ed Sand Grai	ns <sup>2</sup> Locat	ion: PL=Pore Lining. M=M	atrix
Hydric Soil II	ndicators:						Indicators for Drobl	ematic Hydric Soils <sup>3</sup> :
Histosol (A			☐ Dark Surface	(S7)				
Histic Epip	•		Polyvalue Belo		(S8) (MLRA	147,148)	2 cm Muck (A10)	
Black Histi			☐ Thin Dark Surf				Coast Prairie Red	ox (A16)
	Sulfide (A4)		Loamy Gleyed			•	(MLRA 147,148)	1.1.0.1. (510)
Stratified L			Depleted Matr				Piedmont Floodp (MLRA 136, 147)	
	(A10) (LRR N)		Redox Dark Su					k Surface (TF12)
	Below Dark Surface (A	11)	Depleted Dark		7)			
	Selow Dark Surface (A Surface (A12)	11)	Redox Depres		• /		Other (Explain in	Remarks)
	` ′	1	☐ Iron-Mangane		(F12) (LRR N	J		
MLRA 147	•	Ι,	MLRA 136)					
	yed Matrix (S4)		Umbric Surfac				3 Indicators of	hydrophytic vegetation and
Sandy Rec	lox (S5)		☐ Piedmont Floo	dplain Soils	(F19) (MLR	RA 148)	wetland hy	drology must be present,
Stripped M	Matrix (S6)		Red Parent Ma	aterial (F21)	) (MLRA 127	7, 147)	unless d	isturbed or problematic.
Postrictive La	yer (if observed):							
Type:	iyer (ii observed).							
Depth (inch	200).						Hydric Soil Present?	Yes ○ No •
	les)							
Remarks:								
No hydric soil	indicators present.							

Site: Crooksvill	e-North Newark 138 kV Transmission I	Line Rebuild Project	<b>Date:</b> June 1, 2020	
Wetland: w-	-bl-20200601-04	-	Rater: BL, SM	
0 0 Subtotal Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2h  10 to <25 acres (4 to <10.1ha) (3  3 to <10 acres (1.2 to <4ha) (3  0.3 to <3 acres (0.12 to <1.2ha)  0.1 to <0.3 acres (0.04 to <0.12  x <0.1 acres (0.04ha) (0 pts)	na) (5 pts) (4 pts) pts) ) (2pts)		
12 12 Subtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  X WIDE. Buffers average 50m (1  MEDIUM. Buffers average 25m  NARROW. Buffers average 10  VERY NARROW. Buffers aver  2b. Intensity of surrounding land use (select of the surrounding land use)  X LOW. Old field (>10 years), shi  MODERATELY HIGH. Resider  HIGH. Urban, industrial, open p	e, do not double check) 164ft) or more around wetlant to <50m (82 to <164ft) ard on to <25m (32ft to <82ft) are age <10m (<32ft) around wetlant to <60m (<32ft) around wetlant to come or double check & average forest, prairie, savannah rubland, young second grontial, fenced pasture, park,	and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0)  erage) h, wildlife area, etc. (7) owth forest. (5) conservation tillage, new fallow field. (3)	
31 19 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  X Other groundwater (3)  X Precipitation (1)  Seasonal/Intermittent surface w Perennial surface water (lake of the seasonal surface water (lake of the seasonal surface)  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  X <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regimes (select one or double check & average (select one or double check & average (select one or double check & average (7)  Recovered (7)  Recovering (3)  Recent or no recovery (1)	3b vater (3) r stream) (5) 3d	b. Connectivity. Score all that apply.  100 year floodplain (1) Between stream/lake and other human use (1) x Part of wetland/upland (e.g. forest), complex (1) part of riparian or upland corridor (1)  d. Duration inundation/saturation. (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) x Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch	
40 9 Subtotal Points	Metric 4. Habitat Alteration and D  4a. Substrate disturbance. Score one or dot  X None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  Fair (3)  x Poor to fair (2)  Poor (1)	evelopment. (max 2 uble check and average.	20 pts.)  c. Habitat alteration. Score one or double check and ave  None or none apparent (9)  Recovered (6)  x. Recovering (3)  Recent or no recovery (1)  ances observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging	rage.

40 subtotal this page

Sita: Crookeville North N	Newark 138 kV Transmission Line Rebui	Date:	June 1, 2020
		-	
Wetland: Wetland 02	<u> </u>	Rater:	BL, SM
40 subtotal first page			
40 0 Metric	c 5. Special Wetlands. (max 10 pts.)		
	all that apply and score as indicated		
	Bog (10 pts)		
	Fen (10 pts)		
	Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		
	Lake Erie coastal/tributary wetland-unre	estricted hydrol	logy (10 pts)
	Lake Erie coastal/tributary wetland-rest	ricted hydrolog	y (5 pts)
	Lake Plain Sand Prairies (Oak Opening	ıs) (10 pts)	
	Relict Wet Prairies (10 pts)		
	Known occurrence state/federal threate	_	
	Significant migatory songbird/waterfowl		
	Category 1 Wetland. See Question 1 o	∝uaiitative K	aung. (-10 μω)
38 -2 Metric	c 6. Plant Communities, interspersion	ı, microtop	ography. (max 20 pts.)
	etland Vegetation Communities	17	
	all present using 0 to 3 scale	Vegetatio	n Community Cover Scale
	Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	1 Emergent		(0.2.17 1 dolos) confuguous alea
	Shrub		Present and either comprises small part of wetland's vegetation and is
	Forest	1	of moderate quality, or comprises a significant part but is of low quality
	Mudflats Open water		
	Open water Other (list)	2	Present and either comprises significant part of wetland's vegetation
	Other (list)		and is of moderate quality or comprises a small part and is of high quality
6b. Hon	rizontal (plan view) interspersion		Present and comprises significant part, or more, of wetland's vegetation
Select o		3	and is of high quality
	High (5)		Paradiation (IV) and IV are
	Moderately high (4)	Narrative	Description of Vegetation Quality
	Moderate (3)	low	Low spp diversity and/or predominance of nonnative or disturbance
	Moderately low (2)		tolerant native species
	Low (1) x None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,
		moderate	and species diversity moderate to moderately high, but generally w/o
6c. Cov	c. Coverage of invasive plants.		presence of rare threatened or endangered spp
Refer to	Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or
Add or c	deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp
	Extensive >75 % cover (-5)	9.1	diversity and often, but not always, the presence of rare, threatened, or
	x Moderate 25-75% cover (-3)	<u> </u>	endangered spp
	Sparse 5-25% cover (-1)	Mudflat a	nd Open Water Class Quality
	Nearly Absent <5% cover (0) Absent (1)	0	Absent <0.1 ha (0.2471 acres)
	, ason (1)	1	Low 0.1 ha to <1 ha (0.2471 acres)
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
<u>6</u> d. Mica	<u>crotopography</u>	3	High 4 ha (9.88 acres) or more
	ıll present using 0 to 3 scale		
	0 Vegetated hummocks/tussocks		ography Cover Scale
	0 Coarse woody debris >15 cm (6")	0	Absent
	0 Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
		3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 023

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 023

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 023

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 023

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing West





## PHOTOGRAPHIC RECORD

**WETLANDS** 

**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 023

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 024

Project/Site: Crooksville-North Newark 138 kV Transmission L	ine City/County: Muskingum	Sampling Date: 01-Jun-20
pplicant/Owner: AEP	State: 0	OH Sampling Point: w-bl-20200601-03
nvestigator(s): BL, SKM	Section, Township, Range: S	S 35 T 17N R 15W
andform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex,	none): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.82863 Lo	ong.: -82.16598 Datum: NAD83
Soil Map Unit Name: CsD - Coshocton silt loam, 15 to 25		NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for th		o, explain in Remarks.)
Are Vegetation . Soil . , or Hydrology .	· ·	al Circumstances" present? Yes   No
Are Vegetation . , Soil . , or Hydrology .	naturally problematic? (If needed,	, explain any answers in Remarks.)
Summary of Findings - Attach site map s	howing sampling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No		
Hydric Soil Present? Yes   No	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present? Yes   No	within a Wetland?	
Sample point in for wetland 024ab (w-bl-20200601-03al Wetland fully delineated, drains directly to intermittent s		along edge of Pond <b>09</b> (ρ-bi-20200601-01).
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all	that apply)	Surface Soil Cracks (B6)
	e Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
	rogen Sulfide Odor (C1)	Drainage Patterns (B10)
	lized Rhizospheres along Living Roots (C3) ence of Reduced Iron (C4)	☐ Moss Trim Lines (B16) ☐ Dry Season Water Table (C2)
	ent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
	Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
	er (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		<b>✓</b> Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
☐ Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes  No  De	pth (inches):	
	pth (inches):	
Saturation Present?	Wetland Hyd	drology Present? Yes 💿 No 🔾
(includes capillary irringe)	pth (inches): 12	7.11
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if ava	allable:
Remarks:		
	ourse of hydrology is concentration of proci	nitation and curface runoff in geometric nacition
Multiple primary hydrology indicators present. Primary so and abutting farm pond. Drains to south directly to interr		pitation and surface runoir in geomorphic position

			ominant		Sampling Point: w-bl-20200601-03
	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		Species ricross riir strata.
5			0.0%		Percent of dominant Species
			0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)
6			0.0%		Description of the description of
7					Prevalence Index worksheet:
8		_	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r		= 10	otal Cover	-	OBL species 30 x 1 = 30
4.61	10	<b>✓</b>	52.6%	UPL	FACW species <u>26</u> x 2 = <u>52</u>
<b>0</b> D		<b>✓</b>	26.3%	FACU	FAC species <u>40</u> x 3 = <u>120</u>
2. Rosa multiflora					FACU species $15$ x 4 = $60$
3. Ulmus americana			15.8%	FACW	UPL speci es 10 x 5 = 50
4. Fraxinus pennsylvanica			5.3%	FACW	1
5			0.0%		Col umn Total s: 121 (A) 312 (B)
6	0		0.0%		Prevalence Index = B/A = 2.579
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		
10.			0.0%		✓ Dominance Test is > 50%
			otal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		- 10			Morphological Adaptations <sup>1</sup> (Provide supporting
1			0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		 _ Tc	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' r</u> )		_			Sapling/shrub stratum – Consists of woody plants, excluding
1. Scirpus atrovirens	30	<b>✓</b>	29.4%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Valerianella umbilicata	15	✓	14.7%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Dichanthelium clandestinum	<u>15</u>	✓	14.7%	FAC	regardless of size, and all other plants less than 3.28 ft tall.
4. Scirpus cyperinus	10		9.8%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Elymus virginicus	10		9.8%	FACW	in height.
6. Poa compressa	10		9.8%	FACU	Five Vegetation Streets
7. Euthamia graminifolia	5		4.9%	FAC	Five Vegetation Strata:
8. Juncus tenuis	5		4.9%	FAC	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
0.000100001111			2.0%	FACW	diameter at breast height (DBH).
9. Onoclea sensibilis				TACVV	Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11			0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	102	= To	otal Cover	=	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody
	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
2			0.0%		
3					Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		-
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation Ves (A) No (C)
	0	= To	otal Cove	r	Present? Yes No C
Remarks: (Include photo numbers here or on a separate :	sheet)				•
Hydrophytic vegetation indicator present as dominance test > 50	•	ecies	s are OBL,	FAC, FACU	and UPL

Sampling Point:

w-bl-20200601-03

Depth Matri				lox Featu	1				
(inches)         Color (moist)           0-3         5Y         3/3	100	Color (r	moist)	%	_Tvpe_	Loc <sup>2</sup>	Texture Remarks Silt Loam		
	$\overline{}$						· · · · · · · · · · · · · · · · · · ·		
3-13 5Y 4/2	95	5Y	4/6	5	С	PL	Silt Loam		
13-17 5Y 4/1	98	5Y	4/4	2	C	PL	Silty Clay Loam		
							· · · · · · · · · · · · · · · · · · ·		
							`		
					$\overline{}$				
pe: C=Concentration. D=Deple	etion. RM=Redu	ced Matrix. C	S=Covered	d or Coate	d Sand Grain	ns ²Locat	tion: PL=Pore Lining. M=Matrix		
dric Soil Indicators:									
Histosol (A1)		☐ Dark	Surface (S	7)			Indicators for Problematic Hydric Soils 3:		
Histic Epipedon (A2)					(S8) (MLRA	147,148)	2 cm Muck (A10) (MLRA 147)		
Black Histic (A3)		Thin	Dark Surfac	ce (S9) (N	1LRA 147, 14	18)	Coast Prairie Redox (A16) (MLRA 147,148)		
Hydrogen Sulfide (A4)			ny Gleyed N		1		Piedmont Floodplain Soils (F19)		
Stratified Layers (A5)			eted Matrix				(MLRA 136, 147)		
2 cm Muck (A10) (LRR N)			x Dark Surf				<ul><li>☐ Very Shallow Dark Surface (TF12)</li><li>☐ Other (Explain in Remarks)</li></ul>		
Depleted Below Dark Surface	(A11)		eted Dark S		7)				
Thick Dark Surface (A12)			x Depression		(540) (100 )				
Sandy Muck Mineral (S1) (LRF MLRA 147, 148)	R N,		Manganese 4 136)	Masses (	(F12) (LRR N	,			
Sandy Gleyed Matrix (S4)			,	(F13) (ML	RA 136, 122	2)			
Sandy Redox (S5)					(F19) (MLR		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
, (		_			) (MLRA 127				
Stripped Matrix (S6)						<u> </u>			
strictive Layer (if observed)	1:								
strictive Layer (if observed) Type:	):						Hydric Soil Present? Yes • No •		
strictive Layer (if observed) Type: Depth (inches):	:						Hydric Soil Present? Yes   No		
strictive Layer (if observed) Type: Depth (inches):						<u> </u>			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox	Hydric Soil Present? Yes  No  x concentrations in pore linings.		
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
trictive Layer (if observed)  Type:  Depth (inches):  marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
trictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chrom:	a and lov	v value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
trictive Layer (if observed)  Type:  Depth (inches):  marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chrom:	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches):		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches):		atrix with lo	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches):		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chroma	a and lov	w value ha	ving redox			
strictive Layer (if observed) Type: Depth (inches): marks:		atrix with Ic	ow chrom:	a and lov	w value ha	ving redox			

Upland 024

Project/Site: Crooksville-North Newar	rk 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20
Applicant/Owner: AEP		State: OH	Sampling Point: upl-bl-20200601-03
Investigator(s): BL, SKM		Section, Township, Range: S	35 T 17N R 15W
Landform (hillslope, terrace, etc.):	Shoulder slope	Local relief (concave, convex, n	none): <u>convex</u> Slope: <u>20.0</u> % / <u>87.1</u> °
Subregion (LRR or MLRA): LRR N	Lat.:	38.82884 Lon	ng.: -82.166315 Datum: NAD83
Soil Map Unit Name: CsD - Coshoct			NWI classification: N/A
Are climatic/hydrologic conditions or —	n the site typical for this time of ye	ar? Yes • No O (If no,	explain in Remarks.)
Are Vegetation . , Soil .	, or Hydrology significantly	ly disturbed? Are "Normal	Circumstances" present? Yes   ● No ○
Are Vegetation . , Soil .	, or Hydrology 🔲 naturally pr	roblematic? (If needed, e	explain any answers in Remarks.)
Summary of Findings - At		ampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No O		
Hydric Soil Present?	Yes O No O	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present?	Yes ○ No ●	WILLIIII a vvetiana:	
Remarks: Point out to wetland 024ab (w-bl-2 criteria not met.	20200601-03), about 50 feet north	nwest of wetland boundary. Not	t a wetland point as hydric soil and hydrology
Hydrology			
Wetland Hydrology Indicators:  Primary Indicators (minimum of on Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  Field Observations:  Surface Water Present?  Yes C	True Aquatic Plants  Hydrogen Sulfide O  Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface Other (Explain in Re	Odor (C1) Peres along Living Roots (C3) Peres along Living Roots (C3) Peres along Living Roots (C3) Peres along Living Roots (C6) Peres along Living Roots (C6) Peres along Living Roots (C3) Peres along Living Roots (C4) Peres along Living Roots (C6) Peres along Living Roots (	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Saturation Present?	_	Wetland Hydr	rology Present? Yes O No 🗨
(includes capillary fringe)  Describe Recorded Data (stream ga  Remarks:  No hydrology indicators present.		s, previous inspections), if avail-	able:

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

## Upland 024

			ominant		Sampling Point: <u>upl-bl-20200601-03</u>
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2	0		0.0%		T
3.			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		Species / Gross / Gros
5			0.0%		Percent of dominant Species
		$\Box$	0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
6		$\Box$	0.0%		Prevalence Index worksheet:
7		$\Box$			
8			0.0%		
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )		= 10	otal Cover		0BL species
1. Fraxinus americana	_10_	<b>✓</b>	76.9%	FACU	FACW species 17 x 2 = 34
2. Juglans nigra			15.4%	FACU	FAC speci es $70 \times 3 = 210$
3. Sassafras albidum	1		7.7%	FACU	FACU speci es $28 \times 4 = 112$
4.			0.0%		UPL speci es
		$\overline{\Box}$	0.0%		Col umn Total s: 115 (A) 356 (B)
5		$\Box$	0.0%		
6					Prevalence Index = B/A = 3.096
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9	0	$\sqcup$	0.0%		✓ Dominance Test is > 50%
10	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover		☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	00	Ш	0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
	0		0.0%		Tree stratum - Consists of woody plants, excluding vines, 3 in.
7	_	ــــ To =	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' r</u> )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Dichanthelium clandestinum	40	<b>✓</b>	39.2%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Valerianella umbilicata	30	<b>✓</b>		FAC	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Onoclea sensibilis	10	Н	9.8%	FACW	, ,
4. Alliaria petiolata	10		9.8%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Festuca rubra	5	Ш	4.9%	FACU	
6. Elymus virginicus	5		4.9%	FACW	Five Vegetation Strata:
7. Packera aurea	2		2.0%	FACW	Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0_		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	102	= To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	_				species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	_		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5			0.0%		Hydrophytic
6.	0	Ш	0.0%		Vegetation Present? Yes No No
	0	= T	otal Cover	-	Treaditi.
Remarks: (Include photo numbers here or on a separate shee	et.)				
Hydrophytic vegetation indicator present as dominance test > 50%, of	dominant sp	ecie:	s are FAC a	nd FACU	

Sampling Point: upl-bl-20200601-03

0-3 5Y 3-19 5Y	an. D=Depletion ors: (A4) A5) (LRR N) ark Surface (A12)		Matrix, CS=Covered or Coated Sand Grain  Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14 Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
Dee: C=Concentration  Deciding Soil Indicate  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Stratified Layers (  2 cm Muck (A10)  Depleted Below D  Thick Dark Surfact  Sandy Muck Miner  MLRA 147, 148)  Sandy Gleyed Matt  Sandy Redox (S5)	an. D=Depletion ors: (A4) A5) (LRR N) ark Surface (A12)	n. RM=Reduced	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Silt Loam  M=Matrix  Indicators for Problematic Hydric Soils 3:  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
pe: C=Concentration dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	on. D=Depletion ors: (A4) (A5) (LRR N) ark Surface (A12)	n. RM=Reduced	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	ion: PL=Pore Lining. M=Matrix  Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
Hric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicato Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
dric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup> e (A12)		Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14: Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	47,148)	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19)
Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) (A5) (LRR N) ark Surface (A <sup>2</sup>	1)	Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)		2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147,148) Piedmont Floodplain Soils (F19)
Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) A5) (LRR N) ark Surface (A <sup>7</sup> e (A12)	1)	Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 14) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)		2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147,148) Piedmont Floodplain Soils (F19)
Black Histic (A3) Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(A4) A5) (LRR N) ark Surface (A <sup>7</sup> e (A12)	1)	☐ Thin Dark Surface (S9) (MLRA 147, 14☐ Loamy Gleyed Matrix (F2)☐ Depleted Matrix (F3)☐ Redox Dark Surface (F6)		Coast Prairie Redox (A16) (MLRA 147,148) Piedmont Floodplain Soils (F19)
Hydrogen Sulfide Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	A5) (LRR N) ark Surface (A´ e (A12)	1)	☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6)	8)	(MLRA 147,148)  Piedmont Floodplain Soils (F19)
Stratified Layers ( 2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	A5) (LRR N) ark Surface (A´ e (A12)	1)	Depleted Matrix (F3) Redox Dark Surface (F6)		
2 cm Muck (A10) Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	(LRR N) ark Surface (A <sup>2</sup> e (A12)	1)	Redox Dark Surface (F6)		
Depleted Below D Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	ark Surface (A´ e (A12)	1)	_		(MLRA 136, 147)
Thick Dark Surfac Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	e (A12)	1)			☐ Very Shallow Dark Surface (TF12)
Sandy Muck Miner MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)			Depleted Dark Surface (F7)		Other (Explain in Remarks)
MLRA 147, 148) Sandy Gleyed Mat Sandy Redox (S5)	al (S1) (LRR N		Redox Depressions (F8)		
Sandy Redox (S5)		,	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
	rix (S4)		Umbric Surface (F13) (MLRA 136, 122)	)	3
Stripped Matrix (S			Piedmont Floodplain Soils (F19) (MLRA	A 148)	<sup>3</sup> Indicators of hydrophytic vegetation ar wetland hydrology must be present.
	6)		Red Parent Material (F21) (MLRA 127,	147)	wetland hydrology must be present, unless disturbed or problematic.
trictive Layer (if	observed):				
Type:	observed).				
Depth (inches):					Hydric Soil Present? Yes No 💿
					-
marks:				,	

Site: Crooksvi	ille-North Newark 138 kV Transmission Line Rebuild Project	Date	: June 1, 2020
Wetland: V	Vetland 024	Rate	r: BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max 6 pts)  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  0.3 to <3 acres (0.12 to <1.2ha) (2pts)  0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)  <0.1 acres (0.04ha) (0 pts)		w-bl-20200601-03
12 12 Subtotal Points	Metric 2. Upland buffers and surrounding land use. (n  2a. Calculate average buffer width (select one, do not double check)  X WIDE. Buffers average 50m (164ft) or more around wetle MEDIUM. Buffers average 25m to <50m (82 to <164ft) at NARROW. Buffers average 10m to <25m (32ft to <82ft) VERY NARROW. Buffers average <10m (<32ft) around to  2b. Intensity of surrounding land use (select one or double check & ave  VERY LOW. 2nd growth or older forest, prairie, savannal X LOW. Old field (>10 years), shrubland, young second growth or older forest, prairie, savannal  MODERATELY HIGH. Residential, fenced pasture, park, and the properties of t	and perime round wetla around we wetland pe erage) n, wildlife a owth forest conservat	eter (7) and perimeter (4) btland perimeter (1) brimeter (0)  area, etc. (7) c. (5) tion tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, min	ing, constr	uction. (1)
31 19 Subtotal Points	High pH groundwater (5) Other groundwater (3)  X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3) X 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime. (select one or double check & average) None or none apparent (12) X Recovered (7) Recovering (3) Recent or no recovery (1)	d. Duration (select x S S S S S S S S S S S S S S S S S S	tivity. 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)  In inundation/saturation.  In inundation/sat
42 11 Subtotal Points	Metric 4. Habitat Alteration and Development. (max 2  4a. Substrate disturbance. Score one or double check and average.  None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  X Good (5)  Moderately good (4)  Fair (3)  Poor to fair (2)  Poor (1)  Metric 4. Habitat development. (max 2  4c  Check all disturbate grazing  grazing  clearcutting  selective cutting  woody debris remove toxic pollutants	c. Habitat	alteration. Score one or double check and average.  None or none apparent (9) Recovered (6) Recent or no recovery (1)  Served Shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient emrichment

Site: Crooksville	e-North Newark 138 kV Transmission Line Rebuil	Date:	June 1, 2020
Wetland: We	etland 024	Rater:	BL, SM
42 subtotal first p	page		
42 0	Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points	Check all that apply and score as indicated		
	Bog (10 pts)		
	Fen (10 pts) Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		
	Lake Erie coastal/tributary wetland-unre	stricted hydro	ogy (10 pts)
	Lake Erie coastal/tributary wetland-restr	· -	
	Lake Plain Sand Prairies (Oak Openings		, (- F)
	Relict Wet Prairies (10 pts)	, , ,	
	Known occurrence state/federal threater	ned or endang	ered species (10)
	Significant migatory songbird/waterfowl	habitat or usa	ge (10 pts)
	Category 1 Wetland. See Question 1 of	Qualitative R	ating. (-10 pts)
47 5	Metric 6. Plant Communities, interspersion	, microtop	ography. (max 20 pts.)
Subtotal Points	6a. Wetland Vegetation Communities	Voqotatio	n Community Coyor Scalo
	Score all present using 0 to 3 scale  Aquatic bed	vegetatio	n Community Cover Scale
	2 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	Shrub		
	Forest	1	Present and either comprises small part of wetland's vegetation and is
	Mudflats		of moderate quality, or comprises a significant part but is of low quality
	Open water		Present and either comprises significant part of wetland's vegetation
	Other (list)	2	and is of moderate quality or comprises a small part and is of high
			quality
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
	Select only one		and is of high quality
	High (5)		
	Moderately high (4)	Narrative	Description of Vegetation Quality
	Moderate (3)	low	Low spp diversity and/or predominance of nonnative or disturbance
	Moderately low (2)		tolerant native species
	Low (1)  x None (0)		Native spp are dominant component of the vegetation, although
	X None (0)	moderate	nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o
	6c. Coverage of invasive plants.		presence of rare threatened or endangered spp
	Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or
	Add or deduct points for coverage	la i arla	disturbance tolerant native spp absent or virtually absent, and high spp
	Extensive >75 % cover (-5)	high	diversity and often, but not always, the presence of rare, threatened, or
	Moderate 25-75% cover (-3)		endangered spp
	Sparse 5-25% cover (-1)		. 10 W. ( 0 0 l')
	Nearly Absent <5% cover (0)		nd Open Water Class Quality
	x Absent (1)	0	Absent <0.1 ha (0.2471 acres)  Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or more
	Score all present using 0 to 3 scale		g (0.00 dail00) of more
	1 Vegetated hummocks/tussocks	Microtopo	ography Cover Scale
	0 Coarse woody debris >15 cm (6")	0	Absent
	0 Standing dead > 25 cm (10") dbh 1 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
		3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 024a

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 024a

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 024a

Date:

June1, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 024a

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 024a

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 025

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Muskingum Sampling Date: 01-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: w-bl-20200601-02
Investigator(s): BL, SKM	Section, Township, Range: S 35 T 17N R 15W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N Lat.:	38.82963 Long.: -82.167702 Datum: NAD83
Soil Map Unit Name: WuD2 - Westmoreland-Guernsey silt loams, 15	to 25 percent NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes   No   (If no, explain in Remarks.)
Are Vegetation $\ \square$ , Soil $\ \square$ , or Hydrology $\ \square$ significantl	ly disturbed? Are "Normal Circumstances" present? Yes 🍳 No 🔾
Are Vegetation , Soil , or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing s	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No O	Is the Sampled Area Yes No
Wetland Hydrology Present? Yes   No   No	within a Wetland?
Remarks: Sample point in for wetland 025 (w-bl-20200601-02). Wetland within delineated.	n swale, drains southwest directly to s-bl-20200601-04. Wetland is fully
Hydrology	
Water Marks (B1) Presence of Reduce	Drainage Patterns (B10)  Peres along Living Roots (C3)  Moss Trim Lines (B16)  Ed Iron (C4)  Dry Season Water Table (C2)  tion in Tilled Soils (C6)  Crayfish Burrows (C8)  C7)  Saturation Visible on Aerial Imagery (C9)
Describe Recorded Data (stream gauge, monitoring well, aerial photo:	s, previous inspections), if available:
Remarks: Two primary and one secondary hydrology indicators present. Primary geomorphic position. Drains to southwest directly to intermittent stream	y source of hydrology is concentration of precipitation and surface runoff in am.

		-Species?		Sampling Point:	w-bl-20200601-02
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Rel.Strat.	Indicator Status		
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC:	5(A)
2	0	0.0%			
3.	0	0.0%		Total Number of Dominant Species Across All Strata:	5 (B)
4		0.0%			
5		0.0%		Percent of dominant Species	400.00/ (A/D)
6		0.0%		That Are OBL, FACW, or FAC:	100.0% (A/B)
7		0.0%		Prevalence Index worksheet:	
8.	0	0.0%		Total % Cover of: N	ultiply by:
	0 =	= Total Cove	r	OBL species 25 x	<b>1 =</b> 25
Sapling-Sapling/Shrub Stratum (Plot size: 15' r		_		FACW species 47 x	
1. Ulmus americana	2	100.0%	FACW		
2	0	0.0%			<del></del>
3		0.0%		FACU speci es 5 x	
4		0.0%		UPL speci es x	
5	0	0.0%		Column Totals: 93 (A	) <u>187</u> (B)
6		0.0%		Prevalence Index = B/A =	2.011_
7		0.0%		Hydrophytic Vegetation Indicate	
8		0.0%		Rapid Test for Hydrophytic	
9.		0.0%		✓ Dominance Test is > 50%	vegetation
0	0	0.0%		Prevalence Index is ≤3.0 ¹	
		= Total Cove	r		1 (0 )
Shrub Stratum (Plot size:)	0	0.0%		Morphological Adaptations data in Remarks or on a seg	
1	$\frac{0}{0}$	0.0%	$\overline{}$	Problematic Hydrophytic Ve	,
2		0.0%			
3		0.0%		<sup>1</sup> Indicators of hydric soil and w be present, unless disturbed or	
4				Definition of Vegetation Str	
5	0	0.0%		Four Vegetation Strata:	ata.
6		0.0%		Tree stratum – Consists of woody	olants, excluding vines, 3 in.
7		0.0%		(7.6 cm) or more in diameter at brea	
Herb Stratum (Plot size: <u>5' r</u> )	0 =	= Total Cove	r	of height.	fureeds pleate eveluding
1. Poa palustris	40	44.0%	FACW	Sapling/shrub stratum – Consists of vines, less than 3 in. DBH and great	
2. Persicaria sagittata	10	<b>✓</b> 11.0%	OBL	Herb stratum – Consists of all herb	
3. Euthamia graminifolia	10	11.0%	FAC	regardless of size, and all other pla	
4. Galium asprellum	10	11.0%	OBL	Woody vines – Consists of all wood in height.	ly vines greater than 3.28 ft
5. Scirpus atrovirens	5	5.5%	OBL	in neight.	
6. Rubus allegheniensis	5	5.5%	FACU	Five Vegetation Strata:	
7. Juncus effusus	5	5.5%	FACW	Tree - Woody plants, excluding woo	ndy vines, annrovimately 20
3. Rumex crispus	3	3.3%	FAC	ft (6 m) or more in height and 3 in. (	
9. Dichanthelium clandestinum	3	3.3%	FAC	diameter at breast height (DBH).	handanda a al al al
D	0	0.0%		Sapling stratum – Consists of wood vines, approximately 20 ft (6 m) or i	
1	0	0.0%		3 in. (7.6 cm) DBH.	
2.	0	0.0%		Shrub stratum - Consists of woody	
Noody Vine Stratum (Plot size: 15' r )	91 =	= Total Cove	r	vines, approximately 3 to 20 ft (1 to Herb stratum – Consists of all herb	, ,
	0	0.0%		including herbaceous vines, regard	lless of size, and woody
1		0.0%		species, except woody vines, less t in height.	han approximately 3 ft (1 m)
2		0.0%		_	luvinos romandlasf
3				Woody vines – Consists of all wood height.	iy viiles, regardless of
4		0.0%			
5	0	0.0%		Hydrophytic	
		I I 0 00/		The second secon	
6	0	0.0% = Total Cove		Vegetation Present? Yes No	$\supset$

Sampling Point: w-bl-20200601-02

Profile Description: (Describe to the depth	needed to document	the indicato	or or cor	nfirm the a	absence of indicators.)	
DepthMatrix	Re	dox Features	S			
(inches) Color (moist) %	Color (moist)		Tvpe_1	Loc <sup>2</sup>	Texture	Remarks
<b>0-3</b> 10YR 4/3 100					Silt Loam	
<b>3-12</b> 5Y 5/2 80	10YR 4/6	20	С	М	Silty Clay Loam	,
<b>12-17</b> 5Y 5/2 60	5Y 5/8	30	C	M	Silty Clay Loam	
	10YR 5/1	10		M		
		,,				
						•
						-
Tune C Concentration D Depletion DM Red	upod Matrix CC Cayora	nd or Contod C	and Crai	no 21 000	tion. DL Doro Lining M M	lotriv
Type: C=Concentration. D=Depletion. RM=Red Hydric Soil Indicators:	uced Matrix, CS=Covere	ed of Coated S	sand Grai	ns ²Loca	~	
Hydric Soil Indicators:  Histosol (A1)	☐ Dark Surface (	\$7 <b>\</b>			Indicators for Probl	ematic Hydric Soils <sup>3</sup> :
Histosof (AT)  Histic Epipedon (A2)	Polyvalue Belov		) (MLRA	147 148)	2 cm Muck (A10)	) (MLRA 147)
Black Histic (A3)	Thin Dark Surfa				Coast Prairie Red	lox (A16)
Hydrogen Sulfide (A4)	Loamy Gleyed			,	(MLRA 147,148)  Piedmont Floodp	loip Coile (F10)
Stratified Layers (A5)	✓ Depleted Matri:	x (F3)			(MLRA 136, 147)	
2 cm Muck (A10) (LRR N)	Redox Dark Su	rface (F6)			Very Shallow Dar	rk Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark				Other (Explain in	Remarks)
☐ Thick Dark Surface (A12)	Redox Depress					
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	☐ Iron-Manganes MLRA 136)	se Masses (F12	2) (LRR I	٧,		
Sandy Gleyed Matrix (S4)	Umbric Surface	e (F13) (MLRA	136, 12	2)		
Sandy Redox (S5)	☐ Piedmont Floor	dplain Soils (F	19) (MLR	RA 148)	<sup>3</sup> Indicators of	hydrophytic vegetation and drology must be present,
Stripped Matrix (S6)	Red Parent Ma	terial (F21) (M	/ILRA 127	', 147)		isturbed or problematic.
Restrictive Layer (if observed):						
Type:						
Depth (inches):					Hydric Soil Present?	Yes   ● No   ○
Remarks:						
Hydric soil indicators present as depleted n	natrix with low chrom	na and high	value.			
		J				

## Upland 025

Project/Site: Crooksville-North Newark 138	3 kV Transmission Line	City/County: Muskingum	S	ampling Date: 01-Jun-20
Applicant/Owner: AEP		State: 0	H Samplir	ng Point: upl-bl-20200601-02
nvestigator(s): BL, SKM		Section, Township, Range: S	35 T 17	N R 15W
andform (hillslope, terrace, etc.): Hill	side	Local relief (concave, convex,	none): convex	Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N	Lat.:	39.829605 Lo	ng.: -82.1677	Datum: NAD83
Soil Map Unit Name: WuD2 - Westmore	land-Guernsey silt loams, 15 t	to 25 percent	NWI classifica	ation: N/A
Are climatic/hydrologic conditions on the	site typical for this time of ye	ar? Yes • No O (If no	, explain in Remarks	5.)
			l Circumstances" pre	esent? Yes • No O
Are Vegetation  , Soil , or	Hydrology naturally pr	oblematic? (If needed,	explain any answers	s in Remarks.)
Summary of Findings - Attacl	h site map showing sa			
Hydrophytic Vegetation Present? Y6	es O No O			
Hydric Soil Present? Ye	es O No 💿	Is the Sampled Area	Yes ○ No •	
Wetland Hydrology Present? Ye	es O No 💿	within a Wetland?	res C No C	
Remarks:		I.		
Hydrology				
Hydrology				
Wetland Hydrology Indicators:	outrod, about all that awal.			(minimum of two required)
Primary Indicators (minimum of one red  Surface Water (A1)	quired; cneck all that apply)  True Aquatic Plants	(R14)	Surface Soil Crack	ks (B6) ed Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide O		Drainage Pattern:	
Saturation (A3)		res along Living Roots (C3)	Moss Trim Lines	
Water Marks (B1)	Presence of Reduce		Dry Season Wate	r Table (C2)
Sediment Deposits (B2)	Recent Iron Reduct	ion in Tilled Soils (C6)	Crayfish Burrows	(C8)
Drift deposits (B3)	Thin Muck Surface			on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5)	U Other (Explain in Re	emarks)	Stunted or Stress Geomorphic Posi	` '
Inundation Visible on Aerial Imagery (B7)	)		Shallow Aquitard	
Water-Stained Leaves (B9)			☐ Microtopographic	
Aquatic Fauna (B13)			FAC-neutral Test	(D5)
Field Observations: Surface Water Present?  Yes  N	No Depth (inches):	0		
		0		
	No Depth (inches):	Wetland Hyd	rology Present?	Yes O No •
Saturation Present?  (includes capillary fringe)  Yes O	Depth (inches):			
Describe Recorded Data (stream gauge,	monitoring well, aerial photos	s, previous inspections), if ava	lable:	
Remarks:				
No hydrology indicators present.				
no flydrology fidicators present.				

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

## Upland 025

			ominant becies? -		Sampling Point: upl-bl-20200601-02
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:3 (A)
2	0		0.0%		Tatal Niverbase of Descious
3	0		0.0%		Total Number of Dominant Species Across All Strata:5 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 60.0% (A/B)
6	0		0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	_)	= To	otal Cove	r	0BL speci es <u>15</u> x 1 = <u>15</u>
A Flancisco control of the control o	16	<b>✓</b>	55.6%	UPL	FACW speci es <u>27</u> x 2 = <u>54</u>
			37.0%	UPL	FAC speciles <u>40</u> x 3 = <u>120</u>
•			7.4%	FACW	FACU species $\frac{12}{}$ x 4 = $\frac{48}{}$
		$\Box$	0.0%	171011	UPL speci es $\frac{25}{100}$ x 5 = $\frac{125}{100}$
4		$\Box$	0.0%		Column Totals: 119 (A) 362 (B)
5		$\Box$	0.0%		
6			0.0%		Prevalence Index = B/A = 3.042
7		$\Box$	0.0%		Hydrophytic Vegetation Indicators:
8		$\Box$	0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10		т,	otal Cove	·	Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2			0.0%		
3			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			0.0%		
5			0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		Ш	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: <u>5' r</u> )		= To	otal Cove	r	of height.
1. Euthamia graminifolia	30	<b>✓</b>	32.6%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Boehmeria cylindrica	15	✓	16.3%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Galium asprellum	15	<b>✓</b>	16.3%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Solidago altissima	10		10.9%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Verbesina alternifolia	10		10.9%	FAC	in noight
6. Agrimonia parviflora	5		5.4%	FACW	Five Vegetation Strata:
7. Packera aurea	5		5.4%	FACW	Tree - Woody plants, excluding woody vines, approximately 20
8. Asclepias syriaca	2		2.2%	FACU	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	92	= To	otal Cove	r	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	00		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		
6	0		0.0%		Hydrophytic Vegetation
-	0	= T	otal Cove		Present? Yes No
Remarks: (Include photo numbers here or on a separate s	theet \				I.
Hydrophytic vegetation indicator present as dominance test > 50°	•	ecie	s are OBL,	FAC, FACW	and UPL

Upland 025

Soil

Sampling Point:

upl-bl-20200601-02

<u>(inches)</u>	Matrix		Redox Features	
	Color (moist)	%	Color (moist) % Type 1 Loc2	Texture Remarks
0-3	10YR 3/3	100		Silt Loam
3-17	10YR 4/3	100		Silt Loam
				*
pe: C=Conce	entration. D=Depleti	on. RM=Reduce	d Matrix, CS=Covered or Coated Sand Grains <sup>2</sup> Locat	tion: PL=Pore Lining. M=Matrix
dric Soil In	dicators:			Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1			☐ Dark Surface (S7)	
Histic Epipe			Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)
Black Histic			Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147,148)
Hydrogen S	Sulfide (A4)		Loamy Gleyed Matrix (F2)	
Stratified La	ayers (A5)		Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
2 cm Muck	(A10) (LRR N)		Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF12)
Depleted Br	elow Dark Surface (A	A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	Surface (A12)	,	Redox Depressions (F8)	Other (Explain in Remarks)
	k Mineral (S1) (LRR	N,	Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gley	ed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
] Sandy Redo			Piedmont Floodplain Soils (F19) (MLRA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,
Stripped Ma			Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
	(16. 1			
	yer (if observed):			
Type:				Hydric Soil Present? Yes ○ No •
Depth (inche	÷S):			Tigano con ricacini. Tes C 100 C
marks:				
hydric soil i	ndicators present			
-				
-				
-				
•				
-				
-				
-				

	Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project			June 1, 2020
Wetland:	w-bl-20200601-02		Rater:	BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2h  10 to <25 acres (4 to <10.1ha)  3 to <10 acres (1.2 to <4ha) (3  0.3 to <3 acres (0.12 to <1.2ha)  0.1 to <0.3 acres (0.04 to <0.12  x <0.1 acres (0.04ha) (0 pts)	na) (5 pts) (4 pts) pts) ) (2pts)		
12 12 Subtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  x WIDE. Buffers average 50m (1  MEDIUM. Buffers average 25n  NARROW. Buffers average 10  VERY NARROW. Buffers average 10  VERY LOW. Dud growth or old  x LOW. Old field (>10 years), shi  MODERATELY HIGH. Resider	e, do not double check) 164ft) or more around wetlan to <50m (82 to <164ft) around wetlan to <25m (32ft to <82ft) arage <10m (<32ft) around verse <10m (<32ft) around verse or double check & average around verse, prairie, savannahrubland, young second grontial, fenced pasture, park,	and perimeter ('cound wetland paround wetland wetland perime' rage)  n, wildlife area, with forest. (5) conservation ti	perimeter (4) d perimeter (1) ter (0) etc. (7) sillage, new fallow field. (3)
29 17 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  Precipitation (1)  Seasonal/Intermittent surface w Perennial surface water (lake of the seasonal of the season	3t vater (3) r stream) (5) 3c	D. Connectivity.  100 y Betwee X Part of X Part of Select one of Regular Season X Se	Score all that apply. rear floodplain (1) rear floodplain (1) rear stream/lake and other human use (1) of wetland/upland (e.g. forest), complex (1) of riparian or upland corridor (1)  Indation/saturation.  For double check & average) - to permanently inundated/saturated (4) Ilarly inundated/saturated (3) Ilarly inundated (2) Ilarly inundated in upper 30cm (12in) (1) Ilisturbances observed    point source (nonstormwater)   filling/grading   road bed/RR track   dredging
38 9 Subtotal Points	Metric 4. Habitat Alteration and D  4a. Substrate disturbance. Score one or doc  x None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  Fair (3)  x Poor to fair (2)  Poor (1)	pevelopment. (max 2 uble check and average.	20 pts.)  c. Habitat altern None Reco X Reco Recei	ation. Score one or double check and average. or none apparent (9) vered (6) vering (3) nt or no recovery (1)

Wetland (25)  Rater: BL, SM  Wetra by Metric 5. Special Wetlands, (max 10 pts.) Check at the graph and soons as aniskated  Beg (10 pts) Check at the graph and soons as aniskated  Beg (10 pts) Check at the graph and soons as aniskated Beg (10 pts) Check at the graph and soons as aniskated Check at the graph and soons as aniskated Beg (10 pts) Check at the graph and soons as aniskated Beg (10 pts) Check at the graph and soons as aniskated Check at the graph and soons as aniskated Beg (10 pts) Check at the graph and soons as aniskated Check at the graph and soons as aniskated Beg (10 pts) Check at the graph and soons as aniskated Associated Plant Check and Check	ORAM v. 5.0 Field Form Quantitative Rating  Sito: Crooksville North Nowark 139 kW Transmission Line Robuil Date: June 1, 2020						
Motirio 5   Special Wetlands (max 10 pts.)	Site: Crooksville-North Newark 138 kV Transmission Line Rebuil Date: June 1, 2020						
Metric 5. Special Wetlands, (max 10 pts.)  Subtotal Points  Metric 5. Special Wetlands, (max 10 pts.)  Check all that serols and score as indicated:  Sog (10 pts.)  From (10 pts.)  Adulture forested wetland (5 pts.)  Lake Ene coastativitouslary wetland-eretricted hydrology (10 pts.)  Lake Plans Sand Prairies (10 pts.)  Relict Wet Prairies  Relict Wet Prairies  All Cardiophy scoppion/develored from Inhabitat or usage (10 pts.)  Galegory 1 Wetland. See Question 1 of Qualitative Rairing. (-10 pts.)  Metric 6. Plant Communities, interspersion, microtopography, (max 20 pts.);  Metric 6. Plant Communities, interspersion, microtopography, (max 20 pts.);  Metric 6. Plant Communities  Score all present using (10 of 3 scale  All Emergent  Simula  Froest  General of Complexes (-10 pts.)  Mudflats  Open water  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a similar and is of high quality.  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality.  Moderate (3)  Moderate (3)  Moderate (4)  Moderate (3)  Moderate (4)  Moderate (3)  Moderate (4)  Moderate (5)  Moderate (4)  Moderate (5)  Moderate (5)  Moderate (5)  Moderate (7)  M	wetiand: We	tland 025	Rater:	BL, SM			
Metric 5. Special Wetlands, (max 10 pts.)  Subtotal Points  Metric 5. Special Wetlands, (max 10 pts.)  Check all that serols and score as indicated:  Sog (10 pts.)  From (10 pts.)  Adulture forested wetland (5 pts.)  Lake Ene coastativitouslary wetland-eretricted hydrology (10 pts.)  Lake Plans Sand Prairies (10 pts.)  Relict Wet Prairies  Relict Wet Prairies  All Cardiophy scoppion/develored from Inhabitat or usage (10 pts.)  Galegory 1 Wetland. See Question 1 of Qualitative Rairing. (-10 pts.)  Metric 6. Plant Communities, interspersion, microtopography, (max 20 pts.);  Metric 6. Plant Communities, interspersion, microtopography, (max 20 pts.);  Metric 6. Plant Communities  Score all present using (10 of 3 scale  All Emergent  Simula  Froest  General of Complexes (-10 pts.)  Mudflats  Open water  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a similar and is of high quality.  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality.  Moderate (3)  Moderate (3)  Moderate (4)  Moderate (3)  Moderate (4)  Moderate (3)  Moderate (4)  Moderate (5)  Moderate (4)  Moderate (5)  Moderate (5)  Moderate (5)  Moderate (7)  M	20						
Subtotal   Points	38 subtotal first pa	age					
Subtotal   Points	20 0	Matric E. Special Wetlands (may 10 pts.)					
Bog (10 pts)   Fen (10 pts)   Cld Growth Forest (10 pts)   Cld Growth Fo							
Fen (10 pts)  Olts Growth Forrest (10 pts)  Lake Eire coastal/tributary wetlund-serviced hydrology (10 pts)  Lake Eire coastal/tributary wetlund-serviced hydrology (5 pts)  Lake Eire coastal/tributary wetlund-serviced hydrology (70 pts)  Lake Plain Stanf Praifres (10 pts)  Redict Wet Praifres (10 pts)  Redict Wet Praifres (10 pts)  Redict Wet Praifres (10 pts)  Significant rigitory complications communities. Interspersion, microtopography. (max 20 pts.)  8a. Wetland Vegetation Communities.  Score all present using 10 to 3 scale  Present and either comprises significant part of wetland's vegetation and is of moderate quality, or comprises a significant part of wetland's vegetation and is of moderate quality. Or comprises a significant part of wetland's vegetation and is of moderate quality. Or comprises a significant part of wetland's vegetation and is of moderate quality. Or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality. Or comprises a significant part of wetland's vegetation and is of high quality  8b. Honceontel (plan view interspersion)  Select only one  High (5)  Moderate (3)  Moderate (4)  Moderate (4)  Moderate (4)  Moderate (4)  Moderate (5)  Moderate (5)  Moderate (6)  Moderate (7)  Moderate	Subtotal Points						
Obt Growth Forest (10 pis) Mature forested weltand (5 pist) Lake Eire costabil/bildurary wetland-restricted hydrology (10 pis) Lake Eire costabil/bildurary wetland-restricted hydrology (5 pist) Lake Plain Sand Praints (Op 18) Relief Wet Praints (10 pist) Relief Vet Praints (10 pist) Relief Wet Relief (10 pist) Relief (10 pist) Relief (1							
Muture forested wetland (5 pts)							
Lake Eric coastal/tributary wetland-unrestricted hydrology (10 pts) Lake Plain Sand Prairies (Quk Openings) (10 pts) Relict Wet Prairies (10 pts) Relict Wet Prairies (10 pts) Significant migatory compiter/awater/own habitat or usage (10 pts) Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  ### Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  ### Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  ### Wetric 6. Plant Communities Apout bed 1							
Lake Flain Sand Prairies (Oak Openings) (10 pts)  Relict Wet Prairies (10 pts)  Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)  Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)  Subtotal Points  Metric 6. Plant Communities interspersion, microtopography. (max 20 pts.)  See Wetland Vegetation Communities  Score all present using 0 to 3 scale  Aquatic bed  Aguatic bed  Aguatic bed  Relict Wetland's Vegetation Communities  Score all present using 0 to 3 scale  Present and either comprises an significant part of wetland's vegetation and is of moderate quality. or comprises a significant part of wetland's vegetation and is of moderate quality or comprises and part and is of high quality  See Horizontal (plan view) interspersion  Select only one  High (5)  Moderately lingh (4)  Moderately lingh (4)  Moderately low (2)  Low (1)  None (0)  See Coverage of invasive plants.  Refer to Table 1 ORAM long form for list.  Refer to Table 1 ORAM long form for list.  Add or deduct points for coverage  Elemsive 75% cover (-1)  Nearly Absent (-5% cover (							
Lake Plain Sand Prairies (Oak Openings) (10 pts) Relict Wet Prairies (10 pts) Romovin occurrence statefederal threatened or endangered species (10) Significant migrator, sonophiroflwaterfown habitat or usage (10 pts) Score all present using (10 a scale Open water Score all present using (10 a scale Open water Other (ilist) Open water Ot							
Relict Wet Prainies (10 pts)  Known occurrence statefederal threatened or endangered species (10)  Significant migatory somptive waterfown habitat or usage (10 pts)  Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)  Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  Se. Wetland Vesetation Communities  Score all present using 0 to 3 scale    Aquatic bed   Emergent   Shrub   Present and either comprises significant part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality quality    Present and either comprises significant part but is of low quality quality   Present and either comprises significant part or wetland's vegetation and is of moderate quality, or comprises a significant part or wetland's vegetation and is of moderate quality or comprises a significant part or wetland's vegetation and is of moderate quality or comprises a significant part or more, of wetland's vegetation and is of moderate quality or comprises a significant part or more, of wetland's vegetation and is of moderate quality or comprises a significant part, or more, of wetland's vegetation and is of moderate quality or comprises a significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's vegetation and is of high quality   Present and comprises significant part, or more, of wetland's veget							
Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  Subtotal Points  Wegetation Communities Score all present using 0 to 3 scale  Aquatic bed 1 Emergent Shrub 1 Present and either comprises significant part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality  Significant migratory interspersion Select cony one  High (5) Moderately low (2) Low (1) X None (0)  Sc. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or debut points for coverage  Add or debut points for coverage  Scover (-1) Nearly Absent (-1) Nearly Absent (-1) Nearly Absent (-1) Sparse 5-25% cover (-3) Sparse 5-25% cover (-1) Nearly Absent (-1) Scover all present using 0 to 3 scale  O Vegetated hummockaftussocks O Course woody debris 15 cm ((0') dhb O Standing dead - 25 cm ((10') dhb O Amphibian breeding pools  Microtopography. (max 20 pts.)  Seguration Community  Vegetation Community Cover Scale  Vegetated no (0.2471 acres) Advances of or wetland's vegetation and is of moderate quality or comprises a significant part or wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part or wetland's vegetation and is of moderate quality or comprises a significant part or wetland's vegetation and is of moderate quality or comprises significant part or wetland's vegetation and is of moderate quality or comprises a significant part or wetland's vegetation an		Relict Wet Prairies (10 pts)					
Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.;		Known occurrence state/federal threater	ned or endang	gered species (10)			
Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)   Subtotal Points   Sa Wetland Vegetation Communities							
Subtotal Points    Score all present using 0 to 3 scale	Category 1 Wetland. See Question 1 o			of Qualitative Rating. (-10 pts)			
Subtotal Points    Score all present using 0 to 3 scale							
Score all present using 0 to 3 scale  Aquatic bed 1 Emergent Shrub Forest Open water Other (list) Deby Moderate (3) Moderately high (4) Moderately high (2) L Low (1) X None (0)  6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75 % cover (3) Sparse 5-25% cover (1) Nearly Absent (1) Nearly Absent (1)  Absent (1)  6d. Microlopography  Score all present using 0 to 3 scale  Vegetation Community Cover Scale  0 Absent or comprises     Absent or comprises synalip part of wetland's vegetation and is of moderate quality, or comprises a small part and is of high quality    Present and either comprises significant part or wetland's vegetation and is of moderate quality, or comprises a small part and is of high quality    Present and either comprises significant part or wetland's vegetation and is of moderate quality, or comprises a small part and is of high quality    Present and either comprises significant part or wetland's vegetation and is of moderate quality, or comprises a small part and is of high quality    Present and either comprises significant part of wetland's vegetation and is of moderate quality, or comprises a small part and is of high quality    Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality    Present and either comprises significant part or wetland's vegetation and is of moderate quality or part of wetland's vegetation and is of moderate quality or part of wetland's vegetation and is of moderate quality or part of wetland's vegetation and is of high quality    Present and either comprises small part of wetland's vegetation and is of moderate quality or omprises as mall part and is of high quality    Present and either comprises standing and is of moderate quality.   Present and either comprises standing and is of moderate quality or part of wetland's vegetation and is of present and or present and or present and or present and or p	40 2	Metric 6. Plant Communities, interspersion	, microtop	ography. (max 20 pts.)			
Aquatic bed Emergent Shrub Forest Mudflats Open water Other (list)  6b. Horizontal (plan view) interspersion Select only one Moderately low (2) Low (1) None (0) Low (1) None (0) Extensive 275 % cover (-5) Moderate 25-75% cover (-5) Moderate 25-75% cover (-5) Moderate 25-75% cover (-1) Nearly Absent <5% cover (-1) Nearly Absent <5% cover (-1) Nearly Absent <5% cover (-1) Nearly Absent (-5% cover (-1) O Absent (1) Standing dead > 25 om (10") dbh O Standing dead > 25 om (10") dbh O Moderate woody debris >15 om (6") O Standing dead > 25 om (10") dbh O Amphibian breeding pools  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality  Present and either comprises significant part of wetland's vegetation and is of high quality or comprises a small part and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a significant part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a significant part of wetland's vegetation and is of high quality  Present and comprises significant part of wetland's vegetation and is of high quality  Narrative Description of Vegetation Quality  Narrative Description of Vegetation Quality  Native spp are dominant component of the vegetation, although nonnative and/or disturbance belearnt native spp can also be present, and species diverately high, but moderately high, but generally w/o presence of rare threatened or endangered spp  A predominance of native species, with nonnative spp and/or disturbance believant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  1 Low 0.1 ha to <1 ha (0.2471 acres) 9.3 high 4 ha (9.88 acres) 3.3 high 4 ha	Subtotal Points	- <del>-</del>					
Absent of comprises 4.01, not comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality			Vegetatio	n Community Cover Scale			
Shrub   Forest			0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area			
Forest Mudflats Mudflats Open water Other (list)  6b. Horizontal (plan view) interspersion Select only one  High (5) Moderately high (4) Moderately (3) Moderately (10) Low (1) None (0)  6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive 275 % cover (-1) Nearly Absent (-5) Moderatel 25-75% cover (-1) Nearly Absent (-5) Nearly Absent (-5) O Carse woody debris >15 cm (6*) O Standing dead > 25 cm (10") dbh O Standing dead > 25 cm (10") dbh O Amphibian breeding pools  Present and either comprises a significant part to wetland's vegetation and is of moderate quality or comprises a small part of wetland's vegetation and is of moderate quality or comprises a significant part, or more, of wetland's vegetation and is of high quality  Present and either comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or or more, of wetland's vegetation and is of high equality or or more, of wetland's vegetation and is of high equality or or more, of wetland's vegetation and is of high equality or or more, of wetland's vegetation and is of high equality or moderate quality or in small amounts or if more common of marginal quality  1		<b>—</b>					
Mudflats Open water Other (list) Other (list			1	Present and either comprises small part of wetland's vegetation and is			
Open water Other (list) Other (list)  6b. Horizontal (plan view) interspersion Select only one High (5) Moderately high (4) Moderately high (4) Low (1) X None (0)  6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-1) Nearly Absent (1) Nearly Absent (1) X Absent (1) X Absent (1) X Dore all present using 0 to 3 scale  6d. Microtopography Score all present using 0 to 3 scale  O Coarse woody debris >15 cm (6") O Standing dead > 25 cm (10") dbh O Amphibian breeding pools  Present and either comprises significant part of wetland's vegetation and is of high quality or comprises a small part and is of high quality or comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality  Present and comprises significant part of wetland's vegetation and is of high quality  Present and cellware quality or comprises a small part and is of high quality  Absent (3)  Narrative Description of Vegetation Quality  Narrative species  Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species with nonnative or entangled with and subtrabne tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  0 Absent 1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality or in small amounts of highest quality		<del></del>	!	of moderate quality, or comprises a significant part but is of low quality			
Other (list)  6b. Horizontal (plan view) interspersion Select only one  High (5) Moderately ligh (4) Moderately low (2) Low (1) x None (0) Select oTable 1 ORAM long form for list. Add or deduct points for coverage  Extensive p75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent (1) X Absent (1)  Moderate (3)  Moderately low (2) Low (1) Absent (1)  Extensive plants.  Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Moderate 25-75% cover (-5) Moderate 25-75% cover (-1) Nearly Absent (1)  Moderate 25-75% cover (-1) Nearly Absent (-1) Nearly Absent (-1)  Absent (-1)  Moderate quality or comprises a small part and is of high quality  Narrative Description of Vegetation Quality  Narrative Description of Vegetation Quality  Native spa are deminant component of the vegetation, although nonderate and residual present of rare threatened or endangered spp noderate the moderate part of issurbance tolerant native spo and los of high quality  A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spo diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  Mudflat and Open Water Class Quality  Migh the (0,2471 acres to 2.47 acres)  Moderate 1 ha to <4 ha (2.247 acres 9.88 acres)  High 4 ha (9.88 acres) or more  Microtopography Cover Scale  O Absent  Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		<del></del>		Dreagnt and gither comprises significant part of watland's vegetation			
Quality		—— ·	2				
Select only one  High (5) Moderately high (4) Moderate (3) Moderately low (2) Low (1) X None (0)  6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-1) Nearly Absent <5% cover (0) X Absent (1)  Moderate 25-75% cover (0) Score all present using 0 to 3 scale  0 Vegetated hummocks/tussocks 0 Coarse woody debris >15 cm (6") O Standing dead > 25 cm (10") dbh O Amphibian breeding pools  And is of high quality  Narrative Description of Vegetation Quality  Low spp diversity and/or predominance of nonnative or disturbance tolerant native species  Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp  A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 1 Low 0.1 ha to <1 ha (0.2471 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  0 Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		outsi (list)	_				
Select only one  High (5) Moderately high (4) Moderate (3) Moderately low (2) Low (1) X None (0)  6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct plonts for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-1) Nearly Absent <5% cover (0) X Absent (1)  Moderate 25-75% cover (0) Score all present using 0 to 3 scale  0 Vegetated hummocks/fussocks 0 Coarse woody debris >15 cm (6") O Standing dead > 25 cm (10") dbh O Amphibian breeding pools  Narrative Description of Vegetation Quality  Low spp diversity and/or predominance of nonnative or disturbance tolerant native species  Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native specials diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp  A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 1 Low 0.1 ha to <1 ha (0.2471 acres) and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) and often, but not of high 4 ha (9.88 acres) or more  Microtopography Cover Scale  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		6b. Horizontal (plan view) interspersion	_	Present and comprises significant part, or more, of wetland's vegetation			
Moderately high (4) Moderately (3) Moderately low (2) Low (1) None (0)  Sc. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-5) Moderate 25-75% cover (-1) Nearly Absent <5% cover (0) x Absent (1)  Score all present using 0 to 3 scale  O Vegetated hummocks/tussocks Coarse woody debris >15 cm (6") O Standing dead > 25 cm (10") dbh Amphibian breeding pools  Moderate (3) Moderately high (4) Low spp diversity and/or predominance of nonnative or disturbance tolerant native species.  Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp and/or disturbance tolerant native species, with nonnative spp and/or disturbance tolerant native species, with nonnative spp and/or disturbance tolerant native species with nonnative spp and/or disturbance of native species with nonnative spp and/or disturbance of native species with nonnative spp and/or disturbance tolerant native species with species with species diversity and/or nonnative and species diversity and/or of rare threatened or endangered spp  Mudflat and Open Water Class Quality  O Absent <0.1 ha (0.2471 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  O Absent <0.1 ha (0.2471 acres) 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality		Select only one	3	and is of high quality			
Low spp diversity and/or predominance of nonnative or disturbance tolerant native species		High (5)					
Moderately low (2)   Low (1)   None (0)		Moderately high (4)	Narrative	Description of Vegetation Quality			
Low (1) None (0)  6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)  X Absent (1)  Mudflat and Open Water Class Quality  Moderate 1 ha to <4 ha (2.47 acres) Moderate 1 ha to <4 ha (2.47 acres) Moderate 1 ha to <4 ha (2.47 acres) Migh 4 ha (9.88 acres) or more  Microtopography  Score all present using 0 to 3 scale  O Vegetated hummocks/tussocks O Coarse woody debris >15 cm (6") O Standing dead > 25 cm (10") dbh O Amphibian breeding pools  Microtopography Cover Scale  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		``	low				
moderate  6c. Coverage of invasive plants.  Refer to Table 1 ORAM long form for list.  Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)  X Absent (1)  Mudflat and Open Water Class Quality  Mudflat and Open				tolerant native species			
moderate  and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp  A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  D Absent <0.1 ha (0.2471 acres)  Low 0.1 ha to <1 ha (0.2471 acres)  Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)  Microtopography  Score all present using 0 to 3 scale  Vegetated hummocks/tussocks Coarse woody debris >15 cm (6")  Standing dead > 25 cm (10") dbh Amphibian breeding pools  Microtopography Cover Scale  Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality							
Presence of rare threatened or endangered spp		X None (U)	moderate	· · · · · · · · · · · · · · · · · · ·			
Refer to Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0) X Absent (1)  Moderate 25-75% cover (0) Absent (1)  Moderate 25-75% cover (0) Absent (1)  Mudflat and Open Water Class Quality  Moderate 1 ha to <1 ha (0.2471 acres) Moderate 1 ha to <4 ha (2.47 acres) 9.88 acres)  Microtopography  Score all present using 0 to 3 scale  Vegetated hummocks/tussocks Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh O Standing dead > 25 cm (10") dbh O Amphibian breeding pools  Microtopography Cover Scale  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		For Coverage of investive plants					
Add or deduct points for coverage  Extensive >75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <1)  X Absent (1)  Mudflat and Open Water Class Quality  Moderate 1 ha to <1 ha (0.2471 acres)  Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)  High 4 ha (9.88 acres) or more  Microtopography  Score all present using 0 to 3 scale  Ocarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools  Microtopography Cover Scale  Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		· · · · · · · · · · · · · · · · · · ·		- ''			
Extensive >75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0) x Absent (1)  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 1 Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Microtopography Score all present using 0 to 3 scale 0 Vegetated hummocks/tussocks 0 Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh 0 Amphibian breeding pools  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 1 Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  1 Present very small amounts or if more common of marginal quality  2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality		<u> </u>					
Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)  x Absent (1)  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 1 Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Score all present using 0 to 3 scale 0 Vegetated hummocks/tussocks 0 Coarse woody debris >15 cm (6") 5 Standing dead > 25 cm (10") dbh 0 Amphibian breeding pools  Microtopography Cover Scale  Microtopography Cover Scale  1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality		Extensive >75 % cover (-5)	high	,,			
Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)  Absent (1)  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 1 Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Score all present using 0 to 3 scale  0 Vegetated hummocks/tussocks 0 Coarse woody debris >15 cm (6") 5 Standing dead > 25 cm (10") dbh Amphibian breeding pools  Mudflat and Open Water Class Quality  0 Absent <0.1 ha (0.2471 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  0 Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality							
Absent (1)  O Absent <0.1 ha (0.2471 acres)  1 Low 0.1 ha to <1 ha (0.2471 acres)  2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)  3 High 4 ha (9.88 acres) or more  Score all present using 0 to 3 scale  O Vegetated hummocks/tussocks O Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools  Microtopography Cover Scale  O Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality							
1 Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres) 2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Score all present using 0 to 3 scale  0 Vegetated hummocks/tussocks 0 Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools  Microtopography Cover Scale  0 Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality			
2 Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) 3 High 4 ha (9.88 acres) or more  Score all present using 0 to 3 scale  0 Vegetated hummocks/tussocks 0 Coarse woody debris >15 cm (6") 5 Standing dead > 25 cm (10") dbh Amphibian breeding pools    Microtopography Cover Scale		x Absent (1)	0	Absent <0.1 ha (0.2471 acres)			
Score all present using 0 to 3 scale  O Vegetated hummocks/tussocks O Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools  Amphibian breeding pools  3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  O Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality			1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)			
Score all present using 0 to 3 scale    O   Vegetated hummocks/tussocks   O   Coarse woody debris >15 cm (6")   Standing dead > 25 cm (10") dbh   O   Amphibian breeding pools   O   Present very small amounts or if more common of marginal quality			2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)			
Vegetated hummocks/tussocks Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools  Microtopography Cover Scale  0 Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality			3	High 4 ha (9.88 acres) or more			
O Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools  O Absent  Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality			Ministration of the Control				
Standing dead > 25 cm (10") dbh Amphibian breeding pools  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		——————————————————————————————————————					
Amphibian breeding pools  Amphibian breeding pools  Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality			0	Adsent			
Present in moderate amounts, but not of highest quality or in small amounts of highest quality		` '	1	Present very small amounts or if more common of marginal quality			
amounts of highest quality		Amphilibian breeding pools		Present in moderate amounts, but not of highest quality or in small			
3 Present in moderate or greater amounts and of highest quality			2				
3 Present in moderate or greater amounts and of highest quality							
			3	Present in moderate or greater amounts and of highest quality			



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 025

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing North



#### Wetland 025

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 025

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing South



#### Wetland 025

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing West





Site Location:

AEP Crooksville-North Newark 138 kV Transmission Line Rebuild Project

**Project No.** 60616110

Wetland 025

**Client Name:** 

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 026

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20
Applicant/Owner: AEP	State: OH	Sampling Point: w-bl-20200601-01
Investigator(s): BL, SKM	Section, Township, Range: S	35 T 17N R 15W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, no	ne): concave Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N Lat.:	39.830149 Long	-82.168645 Datum: NAD83
Soil Map Unit Name: WuD2 - Westmoreland-Guernsey silt loams, 15	to 25 percent	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of y	<sub>rear?</sub> Yes ⊙ No ○ (If no, e	explain in Remarks.)
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 significan	tly disturbed? Are "Normal C	Circumstances" present? Yes 💿 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, ex	xplain any answers in Remarks.)
Summary of Findings - Attach site map showing s	sampling point locations	, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O		
Hydric Soil Present? Yes No O	Is the Sampled Area	∕es ⊙ No O
Wetland Hydrology Present? Yes ● No ○	within a Wetland? '	
Sample point in for wetland 026 (w-bl-20200601-01). Wetland is a delineated.  Hydrology	drainage swaie, drains to southwe	est directly to s-bi-20200601-03. Welland is fully
Hydrology		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)	S	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)
✓ Surface Water (A1) True Aquatic Plani	ts (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Hydrogen Sulfide		Drainage Patterns (B10)
	neres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	ced Iron (C4)	Dry Season Water Table (C2)
	ction in Tilled Soils (C6)	Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Surface	` ´	Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Other (Explain in I☐ Iron Deposits (B5)	·	
Inundation Visible on Aerial Imagery (B7)	[	Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes  No  Depth (inches):	2	
Water Table Present? Yes No Depth (inches):	Wetland Hydrol	logy Present? Yes  No
Saturation Present? Yes No Depth (inches):	0	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if availab	ole:
Remarks:		
Multiple primary hydrology indicators present. Primary source of hyd	Irology is concentration of precipit;	ation and surface runoff in geomorphic position
Drains to southwest directly to intermittent stream.	Tology is deficed in account 2. p. 2. p	attori dira sarrasse rans geen.e. p p. z.z

			minant		Sampling Point: w-bl-20200601-01
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	n.otiat.	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  4 (A)
2	0		0.0%		Total Muselson of Descious
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0 :	= Tc	tal Cover		0BL speci es53 x 1 =53
Sapling-Sapling/Shrub Stratum (Plot size: 15' r					FACW species 33 x 2 = 66
1. Salix X fragilis			100.0%	FAC	FAC speci es 15 x 3 = 45
2		Н.	0.0%		FACU speci es 0 x 4 = 0
3.		$\square$	0.0%		
4		$\sqsubseteq$	0.0%		1
5	0	$\sqsubseteq$	0.0%		Column Totals: 101 (A) 164 (B)
6	0	$\sqsubseteq$	0.0%		Prevalence Index = B/A = 1.624
7	0	$\sqsubseteq$	0.0%		Hydrophytic Vegetation Indicators:
8	0	$\sqcup$	0.0%		Rapid Test for Hydrophytic Vegetation
9.		$\square$	0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0	$\Box$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0	$\Box$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.		$\Box$	0.0%		be present, unless disturbed or problematic.
		$\Box$	0.0%		Definition of Vegetation Strata:
5	0	$\Box$	0.0%		Four Vegetation Strata:
6	0	$\Box$	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	_	Та	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' r</u> )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Carex lupulina	30	<b>✓</b>	31.3%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus atrovirens	15	ዾ.	15.6%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Poa palustris	15	<b>.</b>	15.6%	FACW	' '
4. Eupatorium perfoliatum	10	Н.	10.4%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Euthamia graminifolia	10	Н.	10.4%	FAC	
6. Juncus effusus	5	$\square$	5.2%	FACW	Five Vegetation Strata:
7. Mimulus ringens	5	$\square$	5.2%	OBL	Tree - Woody plants, excluding woody vines, approximately 20
8. Onoclea sensibilis	3	$\sqsubseteq$	3.1%	FACW	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9. Rumex verticillatus	3	$\square$	3.1%	OBL	diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0	$\sqcup$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0	$\sqsubseteq$	0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	96	= Tc	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody
2.	0	$\Box$	0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0	$\Box$	0.0%		Woody vines – Consists of all woody vines, regardless of
3	0	$\Box$	0.0%		height.
4	0		0.0%		
5	0		0.0%		Hydrophytic
6		Щ. _ т.			Vegetation Present? Yes No No
	0	= 10	otal Cover		
Remarks: (Include photo numbers here or on a separate sheethydrophytic vegetation indicator present as dominance test $>$ 50%, or $>$ 60%, or $>$ 60%		ecies	are OBL,	FACW and f	FAC

Soil

Sampling Point: w-bl-20200601-01

Depth	Matrix			dox Features	onfirm the a	,	
	(moist)	%	Color (moist)	% Type	Loc <sup>2</sup>	Texture	Remarks
<b>0-2</b> 10YR	4/2	100				Silt Loam	
<b>2-11</b> 10Y	4/1	95	10YR 3/4	5 C	PL	Clay Loam	4
	`						4
							4
							·
	,						,
	`			•			`
	`						'
			$\overline{}$	·—-			·
	,						
Type: C=Concentration. I	D=Depletio	n. RM=Redu	ced Matrix, CS=Covere	ed or Coated Sand Gr	ains <sup>2</sup> Locat	ion: PL=Pore Lining. M=N	latrix
Hydric Soil Indicators:							ematic Hydric Soils <sup>3</sup> :
Histosol (A1)			☐ Dark Surface (	S7)			
Histic Epipedon (A2)				w Surface (S8) (MLR.	A 147,148)	2 cm Muck (A10)	
Black Histic (A3)			Thin Dark Surf	ace (S9) (MLRA 147,	148)	Coast Prairie Red (MLRA 147,148)	lox (A16)
Hydrogen Sulfide (A4	)		✓ Loamy Gleyed	Matrix (F2)		Piedmont Floodp	lain Caila (F10)
Stratified Layers (A5)			✓ Depleted Matri	x (F3)		(MLRA 136, 147)	
2 cm Muck (A10) (LR	R N)		Redox Dark Su	rface (F6)		Very Shallow Da	
Depleted Below Dark	Surface (A	.11)	☐ Depleted Dark	Surface (F7)		Other (Explain in	
Thick Dark Surface (A	12)		Redox Depress	ions (F8)		ottro: (Explain ii	Tromarko)
Sandy Muck Mineral (	S1) (LRR N	١,	Iron-Manganes	e Masses (F12) (LRF	RN,		
MLRÅ 147, 148)			MLRA 136)	(F40) (AUDA 40)	.00)		
Sandy Gleyed Matrix	(S4)			e (F13) (MLRA 136, 1		<sup>3</sup> Indicators of	hydrophytic vegetation and
Sandy Redox (S5)				dplain Soils (F19) (M		wetland hy	drology must be present,
Stripped Matrix (S6)			Red Parent Ma	terial (F21) (MLRA 1	27, 147)	unless d	isturbed or problematic.
Restrictive Layer (if ob:	served):						
Type:	,						
Depth (inches):						Hydric Soil Present?	Yes   No
Remarks:							
lydric soil indicators pr	ocant ac	aloved mat	riv with raday cance	entrations in nore	inings		
yuric soil iriulcators pr	esent as i	gieyeu mai	rix with redux conce	initiations in pore	II III IYS		

# Upland 026 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Muskingum Sampling Date: 01-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: upl-bl-20200601-01
Investigator(s): BL, SKM	Section, Township, Range: S 35 T 17N R 15W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): concave Slope: 20.0 % / 87.1 °
Subregion (LRR or MLRA): LRR N Lat	.: 39.83016 Long.: -82.16868 Datum: NAD83
Soil Map Unit Name: WuD2 - Westmoreland-Guernsey silt loams, 1	5 to 25 percent NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes No (If no, explain in Remarks.)
	ntly disturbed? Are "Normal Circumstances" present? Yes   No
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No	
Hydric Soil Present? Yes ○ No •	Is the Sampled Area Yes O No •
Wetland Hydrology Present? Yes No •	within a Wetland?
Remarks:	
Point out to wetland 026 (w-bl-20200601-01), located about 10 fe criteria not met.	eet west of wetland boundary. Not a wetland point as hydric soil and hydrology
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1)	
☐ High Water Table (A2)       ☐ Hydrogen Sulfide         ☐ Saturation (A3)       ☐ Oxidized Rhizost	e Odor (C1)
Water Marks (B1)	
	uction in Tilled Soils (C6)  Crayfish Burrows (C8)
Drift deposits (B3)	
Algal Mat or Crust (B4)  Other (Explain in	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes No Depth (inches)	:0
Water Table Present? Yes O No O Depth (inches)	
Saturation Present?  (includes capillary frings)  Yes No   Depth (inches)	Wetland Hydrology Present? Yes ○ No •
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial pho	
Remarks:	
No hydrology indicators present.	

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

### Upland 026

			ominant		Sampling Point: <b>_upl-bl-20200601-01</b>				
Tree Stratum (Plot size: 30' r )	Absolute % Cover	R	pecies? el.Strat. over	Indicator Status					
1	0		0.0%	·	Number of Dominant Species That are OBL, FACW, or FAC:4(A)				
2	0		0.0%						
3.	0		0.0%		Total Number of Dominant Species Across All Strata: 6 (B)				
4			0.0%		Species Across Air Strata.				
		$\overline{\Box}$	0.0%		Percent of dominant Species				
5		$\Box$	0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)				
6		$\Box$	0.0%		Prevalence Index worksheet:				
7		$\Box$			Total % Cover of: Multiply by:				
8			0.0%						
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	_)	= 10	otal Cove	ſ	0BL speci es				
1. Elaeagnus umbellata	20	<b>✓</b>	69.0%	UPL	FACW species 15 x 2 = 30				
<b>0</b> D.L		$\Box$	17.2%	UPL	FAC speci es $\underline{40}$ x 3 = $\underline{120}$				
0 0 11		$\Box$	6.9%	FACU	FACU species $\underline{24}$ x 4 = $\underline{96}$				
		$\Box$	6.9%	FACU	UPL species 25 x 5 = 125				
4. Juglans nigra			0.9%	TACO	Col umn Total s: 104 (A) 371 (B)				
5									
6			0.0%		Prevalence Index = B/A = 3.567				
7			0.0%		Hydrophytic Vegetation Indicators:				
8			0.0%		Rapid Test for Hydrophytic Vegetation				
9	0	Ш	0.0%		✓ Dominance Test is > 50%				
10	0		0.0%		Prevalence Index is ≤3.0 ¹				
Shrub Stratum (Plot size:)		= To	otal Cove	r	Morphological Adaptations <sup>1</sup> (Provide supporting				
1	0		0.0%		data in Remarks or on a separate sheet)				
2		$\overline{\Box}$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
2		$\Box$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must				
3		$\Box$	0.0%		be present, unless disturbed or problematic.				
4					Definition of Vegetation Strata:				
5			0.0%		_				
6	0		0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.				
7	0	Ш	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless				
Herb Stratum (Plot size: 5' r )	0	= To	otal Cove	г	of height.				
1. Solidago altissima	20	<b>✓</b>	26.7%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.				
Euthamia graminifolia	15	<b>✓</b>	20.0%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,				
Dichanthelium clandestinum	10	✓	13.3%	FAC	regardless of size, and all other plants less than 3.28 ft tall.				
	10	✓	13.3%	-	Woody vines – Consists of all woody vines greater than 3.28 ft				
Vernonia gigantea     Elymus virginicus	10	✓	13.3%	FACW	in height.				
	5		6.7%	FACW					
6. Agrimonia parviflora					Five Vegetation Strata:				
7. Rubus idaeus			6.7%	FAC	Tree - Woody plants, excluding woody vines, approximately 20				
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).				
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody				
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than				
11	0	Ш	0.0%		3 in. (7.6 cm) DBH.				
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.				
	75=	= To	otal Cove	Γ	Herb stratum – Consists of all herbaceous (non-woody) plants,				
	0		0.0%		including herbaceous vines, regardless of size, and woody				
1	0				species, except woody vines, less than approximately 3 ft (1 m) in height.				
2	_		0.0%						
3	_		0.0%		Woody vines – Consists of all woody vines, regardless of height.				
4			0.0%		-				
5	0		0.0%		Hydrophytic				
6	0		0.0%		Vegetation				
	0	= T	otal Cove	er	Present? Yes V No V				
Remarks: (Include photo numbers here or on a separate s	heet.)								
Hydrophytic vegetation indicator present as dominance test > 509	ŕ	ecie	s are FAC.	FACW, FACI	U and UPL				
	- 1								

Upla

Soil

Sampling P

and 026
oint: upl-bl-20200601-01
Remarks
trix
matic Hydric Soils <sup>3</sup> :
(MLRA 147)
x (A16)
ain Soils (F19)
: Surface (TF12)
Remarks)
nydrophytic vegetation and rology must be present,
sturbed or problematic.
Yes ○ No ●

Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Depleted Dark Surface (F7)  Other (Explain in Remains and Setting In Remains In Rem	Remarks			
### Part	IZEITIGI NO			
e: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains      Coated Sand Grains				
Indicators:  Histosol (A1)  Dark Surface (S7)  Histic Epipedon (A2)  Dark Surface (S8) (MLRA 147,148)  Dark Surface (S9) (MLRA 136,147)  Dark Surface (S9) (MLRA 147,148)  Dark				
Indicators:  Isistosol (A1)  Dark Surface (S7)  Isistic Epipedon (A2)  Dark Surface (S9)  Deleted Below Surface (S9)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Depleted Matrix (S4)  Depleted Matrix (S4)  Depleted Dark Surface (F13)  Depleted Dark Surface (F12)  Depleted Dark Surface (F13)  Depleted Dark Surface				
Indicators:  Isistosol (A1)  Dark Surface (S7)  Isistic Epipedon (A2)  Dark Surface (S9)  Deleted Below Surface (S9)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Depleted Matrix (S4)  Depleted Matrix (S4)  Depleted Dark Surface (F13)  Depleted Dark Surface (F12)  Depleted Dark Surface (F13)  Depleted Dark Surface				
Indicators:  Isistosol (A1)  Dark Surface (S7)  Isistic Epipedon (A2)  Dark Surface (S9)  Deleted Below Surface (S9)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Depleted Matrix (S4)  Depleted Matrix (S4)  Depleted Dark Surface (F13)  Depleted Dark Surface (F12)  Depleted Dark Surface (F13)  Depleted Dark Surface				
Indicators:  Isistosol (A1)  Dark Surface (S7)  Isistic Epipedon (A2)  Dark Surface (S9)  Deleted Below Surface (S9)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Depleted Matrix (S4)  Depleted Matrix (S4)  Depleted Dark Surface (F13)  Depleted Dark Surface (F12)  Depleted Dark Surface (F13)  Depleted Dark Surface				
Indicators:  Isistosol (A1)  Dark Surface (S7)  Isistic Epipedon (A2)  Dark Surface (S9)  Deleted Below Surface (S9)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Depleted Matrix (S4)  Depleted Matrix (S4)  Depleted Dark Surface (F13)  Depleted Dark Surface (F12)  Depleted Dark Surface (F13)  Depleted Dark Surface				
Indicators:				
Dark Surface (S7)				
Alstic Epipedon (A2)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Thin Dark Surface (S9) (MLRA 147, 148)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F2)  Depleted Matrix (F3)  Polyvalue Below Surface (S9) (MLRA 147, 148)  Coast Prairie Redox (A' (MLRA 147,148))  Piedmont Floodplain So (MLRA 136, 147)  Pictor Muck (A10) (LRR N)  Depleted Below Dark Surface (A11)  Polyvalue Below Surface (S9) (MLRA 147, 148)  Depleted Matrix (F2)  Piedmont Floodplain So (MLRA 136, 147)  Port Surface (A12)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Find Muck Mineral (S1) (LRR N, MLRA 136)  Dumbric Surface (F13) (MLRA 136, 122)  Find Muck Mineral (S1) (LRR N, MLRA 136)  Find Muck Mineral (S1) (LRR N, MLRA 136, 122)  Find Muck Mineral (S5)  Red Parent Material (F21) (MLRA 127, 147)  Hydric Soil Present?  Yearks:	c Hydric Soils <sup>3</sup> :			
Alack Histic (A3)  Thin Dark Surface (S9) (MLRA 147, 148)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Com Muck (A10) (LRR N)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Candy Gleyed Matrix (S4)  Sandy Redox (S5)  Depleted Matrix (F3)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148)  Sandy Redox (S5)  Red Parent Material (F21) (MLRA 127, 147)  Piedmont Floodplain Soils (F19) (MLRA 148)  Trictive Layer (if observed):  Specific Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 148)  Specific Layer (If observed):  Specific Layer (If observed):  Specific Layer (If observed):  Specific Redox Dark Surface (S9) (MLRA 147, 148)  Depleted Matrix (F2)  Depleted Dark Surface (F7)  Other (Explain in Remains)  Other (Explain in Remains)  Specific Redox Dark Surface (F13) (MLRA 136, 122)  Specific Redox Dark Surface (F13) (MLRA 136, 122)  Specific Redox Dark Surface (F13) (MLRA 148)  Specific Redox Dark Surface (F13)  Specif	A 147)			
Stratified Layers (A5)	6)			
Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Trictive Layer (if observed):  Specific Surface (A12)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  Piedmont Floodplain Soils (F19) (MLRA 148)  Red Parent Material (F21) (MLRA 127, 147)  Wetland hydrolog unless disturbing the stripped Matrix (S6)  Wetland hydrolog unless disturbing the stripped Matrix (S6)  Wetland hydrolog unless disturbing the stripped Matrix (S6)  Hydric Soil Present?  Yepth (inches):	ils (F19)			
Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Tron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Trictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yearks:	☐ Very Shallow Dark Surface (TF12)			
Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 127, 147)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Pictive Layer (if observed):  Sype:  Depth (inches):  Hydric Soil Present?  Yenarks:	rks)			
MLRA 147, 148)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Stripped Matrix (S6)				
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Prictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yearsks:				
Sarity Redox (SS)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  wetland hydrolog unless disturbed trictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yenarks:				
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed trictive Layer (if observed):  Type: Depth (inches): Hydric Soil Present? Yenarks:	phytic vegetation and v must be present			
Type:	ed or problematic.			
Depth (inches): Hydric Soil Present? Y				
narks:	es O No O			
ydric soll indicators present.				

Site: Crooksv	ille-North Newark 138 kV Transmission Line Rebuild	d Project	<b>Date:</b> June 1, 2020				
Wetland:	Wetland 026		Rater: BL,	SM			
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max 6 pts)  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  0.3 to <3 acres (0.12 to <1.2ha) (2pts)  0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)  x <0.1 acres (0.04ha) (0 pts)		w-bl	20200601-01			
12 12 Subtotal Points	Metric 2. Upland buffers and surrounding lar  2a. Calculate average buffer width (select one, do not doub  X WIDE. Buffers average 50m (164ft) or more.  MEDIUM. Buffers average 25m to <50m (82  NARROW. Buffers average 10m to <25m (3  VERY NARROW. Buffers average <10m (<3)  2b. Intensity of surrounding land use (select one or double to the control of	around wetland to <164ft) around wetland to <164ft) around wetland 2ft) around we check & avera ie, savannah, ug second growasture, park, co	d perimeter (7) ind wetland perimeter bund wetland perimeter tland perimeter (0)  ge) wildlife area, etc. (7) h forest. (5) inservation tillage, nev	er (1)			
29 17 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  Precipitation (1)  Seasonal/Intermittent surface water (3)  Perennial surface water (lake or stream) (5)  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  x <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime.  (select one or double check & average)  x None or none apparent (12)  Recovered (7)  Recovering (3)  Recent or no recovery (1)	3d.	x Part of wetland x Part of riparian  Duration inundation/sa (select one or double Semi- to perma Regularly inund Seasonally inund x Seasonally sat  Check all disturbar litch le	olain (1) m/lake and other human use (1) /upland (e.g. forest), complex (1) or upland corridor (1)  turation. check & average) anently inundated/saturated (4) dated/saturated (3) indated (2) urated in upper 30cm (12in) (1)			
39 10 Subtotal Points	Good (a)  Good (4)  X Fair (3)  Poor to fair (2)  Good (4)  Grazing  Grazing  Grazing  Grazing  Grazing  Grazing  Grazing  Grazing  Grazing	d average.  4c.  Ill disturbance  cing cutting ebris removal	pts.)  Habitat alteration. Scc None or none a Recovered (6) x Recovering (3) Recent or no re  ces observed  shrub, herbat sedim dredg farmir	pre one or double check and average.  apparent (9)  ecovery (1)  sapling removal the properties of the			

Wetland   Second	Site: Crooksville	-	Date:	June 1, 2020							
Motirio S. Special Wetlands, (max 10 pts.)				· · · · · · · · · · · · · · · · · · ·							
Metric 5. Special Wetlands, (max 10 pts.)  Subtotal Points  Metric 5. Special Wetlands, (max 10 pts.)  Check all that sends and score as indicated  Bog (10 pts) For (10 pts) Check all that sends and score as indicated  Bog (10 pts) For (10 pts) Laise Eric coastativitodiary wetland-unreatricted hydrology (10 pts) Laise Eric coastativitodiary wetland-unreatricted hydrology (10 pts) Laise Fraines (10 pts) Related Wetlands (10 pts) Re	vvetiand: We	tland U26	Rater:	BL, SM							
Metric 5. Special Wetlands, (max 10 pts.)  Subtotal Points  Metric 5. Special Wetlands, (max 10 pts.)  Check all that sends and score as indicated  Bog (10 pts) For (10 pts) Check all that sends and score as indicated  Bog (10 pts) For (10 pts) Laise Eric coastativitodiary wetland-unreatricted hydrology (10 pts) Laise Eric coastativitodiary wetland-unreatricted hydrology (10 pts) Laise Fraines (10 pts) Related Wetlands (10 pts) Re											
Subtotal   Points	39 subtotal first pa	age									
Subtotal   Points	00	Marie E. Occasiol Marie and Access 40 and a									
Bog (10 pile)   Fen (10 pile)   City Growth Forest (10 pile)											
Fen (10 pts) Olts Growth Forest (10 pts) Mature forested wetland (5 pts) Lake Eire coastal/thiotary wetland-enseticed hydrology (10 pts) Lake Eire coastal/thiotary wetland-enseticed hydrology (5 pts) Lake Eire coastal/thiotary wetland-enseticed hydrology (5 pts) Lake Eire coastal/thiotary wetland-enseticed hydrology (5 pts) Lake Pain Stand Prairies (10 pts) Redict Wet Prairies (10 pts) Redi	Subtotal Points										
Obt Growth Forest (10 pts) Mature forested welland (s) pts) Lake Eire costalt/irbitary wetland-unrestricted hydrology (10 pts) Lake Eire costalt/irbitary wetland-unrestricted hydrology (5 pts) Lake Eire costalt/irbitary wetland-unrestricted hydrology (5 pts) Lake Eire costalt/irbitary wetland-unrestricted hydrology (5 pts) Relict Wet Parines (10 pts) Relict Vetal Relict											
Mutric forested wetland (5 pts)   Lake Eric coastal/tibulary wetland-unrestricted hydrology (10 pts)   Lake Eric coastal/tibulary wetland-unrestricted hydrology (5 pts)   Lake Eric coastal/tibulary wetland-unrestricted hydrology (5 pts)   Lake Pisan Sand Prairies (0ak Openings) (10 pts)   Reliet Wet Prairies (10 pts)   Calegory 1 Wetland, See Question 1 of Qualitative Rating, (10 pts)   Calegory 1 Wetland, See Question 1 of Qualitative Rating, (10 pts)   Ga. Wetland Vegetation Communities   Subtotal Points   See Learning (10 5 ascele											
Lake Eric coastal/tibulary wetland-serticided hydrology (10 pts) Lake Plain Sand Prairies (QAK Openings) (10 pts) Relict Well Prairies (10 pts) Relict Well Prairies (10 pts) Relict Well Prairies (10 pts) Significant migatory compirer/waterfowl habitat or usage (10 pts) Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.) Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  Wegetation Community Cover Scale  1											
Lake Flain Sand Prairies (Oak Openings) (10 pts)  Relict Well Prairies (10 pts)  Relict Well Prairies (10 pts)  Relict Well Prairies (10 pts)  Gategory 1 Welland. See Question 1 of Qualitative Rating. (-10 pts)  Gategory 1 Welland. See Question 1 of Qualitative Rating. (-10 pts)  Subtotal Points  Metric 6. Plant Communities interspersion, microtopography. (max 20 pts.)  See Welland Vegetation Communities  Score all present using 0 to 3 scale  Aquatic bed Agratic bed Agratic bed Copen water Shrub Copen water Copen wat		· · · · ·	المسامرينا المساملة	(40 mts)							
Lake Plain Sand Prairies (Oak Openings) (10 pts) Relict Wet Prairies (10 pts) Robits (10 pts)			•								
Relict Wet Prainies (10 pts)  Known occurrence statefederal threatened or endangered species (10)  Significant migatory songbrind waterflowh habitat or usage (10 pts)  Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)  Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  Subtotal Points  Metric 6. Plant Communities  Score all present using 0 to 3 scale    Aquatic bed   Emergent   Shrub   Present and either comprises scale				y (5 pts)							
Microtopography   Metric 6. Plant Communities, interspersion, microtopography, (max 20 pts.)   Subtotal Points   Metric 6. Plant Communities, interspersion, microtopography, (max 20 pts.)   Subtotal Points   Metric 6. Plant Communities			s) (10 pts)								
Subtotal Points  Wetric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)  Subtotal Points  Wetric 6. Plant Communities  Score all present using 0 to 3 scale  Aquatic bed 2. Emergent 5. Brub 6. Horizontal (plan view) interspersion Copen water Open water Other (list)  Moderately low (2) Low (1) X. None (0)  Sec. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or debut points for coverage  Add or debut points for coverage  Score all present using 0 to 3 scale  Present and either comprises significant part of wetland's vegetation and is of moderate quality, or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of high quality  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of high quality  Present and comprises significant part, or more, of wetland's vegetation and is of high quality  None (0)  Noderately low (2) Low (1) X. None (0)  Sc. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or debut points for coverage  Scover (-1) Nearly Absent -5% cover (-3) Sperse 5-25% cover (-1) Nearly Absent (1) Note the coverage of invasive plants or demandation component of the vegetation, although normalities and/or disturbance tolerant native species  Mudflat and Open Water Class Quality  A predominance of native species, with nonnative species  Mudflat and Open Water Class Quality  A predominance of native species with nonnative species  Mudflat and Open Water Class Quality  A predominance of native species or or rate, threatened, or endangered spe  Mudflat and Open Water Class Quality  A predominance of native species or refers, threatened, or endangered spe  Mudflat and Open Water Class Quality  Present in moderate amounts, but not of highest quality or in small amounts			nod or ondone	vared energies (10)							
Category 1 Weltland. See Question 1 of Qualitative Rating. (-10 pts)   Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)			_								
Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)   Subtotal Points											
Subtotal Points    Score all present using 0 to 3 scale		Catagory 1 Wolland: Coo Quodion 1 of	Qualitativo	aung. (10 pts)							
Subtotal Points    Score all present using 0 to 3 scale	42 3	Metric 6. Plant Communities, interspersion	. microtop	ography. (max 20 pts.)							
Score all present using 0 to 3 scale  Aquatic bed 2 Emergent Shrub Forest Mucflats Open water Other (list) Big (6) Moderate (n) Moderat		· · · · · · · · · · · · · · · · · · ·	,о. стор	og.upy. (a. to pro.)							
Aquatic bed 2 Emergent Shrub Forest Mudflats Open water Other (list)  6b. Horizontal (plan view) interspersion Select only one Whoderately low (2) Low (1) None (0) Low (1) None (0) Extensive Plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage Extensive 2-5% cover (-1) Nearly Absent <5% cover (-5) Moderate (25-75% cover (-1) Nearly Absent <5% cover (-1) Nearly Absent <5% cover (-1) Nearly Absent (5% cover (-1) O Standing dead > 25 om (10") dbh O Standing dead > 25 om (10") dbh O Standing dead > 25 om (10") dbh O Amphibian breeding pools  Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality  Present and either comprises significant part of wetland's vegetation and is of high quality or comprises a small part and is of high quality or comprises a small part of wetland's vegetation and is of moderate quality or comprises a significant part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of moderate quality or comprises a small part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a significant part but is of low quality  Narrative Description of Vegetation part or wetland's vegetation and is of high quality or comprises a significant part but is of low quality  Narrative Description of Vegetation part or wetland's vegetation and is of high quality or comprises a significant part but is of low quality  Narrative Description of Vegetation part or wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality or comprises a small part of wetland's vegetation and is of high quality.		· ·	Vegetatio	n Community Cover Scale							
Absent of comprises 4.01 in a (2.47 l acres) computous area		· — ·									
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Forest   Mudflats   Open water   Other (list)   Open wat		<b>⊢</b>									
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8b. Horizontal (plan view) interspersion  Select only one  High (5)  Moderately high (4)  Moderate (3)  Moderately low (2)  Low (1)  None (0)  8c. Coverage of invasive plants.  Refer to Table 1 ORAM long form for list.  Add or deduct points for coverage  Extensive >75 % cover (-5)  Nearly Absent <5% cover (0)  Absent (1)  Score all present using 0 to 3 scale  0 Vegetated hummocks/tussocks  Coarse woody debris >15 cm (6")  Standing dead > 25 cm (10") dbh  Amphibian breeding pools  A Present and comprises significant part, or more, of wetland's vegetation and is of high quality  Narrative Description of Vegetation Quality  Narrative Description of Vegetation Quality  Narrative Description of Vegetation Quality  Low spp diversity and/or predominance of nonnative or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp or definition of native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp or endangered spp or definition of native spp and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp or endangered spp or moderated by nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp  Mudflat and Open Water Class Quality  Mudflat and Open Water Class Quality  Mudflat and Open Water Class Quality  Moderate 1 ha to <4 ha (0.2471 acres) 9.2 Moderate 1 ha to <4 ha (0.2471 acres) 9.3 High 4 ha (9.88 acres) or more  Microtopography Cover Scale  O Absent  1 Present very small amounts or if more common of marginal quality  Present in moderate amounts, but not of highest quality or in small amounts of highest quality		Other (list)	2								
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Moderately low (2)   Low (1)   None (0)		Moderately high (4)	Narrative	Description of Vegetation Quality							
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3 Present in moderate or greater amounts and of highest quality			2								
Tresent in moderate or greater amounts and or nignest quality			2	Present in moderate or greater amounts and of highest quality							
			3	n resent in moderate or greater amounts and or highest quality							



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 026

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 026

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 026

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 026

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Facing West





Site Location:

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

**Project No.** 60616110

### Wetland 026

**Client Name:** 

Date:

June 1, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 027a

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 03-Jun-20
Applicant/Owner: AEP	State: OF	Sampling Point: w-bl-20200603-01a
Investigator(s): BL, SKM	Section, Township, Range: S	34 T 17N R 15W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, r	none): convex Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N Lat.:	39.83403 Lor	ng.: -82.1759 Datum: NAD83
Soil Map Unit Name: GwC - Guernsey-Westmoreland silt loams, 8 to	15 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of y	rear? Yes • No O (If no	, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Norma	Circumstances" present? Yes   No
Are Vegetation , Soil , or Hydrology naturally	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Attach site map showing s	sampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○		
Hydric Soil Present? Yes   No	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present? Yes   No	within a Wetland?	
Sampling point in for Wetland 027a, PEM component of larger PEM, located in residential yard. Wetland is partially disturbed due to residential yard.		
Hydrology		
Water Marks (B1)	Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) e (C7)	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes  No  Depth (inches):	3	
Water Table Present? Yes  No Depth (inches):	8	
Saturation Present?  (includes applitude spellings friege)  Yes  NO  Depth (inches):		rology Present? Yes 💿 No 🔾
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo  Remarks:  Multiple primary and secondary hydrology indicators present. Primary to southeast and to southwest by upland drainage features towards	y sources of hydrology are grou	ndwater seepage and precipitation. Wetland drains

			ominant		Sampling Point: w-bl-20200603-01a
Tree Stratum (Plot size: 30' radius )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: (A)
2	0		0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata:3(B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)
6			0.0%		That We obe, thow, of the
7			0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius	0	= To	otal Cover		0BL speci es <u>15</u> x 1 = <u>15</u>
1. Rubus occidentalis	Б	<b>✓</b>	62.5%	UPL	FACW species <u>58</u> x 2 = <u>116</u>
2. Ulmus americana		<b>✓</b>	37.5%	FACW	FAC speci es $\underline{5}$ x 3 = $\underline{15}$
3.			0.0%		FACU speci es $\frac{17}{}$ x 4 = $\frac{68}{}$
4			0.0%		UPL speci es $\frac{5}{}$ x 5 = $\frac{25}{}$
5.			0.0%		Column Totals: 100 (A) 239 (B)
6.			0.0%		Prevalence Index = B/A = 2.390
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 0 )		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0	П	0.0%		data in Remarks or on a separate sheet)
2.			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' radius )	0	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	50	<b>✓</b>	54.3%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
0.0	15		16.3%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Poa compressa     Scirpus atrovirens	10	П	10.9%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Onoclea sensibilis	5		5.4%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Dichanthelium clandestinum	5		5.4%	FAC	in height.
6. Eleocharis obtusa	5		5.4%	OBL	Five Vegetation Streets
7. Asclepias syriaca	2		2.2%	FACU	Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' radius )	92	= To	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0	$\Box$	0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
3.	0	$\Box$	0.0%		Woody vines - Consists of all woody vines, regardless of
4	0		0.0%		height.
	0		0.0%		
5	0		0.0%		Hydrophytic Vegetation
·	0	 = To	otal Cove		Present? Yes No
Remarks: (Include photo numbers here or on a separate shee					I
Hydrophytic vegetation indicator present dominance test > 50%, dom		es ar	e FACW ar	nd UPL	

Sampling Point: w-bl-20200603-01a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)													
Depth		Matrix											
(inches) 0-1	Color 10YR	(moist) 3/3		Color_	(moist)	%	_Tvpe_	Loc <sup>2</sup>	Texture Silt Loam	Re	marks		
1-9	5Y	7/2	90	10YR	5/6	10	C	PL	Sandy Clay Loam	promi nent	redox		
		-								redox con	tions centrations in		
9-17	5Y	6/2	70	5Y	6/4		C	M	Sandy Clay Loam	pore lini	ngs also		
		_,		5Y	4/1	10	RM	M					
		`			•		_		`	,			
		,								· ·			
		· · · ·			-					· · · · · · · · · · · · · · · · · · ·			
		-,								<del>.</del>			
		_,								<del>.</del>			
<sup>1</sup> Type: C=Cond	centration.	D=Depletion	on. RM=Red	uced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	ins <sup>2</sup> Loca	tion: PL=Pore Lining. M	1=Matrix			
Hydric Soil I	ndicators	:							Indicators for Pr	oblematic Hydr	ic Soils <sup>3</sup> :		
Histosol (A	41)			☐ Dar	k Surface	(S7)				A10) (MLRA 147)			
Histic Epip							(S8) (MLRA		Coast Prairie				
Black Hist				Thir	Dark Sur	face (S9) (I	MLRA 147, 1	48)	(MLRA 147,1	` '			
Hydrogen						Matrix (F2	)		Piedmont Flo	odplain Soils (F19	)		
Stratified					leted Matr	, ,			(MLRA 136, 147)				
2 cm Mucl						urface (F6)			Very Shallow Dark Surface (TF12)				
		Surface (A	A11)			s Surface (F sions (F8)	7)		Other (Explain in Remarks)				
	k Surface (					, ,	(F12) (LRR I	NI.					
□□ Sandy Mu MLRA 147		(S1) (LRR I	٧,	MLF	r-Marigarie RA 136)	SE Masses	(FIZ) (LKK	٧,					
	yed Matrix	(S4)		Um	bric Surfac	ce (F13) (M	LRA 136, 12	2)					
✓ Sandy Red		(= 1)		Pied	dmont Floo	odplain Soil:	s (F19) (MLF	RA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Stripped N							) (MLRA 12						
Restrictive La	ayer (if ob	oserved):											
Type:									Hydric Soil Presen	t? Yes •	No O		
Depth (inch	nes):								,		110 0		
Remarks:													
hydric soil ind	licator pre	esent as d	epleted ma	atrix with p	rominent	redox co	ncentratior	ns in sand	y soil				

#### Wetland 027b

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 03-Jun-20
Applicant/Owner: AEP	State: OH	Sampling Point: w-bl-20200603-01b
Investigator(s): BL, SKM	Section, Township, Range: S 3	4 T 17N R 15W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none)	: convex Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N Lat.:	39.83409 Long.:	-82.17623 Datum: NAD83
Soil Map Unit Name: GwC - Guernsey-Westmoreland silt loams, 8 to	15 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes • No O (If no, expl	lain in Remarks.)
Are Vegetation $\ \square$ , Soil $\ \square$ , or Hydrology $\ \square$ significantl	y disturbed? Are "Normal Circ	umstances" present? Yes   No
Are Vegetation , Soil , or Hydrology naturally p	roblematic? (If needed, expla	nin any answers in Remarks.)
Summary of Findings - Attach site map showing s	ampling point locations, t	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes   No		
Hydric Soil Present? Yes ● No ○	Is the Sampled Area Yes	No O
Wetland Hydrology Present? Yes   No	within a Wetland?	
Sampling point in for Wetland 027b, PFO component of larger PEM/F is potentially isolated; drains to southwest off-site, no obvious drains		hillside seep area near edge of ROW. Wetland
Hydrology		
Water Marks (B1)	is (B14)  Indoor (C1)  Indoor (C1)  Indoor (C3)  Indoor (C4)  Indoor (C4)  Indoor (C4)  Indoor (C7)  Indoor (	Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes No Depth (inches):	0	
Water Table Present? Yes No Depth (inches):	10 Wetland Hydrolog	y Present? Yes  No
(includes capillary fringe)  Yes No Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos	s previous inspections) if available.	
Describe recorded Data (Stream gauge, monitoring well, delial prioto.	s, providus inspections), il avaliable.	,
Remarks:		
Multiple primary and secondary hydrology indicators present. Primary to southwest off-site, no obvious drainage feature present, potentially		ter seepage and precipitation. Wetland drains

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

			ominant becies? -		Sampling Point: w-bl-20200603-01b
Tree Stratum (Plot size: <u>30' radius</u> )	Absolute % Cover	Re	el.Strat.	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Acer rubrum	_60_	<b>✓</b>	92.3%	FAC	That are OBL, FACW, or FAC:4 (A)
2. Prunus serotina	5		7.7%	FACU	
3			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		
5.			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 80.0% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 80.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	65	= Tc	tal Cover	-	0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius				540	FACW species 80 x 2 = 160
1. Acer rubrum	30		46.2%	FAC	FAC speciles 95 x 3 = 285
2. Magnolia acuminata			23.1%	FACU	FACU speci es 30 x 4 = 120
3. Fraxinus pennsylvanica			15.4%	FACW	UPL species
4. Liriodendron tulipifera			15.4%	FACU	
5			0.0%		Column Totals: 205 (A) 565 (B)
6			0.0%		Prevalence Index = B/A = <u>2.756</u>
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10	0	Ш	0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size: 0 )	65	= Tc	tal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' radius )	0	= Tc	tal Cover	-	of height.
4	70	<b>✓</b>	100.0%	EACW/	Sapling/shrub stratum – Consists of woody plants, excluding
			0.0%	TACVV	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2		$\Box$	0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3	0	Н	0.0%	$\overline{}$	Woody vines – Consists of all woody vines greater than 3.28 ft
4 5		$\Box$	0.0%		in height.
	0		0.0%		
6	0	$\Box$	0.0%		Five Vegetation Strata:
0	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
	0		0.0%		diameter at breast height (DBH).
9			0.0%	$\overline{}$	Sapling stratum – Consists of woody plants, excluding woody
10			0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	_	— Тс	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' radius )		_			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1. Smilax rotundifolia	5	<b>V</b>	100.0%	FAC	species, except woody vines, less than approximately 3 ft (1 m)
2			0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5	0	$\Box$	0.0%		Hydrophytic
6	0	$\square$	0.0%		Vegetation
	5	= To	otal Cove	r	Present? Yes VNO V
Remarks: (Include photo numbers here or on a separate shee	et.)			_	
Hydrophytic vegetation indicator present dominance test $>$ 50%, dominance	ninant speci	es ar	e FACW, F	AC and FAC	CU

Wetland 027b

Type: C=Concentration	narks	Silt Loam	=	1						Color	
Type: C = Concentration		Silt Loam	=			moist)	Color (	%	rmoisii		(inches)
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators:    Histor Soil Indicators:		Sandy Clay Loam	PL			,,,,,,,,,,					
Specific Soil Lindicators:					10	4/4	10YR	90	6/2	2.5Y	4-17
Histosol (A1)						. —					
Histosol (A1)											
Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Indicators for Problematic Hydric So    2 cm Muck (A10) (MLRA 147)   2 cm Muck (A10) (MLRA 147)   2 cm Muck (A10) (MLRA 147, 148)    1 coast Prairie Redox (A16) (MLRA 147, 148)   1 piedmont Floodplain Soils (F19) (MLRA 136, 147)    2 cm Muck (A10) (LRR N)   2 cm Muck (A10) (LRR N)   3 coast Prairie Redox (A16) (MLRA 147, 148)    2 cm Muck (A10) (MLRA 147, 148)    2 cm Muck (A10) (MLRA 147, 148)    Piedmont Floodplain Soils (F19) (MLRA 136, 147)    Very Shallow Dark Surface (TF12)    Other (Explain in Remarks)    Other (Explain in Remarks)    Sandy Gleved Matrix (S4)   Umbric Surface (F13) (MLRA 136, 122)						. —					
Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (F6)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  Indicators for Problematic Hydric So  Indicators for Problematic Hydric So  Dark Surface (S7)  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147, 148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122)						. —			,		
Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (F6)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  Indicators for Problematic Hydric So  Indicators for Problematic Hydric So  Dark Surface (S7)  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147, 148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122)											
Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Indicators for Problematic Hydric So    2 cm Muck (A10) (MLRA 147)   2 cm Muck (A10) (MLRA 147)   2 cm Muck (A10) (MLRA 147, 148)    1 coast Prairie Redox (A16) (MLRA 147, 148)   1 piedmont Floodplain Soils (F19) (MLRA 136, 147)    2 cm Muck (A10) (LRR N)   2 cm Muck (A10) (LRR N)   3 coast Prairie Redox (A16) (MLRA 147, 148)    2 cm Muck (A10) (MLRA 147, 148)    2 cm Muck (A10) (MLRA 147, 148)    Piedmont Floodplain Soils (F19) (MLRA 136, 147)    Very Shallow Dark Surface (TF12)    Other (Explain in Remarks)    Other (Explain in Remarks)    Sandy Gleved Matrix (S4)   Umbric Surface (F13) (MLRA 136, 122)									`		
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Indicators for Problematic Hydric So  2 cm Muck (A10) (MLRA 147, 148)  Loamy Gleyed Matrix (F2)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)		`				-			`		
Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (F6)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  Indicators for Problematic Hydric So  Indicators for Problematic Hydric So  Dark Surface (S7)  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147, 148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122)				`		-			`		
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Indicators for Problematic Hydric So  2 cm Muck (A10) (MLRA 147, 148)  Loamy Gleyed Matrix (F2)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)		· · · · · · · · · · · · · · · · · · ·									
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Indicators for Problematic Hydric So  2 cm Muck (A10) (MLRA 147, 148)  Loamy Gleyed Matrix (F2)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)				_							
Histosol (A1)  Dark Surface (S7)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Dark Surface (F1)  Dark Surface (S9) (MLRA 147, 148)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Coast Prairie Redox (A16)  (MLRA 147, 148)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Dother (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)		ion: PL=Pore Lining. M=Matrix	nins <sup>2</sup> Locati	ed Sand Gra	red or Co	CS=Cover	iced Matrix, (	n. RM=Redu	D=Depletic	entration. [	ype: C=Cond
Histosol (A1)  Histic Epipedon (A2)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Dark Surface (F13) (MLRA 136, 122)  Dougleted Matrix (F2)  Depleted Dark Surface (F13) (MLRA 136, 122)	Soils <sup>3</sup> :	Indicators for Problematic Hydric Soils								ndicators:	łydric Soil I
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10) (LRR N)  Depleted Below Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Polyvalue Below Surface (S8) (MLRA 147, 148)  Coast Prairie Redox (A16) (MLRA 147, 148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  Umbric Surface (F13) (MLRA 136, 122)				Dark Surface (S7)							
Hydrogen Sulfide (A4)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F2)  Depleted Matrix (F3)  MLRA 147, 148)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  (MLRA 147, 148)  Piedmont Floodplain Soils (F19)  (MLRA 147, 148)  Other (Explain in Remarks)						_				_	
Stratified Layers (A5)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Redox Dark Surface (F7)  Other (Explain in Remarks)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 147)  Unbric Surface (F19)  Depleted Matrix (F3)  Nedox Dark Surface (F7)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  Umbric Surface (F13) (MLRA 136, 122)											
2 cm Muck (A10) (LRR N)  Redox Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)									)		_
Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)								2 cm Muck (A10) (LRR N)			
Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)	2)				•						
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)  Sandy Gleved Matrix (S4)  Iron-Manganese Masses (F12) (LRR N, MLRA 136)  Umbric Surface (F13) (MLRA 136, 122)		Other (Explain in Remarks)		- /)				Thick Dark Surface (A12)			
MLRA 147, 148) MLRA 136)  Sandy Gleved Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)			N	(E12) (LRR	•						
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)			IN,								
		2	22)	· — —							
Sandy Reday (CE)   Diadmont Floodplain Sails (E10) (MLPA 140)   Indicators of hydrophytic vegeta	egetation and	<sup>3</sup> Indicators of hydrophytic vegetati wetland hydrology must be pres	RA 148)	_							
		unless disturbed or problema	7, 147)	I) (MLRA 12	laterial (I	Parent Ma	Red			latrix (S6)	Stripped N
Restrictive Layer (if observed):									son (od):	vor (if obs	Postrictivo L
Type:									sei veu).	iyei (ii obs	
Depth (inches): Hydric Soil Present? Yes No	No O	Hydric Soil Present? Yes • No								100):	
Depart (mence):		-									
emarks: dric soil indicator present as depleted matrix with prominent redox concentrations in sandy soil		soil	ns in sandy	ncentration	t redox	ominent	trix with pr	epleted ma	sent as d	icator pres	

Upland 027 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry Sampling Date: 03-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: upl-bl-20200603-01ab
Investigator(s): BL, SKM	Section, Township, Range: S 34 T 17N R 15W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): convex Slope: 15.0 % / 86.2 °
Subregion (LRR or MLRA): LRR N Lat.:	39.83411 Long.: -82.17589 Datum: NAD83
Soil Map Unit Name: GwC - Guernsey-Westmoreland silt loams, 8 to 1	15 percent slopes NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year Are Vegetation , Soil , or Hydrology significantly	ear? Yes No (If no, explain in Remarks.)  ly disturbed? Are "Normal Circumstances" present? Yes No (
	problematic? (If needed, explain any answers in Remarks.)
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No •	
Hydric Soil Present? Yes No •	Is the Sampled Area Yes O No •
Wetland Hydrology Present? Yes No •	within a Wetland?
Not a wetland point, does not meet hydric soil or hydrology criteria  Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Aquatic Fauna (B13)	Dodor (C1)  Drainage Patterns (B10)  eres along Living Roots (C3)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Ittion in Tilled Soils (C6)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  (includes capillary fringe)  Pepth (inches):  Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos	0 Wetland Hydrology Present? Yes ○ No ●
Describe Recorded Data (stream gauge, monitoring well, denai priotos	s, previous inspections, in available.
Remarks: No hydrology indicators present	

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

### Upland 027

		-Species?		Sampling Point: <u>upi-bi-20200603-01ab</u>
	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )	% Cover	Cover	Status	No. 1 of Co. 1
1. Liriodendron tulipifera	30	54.5	% FACU	Number of Dominant Species That are OBL, FACW, or FAC:3 (A)
2. Robinia pseudoacacia		36.4	% FACU	
3. Prunus serotina	5	9.19	% FACU	Total Number of Dominant Species Across All Strata: 8 (B)
4	0	0.09	%	Species Neross Air Strata.
5		0.09	%	Percent of dominant Species
6.		0.09	<u>.                                    </u>	That Are OBL, FACW, or FAC: 37.5% (A/B)
		0.09		Prevalence Index worksheet:
7	0	0.09		Total % Cover of: Multiply by:
8	55	= Total Co		
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius	) —	- 10101 00	·VCI	
1. Liriodendron tulipifera	15	31.3	% FACU	FACW species
2. Rubus occidentalis	15	31.3	% UPL	FAC speci es $3 \times 3 = 9$
3. Robinia pseudoacacia	10	20.8	% FACU	FACU species $85 \times 4 = 340$
4. Juglans nigra		10.4	% FACU	UPL species $\frac{15}{100}$ x 5 = $\frac{75}{100}$
<b>F</b>	2	6.39		Column Totals: 181 (A) 580 (B)
		0.09		Dravalance Index D/A 2204
6		0.09		Prevalence Index = B/A = 3.204
7		$\neg$		Hydrophytic Vegetation Indicators:
8		0.09		Rapid Test for Hydrophytic Vegetation
9		0.09		☐ Dominance Test is > 50%
10		0.09	<u> </u>	☐ Prevalence Index is ≤3.0 1
Shrub Stratum (Plot size: 0 )	48	= Total Co	ver	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0	0.09	%	data in Remarks or on a separate sheet)
2.	0	0.09	%	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.		0.09	 %	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1	0	0.09		be present, unless disturbed or problematic.
4		0.09		Definition of Vegetation Strata:
5				Four Vegetation Strata:
6		0.09		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		0.09		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' radius )		= Total Co	ver	of height.
1. Phalaris arundinacea	30	<b>✓</b> 39.5	% FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Woodwardia areolata	20	26.3	% FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Impatiens pallida	20	26.3	% FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Juncus effusus	3	3.99	% FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Acer rubrum	3	3.99	% FAC	in height.
6.	0	0.09	 %	
		0.09		Five Vegetation Strata:
7	0	0.09		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
8		0.09		diameter at breast height (DBH).
9				Sapling stratum – Consists of woody plants, excluding woody
10	0	0.09		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11		0.09		Shrub stratum – Consists of woody plants, excluding woody
12		0.09		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' radius )	76	= Total Co	ver	Herb stratum - Consists of all herbaceous (non-woody) plants,
1. Vitis riparia	2	100.0	% FACW	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0	0.09	%	in height.
3.	0	0.09	 %	Woody vines – Consists of all woody vines, regardless of
4	0	0.09		height.
	0	0.09		
5	0	0.09		Hydrophytic
6				Vegetation Present? Yes No
	2	= Total Co	vei	
Remarks: (Include photo numbers here or on a separate she	,			
No hydrophytic vegetation indicators present, dominant species are F	ACW, FACU	and UPL		

Upland 027

Soil

Sampling Point: upl-bl-20200603-01ab

Depth (Inches)   Color (moist)   %   Color (moist)   %   Type   Loc²   Texture   Remarkable   Remarkable	rks
2-7 2.5Y 4/4 100 Sandy Clay Loam  7-12 2.5Y 6/6 100 Sandy Clay Loam  Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix  Hydric Soil Indicators:    Histosol (A1)	
7-12 2.5Y 6/6 100 Sandy Clay Loam  Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix  Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S	
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix  Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  1 C m Muck (A10) (MI RA 147)	
Hydric Soil Indicators:    Indicators for Problematic Hydric S   Indicators for Problematic Hydric S   Dark Surface (S7)	
Hydric Soil Indicators:  Hydric Soil Indicators:  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Muck (A10) (MLRA 147)	
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Murk (A10) (MLRA 147)	
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Murk (A10) (MLRA 147)	
Hydric Soil Indicators:  Hydric Soil Indicators:  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Muck (A10) (MLRA 147)	
Hydric Soil Indicators:  Hydric Soil Indicators:  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Muck (A10) (MLRA 147)	
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Murk (A10) (MLRA 147)	
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Murk (A10) (MLRA 147)	
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Murk (A10) (MLRA 147)	
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Indicators for Problematic Hydric S  2 cm Murk (A10) (MLRA 147)	
Histosol (A1)  Dark Surface (S7)  Dark (A10) (MI RA 147)	
	Soils <sup>3</sup> :
L. L. Histic Epipodon (A2)	
Histic Epipedon (A2)  Polyvalue Below Surface (S8) (MLRA 147,148)  Black Histic (A3)  Thin Dark Surface (S9) (MLRA 147, 148)  (All PA 147, 148)	
(WERA 147, 146)	
☐ Stratified Layers (A5) ☐ Depleted Matrix (F3) ☐ Piedmont Floodplain Soils (F19) ☐ (MLRA 136, 147)	
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)	
Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Other (Explain in Remarks)	
Thick Dark Surface (A12)  Redox Depressions (F8)	
Sandy Mick Mineral (S1) (LRP N.   Iron-Manganese Masses (F12) (LRR N.	
MLRA 147, 148) MLRA 136)	
Sandy Gleyed Matrix (S4)  Umbric Surface (F13) (MLRA 136, 122)  Sandy Gleyed Matrix (S4)  Pliedment Floodplain Soils (F10) (MLRA 148)  3 Indicators of hydrophytic vege	otation and
wetland hydrology must be p	present,
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or proble	ematic.
Restrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soil Present? Yes O	No •
Remarks:	
No hydric soil indicators present	

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 027

Site: Crook	sville-North Newark 138 kV Transmission Line Rebuild Proj	ect Date: June 3, 2020
Vetland:	w-bl-20200603-01ab	Rater: BL, SM
1 1 ubtotal Points	<del></del>	
	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts)	
	10 to <25 acres (4 to <10.1ha) (4 pts)	
	3 to <10 acres (1.2 to <4ha) (3 pts)	
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)	
	x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	
	<0.1 acres (0.04ha) (0 pts)	
6 5	Metric 2. Upland buffers and surrounding land us	e. (max 14 pts)
ubtotal Points	· · · · · · · · · · · · · · · · · · ·	
	WIDE. Buffers average 50m (164ft) or more around	
	MEDIUM. Buffers average 25m to <50m (82 to <16	
	x NARROW. Buffers average 10m to <25m (32ft to <	
	VERY NARROW. Buffers average <10m (<32ft) are	ound wetland perimeter (0)
	2b. Intensity of surrounding land use (select one or double check	<u>&amp; average)</u>
	VERY LOW. 2nd growth or older forest, prairie, sav	•
	x LOW. Old field (>10 years), shrubland, young secon	
	x MODERATELY HIGH. Residential, fenced pasture,	
	HIGH. Urban, industrial, open pasture, row cropping	j, mining, construction. (1)
22 16	Metric 3. Hydrology. (max 30 pts)	
ubtotal Points	3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all that apply.
	High pH groundwater (5)	100 year floodplain (1)
	x Other groundwater (3)	Between stream/lake and other human use (1)
	x Precipitation (1)	x Part of wetland/upland (e.g. forest), complex (1)
	Seasonal/Intermittent surface water (3)	Part of riparian or upland corridor (1)
	Perennial surface water (lake or stream) (5)	
		3d. Duration inundation/saturation.
	3c. Maximum water depth. Select only 1.	(select one or double check & average)
	>0.7 (27.6in) (3)	Semi- to permanently inundated/saturated (4)
	0.4 to 0.7m (15.7 to 27.6in) (2) x <0.4m (<15.7in) (1)	x Regularly inundated/saturated (3) Seasonally inundated (2)
	X 30.4III (\$15.7III)(1)	Seasonally saturated in upper 30cm (12in) (1)
	3e. Modifications to natural hydrologic regime.	
	(select one or double check & average)	Check all disturbances observed
	None or none apparent (12)	☐ ditch ☐ point source (nonstormwater)
	x Recovered (7)	☐ dike ☐ filling/grading
	Recovering (3)	☐ tile ☐ road bed/RR track
	Recent or no recovery (1)	weir dredging stormwater input determine
		stormwater input  other- list
31 9	Metric 4. Habitat Alteration and Development. (m	nax 20 pts.) Other - Strip Mining
ubtotal Points		ge.
	None or none apparent (4)	As I labited allowering Occurs on an deville about and account
	x Recovered (3)	4c. Habitat alteration. Score one or double check and average.
	Recovering (2)	None or none apparent (9)
	Recent or no recovery (1)	Recovered (6) x Recovering (3)
	4b. Habitat development. Select one.	x Recovering (3) x Recent or no recovery (1)
	Excellent (7)	
		urbances observed
	Good (5)	☐ shrub/sapling removal
	x Moderately good (4) grazing	herbaceous/aquatic bed removal
	Fair (3)	sedimentation
	Poor to fair (2)	三 二 二 二 二 二 二 二 二 二 二 二 二 二 二 二 二 二 二 二
	Poor (1) woody debris r	
	toxic pollutants	
	_ ::::::	

ORAM v. 5.0 Field Fo	rm Quantitative Rating								
Site: Crool	ksville-North Newark 138 kV Transmission Line Rebเ	uil <b>Date:</b> June 3, 2020							
Wetland:	w-bl-20200603-01ab	Rater:	: BL, SM						
		1.10.00	22, 0						
31 subtota	al first page								
31 0 Subtotal Point	Metric 5. Special Wetlands. (max 10 pts.)  Scheck all that apply and score as indicated								
Subtotal 1 offic	Bog (10 pts)								
	Fen (10 pts)								
	Old Growth Forest (10 pts)								
	Mature forested wetland (5 pts)								
	Lake Erie coastal/tributary wetland-uni	estricted hydrology (10 pts)							
	Lake Erie coastal/tributary wetland-res	ricted hydrology (5 pts)							
	Lake Plain Sand Prairies (Oak Openin	gs) (10 pts)	s) (10 pts)						
	Relict Wet Prairies (10 pts)								
	Known occurrence state/federal threat								
	Significant migatory songbird/waterfow								
	Category 1 Wetland. See Question 1	of Qualitative R	ating. (-10 pts)						
32 Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)									
Subtotal Point		ii, iiiiciotop	ography. (max 20 pts.)						
Subtotal 1 offic	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale						
	0 Aquatic bed								
	0 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area						
	0 Shrub								
	1 Forest	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality						
	0 Mudflats		of moderate quality, of comprises a significant part but is of low quality						
	0 Open water		Present and either comprises significant part of wetland's vegetation						
	Other (list)	2	and is of moderate quality or comprises a small part and is of high quality						
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation						
	Select only one	3	and is of high quality						
	High (5)								
	Moderately high (4)	Narrative	Description of Vegetation Quality						
	Moderate (3) Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species						
	Low (1) None (0)  6c. Coverage of invasive plants.	moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp						
	Refer to Table 1 ORAM long form for list.  Add or deduct points for coverage  Extensive >75 % cover (-5)  X Moderate 25-75% cover (-3)	high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp						
	Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality						
	Absent (1)	0	Absent <0.1 ha (0.2471 acres)						
		1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)						
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)						
	6d. Microtopography	3	High 4 ha (9.88 acres) or more						
	Score all present using 0 to 3 scale	Microton	ography Covor Scalo						
	1 Vegetated hummocks/tussocks		ography Cover Scale Absent						
	1 Coarse woody debris >15 cm (6") 0 Standing dead > 25 cm (10") dbh	0	Document						
	0 Standing dead > 25 cm (10 ) dbn	1	Present very small amounts or if more common of marginal quality						
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality						
		3	Present in moderate or greater amounts and of highest quality						



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 027a

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 027a

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 027a

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 027a

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 027a

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 027b

Date:

June 3, 2020

**Description:** 

PFO wetland

Category 2

Facing North



### Wetland 027b

Date:

June 3, 2020

**Description:** 

PFO wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 027b

Date:

June 3, 2020

**Description:** 

PFO wetland

Category 2

Facing South



### Wetland 027b

Date:

June 3, 2020

**Description:** 

PFO wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 027b

Date:

June 3, 2020

**Description:** 

PFO wetland

Category 2

Soil Pit



#### Wetland 028

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: W-bl-20200602-11
Investigator(s): BL, SKM	Section, Township, Range: S 34 T 17N R 15W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): concave Slope: 3.0 % / 71.6 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.83471 Long.: -82.1771 Datum: NAD83
Soil Map Unit Name: GwC - Guernsey-Westmoreland silt loams,	8 to 15 percent slopes NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time	e of year? Yes  No  (If no, explain in Remarks.)
	ficantly disturbed? Are "Normal Circumstances" present? Yes   No O
Are Vegetation 🔲 , Soil 🗹 , or Hydrology 🗌 natur	rally problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showi	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No	
Hydric Soil Present? Yes   No	Is the Sampled Area Yes  No
Wetland Hydrology Present? Yes   No	within a Wetland?
Groundwater seepage observed at northern boundary. Wetland Hydrology	d extends to south towards wetland 029.
3 03	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that ap	Secondary Indicators (minimum of two required)
	ply) Surface Soil Cracks (B6)   Plants (B14) Sparsely Vegetated Concave Surface (B8)
	ulfide Odor (C1)
	zospheres along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of	Reduced Iron (C4)
	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift deposits (B3)  Thin Muck S	
☐ Algal Mat or Crust (B4) ☐ Other (Explain Iron Deposits (B5)	in in Remarks)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present?  Yes No Depth (incl	nes):
Water Table Present? Yes No Depth (incl	has): 12
Saturation Present?	Wetland Hydrology Present? Yes ♥ No U
(includes capillary fringe)  Yes No Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial	·
Damarka	
Remarks:	rimary source of hydrology groundwater seepage as observed and concentration of
precipitation and surface runoff in swale.	imary source of frydrology groundwater seepage as observed and concentration of

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

			ominant		Sampling Point: <b>w-bl-20200602-11</b>
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Acer saccharinum	5	<b>✓</b>	100.0%	FACW	That are OBL, FACW, or FAC:
2	0		0.0%		Tabel Niverbase of Descious
3			0.0%		Total Number of Dominant Species Across All Strata:7 (B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6		Ц	0.0%		That Are OBE, FACW, OF FAC.
7			0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	5	= Tc	otal Cover	•	0BL speci es x 1 =
1. Acer saccharinum	15	<b>✓</b>	34.9%	FACW	FACW speci es x 2 =
2. Acer rubrum	10	<b>✓</b>	23.3%	FAC	FAC speci es $43$ x 3 = $129$
3. Lindera benzoin	10	<b>✓</b>	23.3%	FAC	FACU speci es x 4 =0
4. Ulmus rubra			11.6%	FAC	UPL speci es x 5 =0
5. Populus deltoides	2		7.0%	FAC	Column Totals: 93 (A) 229 (B)
6.	0		0.0%		Prevalence Index = B/A =2.462_
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
_Herb Stratum_ (Plot size: _5' r)		= Tc	otal Cover	-	of height.
1. Woodwardia areolata	30	<b>✓</b>	75.0%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Parathelypteris noveboracensis	10	✓	25.0%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3	0		0.0%		regardless of size, and all other plants less than 3.28 ft tall.
4			0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		0.0%		
6.			0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	40	— – Та	0.0% otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )		_			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1. Toxicodendron radicans	5	<b>✓</b>	100.0%	FAC	species, except woody vines, less than approximately 3 ft (1 m)
2			0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0		0.0%		-
5			0.0%		Hydrophytic
6		<u>Ц</u>	0.0%		Vegetation Present?  Yes No O
	5	= 10	otal Cove	I	
Remarks: (Include photo numbers here or on a separate sheet					
Hydrophytic vegetation indicator present dominance test > 50%, dom	ninant speci	es ar	e facw ar	nd FAC	

Soil Sampling Point: w-bl-20200602-11

Profile Descri	iption: (Descr	ibe to t	he depth	needed to	documen	it the indic	cator or co	nfirm the a	absence of indicators	5.)			
Depth	N	1atrix			R	edox Feati	ures						
(inches)	Color (mo		%	Color	(moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rem	narks		
0-1	10YR 4	/2	100						Silt Loam				
1-16	10YR 5	/1	90	10YR	4/4	10	С	PL	Sandy Clay Loam	distinct r			
	1011	7 1		- 1011	- 4/4				- Sandy Clay Loan	concentrat	ions		
										'			
				. —						· · · · · · · · · · · · · · · · · · ·			
					-		1						
										,			
				. —						· · · · · · · · · · · · · · · · · · ·			
							_			·			
				-						<del>.</del>			
<sup>1</sup> Type: C=Cond	centration. D=D	Depletion	n. RM=Red	luced Matrix,	CS=Cover	red or Coate	ed Sand Gra	ins <sup>2</sup> Loca	tion: PL=Pore Lining. I	M=Matrix			
Hydric Soil I	ndicators:								Indicators for D	roblematic Hydri	Coile 3.		
Histosol (A				□ Dar	k Surface	(\$7)					2 SOIIS :		
Histic Epip	,					. ,	(S8) (MLRA	1/7 1/0)	2 cm Muck	(A10) (MLRA 147)			
									Coast Prairie Redox (A16)				
Black Histi							MLRA 147, 1	48)	(MLRA 147,				
	Sulfide (A4)					d Matrix (F2	)		Piedmont Fl	Piedmont Floodplain Soils (F19)			
	Layers (A5)			☐ Dep	leted Matr	rix (F3)			(MLRA 136, 147)				
2 cm Muck	< (A10) (LRR N)	)		Red	ox Dark S	urface (F6)			☐ Very Shallow Dark Surface (TF12)				
Depleted I	Below Dark Sur	face (A1	1)	☐ Dep	leted Dark	k Surface (F	7)		Other (Expla	ain in Remarks)			
☐ Thick Darl	k Surface (A12)	)		Red	ox Depres	sions (F8)			Other (Expire	an in itematica)			
	ck Mineral (S1)			☐ Iron	n-Mangane	ese Masses	(F12) (LRR	N,					
MLRA 147	', 148)	(LIXIX IV,		MLF	RA 136)		, , ,						
Sandy Gle	yed Matrix (S4)	)		Um	bric Surfac	ce (F13) (M	LRA 136, 12	(2)					
Sandy Red		,					s (F19) (MLF		18) 3 Indicators of hydrophytic vegetation and				
Stripped N										d hydrology must b			
Stripped iv	natrix (30)			☐ Red	i Parent M	ateriai (FZ i	) (MLRA 12	7, 147)	UIII	ess disturbed or pro	DIETTALIC.		
Restrictive La	ayer (if observ	ved):											
Type:		,											
Depth (inch	206):								Hydric Soil Prese	nt? Yes 💿	No O		
	les)							_					
Remarks:													
								equal to 6	" depth with distinct	redox concentra	tions as pore		
linings. Soils a	are naturally p	problen	natic due	to past stri	p-mining	activities.							

## Upland 028 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission L	ine City/County: Perry	Sampling Date: 02-Jun-20		
Applicant/Owner: AEP	State: OH	Sampling Point: upl-bl-20200602-09		
nvestigator(s): BL, SKM	Section, Township, Range: S 34	T 17N R 15W		
_andform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none):	convex Slope: 10.0 % / 84.3 °		
Subregion (LRR or MLRA): LRR N	 Lat.: 39.83504 Long.: -{	NADOO		
Soil Map Unit Name: GwD - Guernsey-Westmoreland silt	loams, 15 to 25 percent slopes	NWI classification: N/A		
Are climatic/hydrologic conditions on the site typical for th	nis time of year? Yes O No (If no, expla	in in Remarks.)		
Are Vegetation  , Soil  , or Hydrology		mstances" present? Yes • No •		
Are Vegetation , Soil , or Hydrology		n any answers in Remarks.)		
Summary of Findings - Attach site map s	nowing sampling point locations, tr	ransects, important features, etc.		
Hydrophytic Vegetation Present? Yes No •				
Hydric Soil Present? Yes No 💿	Is the Sampled Area	O No ●		
Wetland Hydrology Present? Yes O No 💿	within a Wetland?			
wetland criteria met.  Hydrology				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; check all	<del></del>	ndary Indicators (minimum of two required) urface Soil Cracks (B6)		
		parsely Vegetated Concave Surface (B8)		
	= '	Drainage Patterns (B10)		
Saturation (A3)	ized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)		
		Ory Season Water Table (C2)		
		trayfish Burrows (C8)		
		aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1)		
Iron Deposits (B5)	(Explain in termano)	Geomorphic Position (D2)		
Inundation Visible on Aerial Imagery (B7)		hallow Aquitard (D3)		
Water-Stained Leaves (B9)	_ M	licrotopographic Relief (D4)		
Aquatic Fauna (B13)	F,	AC-neutral Test (D5)		
Field Observations: Surface Water Present?  Yes No De	pth (inches): 0			
	pth (inches):			
Saturation Present?	Wetland Hydrology	Present? Yes O No •		
(Includes capillally Ittilige)	pth (inches):			
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if available:			
Remarks:				
No hydrology indicators present.				
Two rigarology indicators present.				

	Dominant				Sampling Point: upl-bl-20200602-09
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:
1. Liriodendron tulipifera	10	<b>✓</b>	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2.	0		0.0%		
3			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		
5			0.0%		Percent of dominant Species
6.			0.0%		That Are OBL, FACW, or FAC: 40.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.			0.0%		Total % Cover of: Multiply by:
	10	= To	tal Cover		OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15' r					FACW speci es 25 x 2 = 50
1. Prunus serotina		<b>✓</b>	39.5%	FACU	FAC speciles 28 x 3 = 84
2. Acer rubrum		<b>✓</b>	26.3%	FAC	FACU speci es $60 \times 4 = 240$
3. Ulmus rubra			13.2%	FAC	UPL species
4. Rosa multiflora			13.2%	FACU	<u> </u>
5. Liquidambar styraciflua	_ 3		7.9%	FAC	(//) <u></u>
6.			0.0%		Prevalence Index = B/A = <u>3.310</u>
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ц	0.0%		Dominance Test is > 50%
10	0	Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	38	= To	otal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
	0	= To	tal Cover		of height.
	30	<b>✓</b>	48.4%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding
Polystichum acrostichoides	20	<b>▼</b>	32.3%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Equisetum hyemale     Onoclea sensibilis	5		8.1%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
Onlocied sensions     Smilax rotundifolia	- <del>- 5</del> 5	П	8.1%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Panicum virgatum	2	$\bar{\sqcap}$	3.2%	FAC	in height.
6.	0	$\overline{\Box}$	0.0%		
7	0		0.0%		Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0	$\Box$	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0	$\overline{\Box}$	0.0%		3 in. (7.6 cm) DBH.
12	0	$\Box$	0.0%		Shrub stratum – Consists of woody plants, excluding woody
	62	= To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )			100.00/	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1. Smilax rotundifolia	3		100.0%	FAC	species, except woody vines, less than approximately 3 ft (1 m)
2			0.0%		in height.
3			0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5			0.0%		Hydrophytic
6		Ш	0.0%		Vegetation Present? Yes No   No
	3	= T	otal Cove	r	Trosont:
Remarks: (Include photo numbers here or on a separate she	et.)				
No hydrophytic vegetation indicators present, dominant species are	FACW, FAC a	and F	ACU.		

Upland 028

Soil

Sampling Point: upl-bl-20200602-09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth <u>Matrix</u>	Redox Features						
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture Remarks					
<b>0-4</b> 10YR 4/3 100		Sandy Loam					
<b>4-16</b> 10YR 6/6 100		Sandy Clay Loam					
		`					
		·					
<sup>1</sup> Type: C=Concentration. D=Depletion. RM=Red	uced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup> Locat	ion: PL=Pore Lining, M=Matrix					
Hydric Soil Indicators:							
Histosol (A1)	Dark Surface (S7)	Indicators for Problematic Hydric Soils <sup>3</sup> :					
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)					
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16)					
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	(MLRA 147,148)					
Stratified Layers (A5)	Depleted Matrix (F2)	Piedmont Floodplain Soils (F19)					
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	(MLRA 136, 147)					
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)					
☐ Thick Dark Surface (A12)	Redox Depressions (F8)						
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)						
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	3					
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,					
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.					
Restrictive Layer (if observed):							
Type:	-	Hydric Soil Present? Yes ○ No •					
Depth (inches):		, , , , , , , , , , , , , , , , , , , ,					
Remarks:							
No hydric soil indicators present.							

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 028

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Date: June 2, 2020

	ile-North Newark 138 kV Transmission Lin	e Rebuild Project	<b>Date:</b> June 2, 2020
Wetland: v	v-bl-20200602-11		Rater: BL, SM
1 1	Metric 1. Wetland Area (size). (max	õ pts)	
Subtotal Points	Select one size class and assign score.		
	>50 acres (>20.2ha) (6 pts)	(F ====)	
	25 to <50 acres (10.1 to <20.2ha)		
	10 to <25 acres (4 to <10.1ha) (4 p	·	
	3 to <10 acres (1.2 to <4ha) (3 pts)		
	0.3 to <3 acres (0.12 to <1.2ha) (2 x 0.1 to <0.3 acres (0.04 to <0.12ha)		
	<0.1 acres (0.04 to <0.121a)	) (1 pt)	
	10.1 doles (0.041d) (0 pts)		
13 12	Metric 2. Upland buffers and surrou	nding land use. (ma	ax 14 pts)
Subtotal Points	2a. Calculate average buffer width (select one, o	lo not double check)	• •
	x WIDE. Buffers average 50m (164)	ft) or more around wetland	d perimeter (7)
	MEDIUM. Buffers average 25m to	<50m (82 to <164ft) aroเ	und wetland perimeter (4)
	NARROW. Buffers average 10m	to <25m (32ft to <82ft) are	ound wetland perimeter (1)
	VERY NARROW. Buffers average	<10m (<32ft) around we	tland perimeter (0)
	2b. Intensity of surrounding land use (select one		
	VERY LOW. 2nd growth or older f	•	
	x LOW. Old field (>10 years), shrub		
			onservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pas	ture, row cropping, mining	g, construction. (1)
27 14	Metric 3. Hydrology. (max 30 pts)		
Subtotal Points	3a. Sources of Water. Score all that apply.	3h	Connectivity. Score all that apply.
Subtotal 1 ollits	High pH groundwater (5)	<i>3b.</i> (	100 year floodplain (1)
	x Other groundwater (3)		Between stream/lake and other human use (1)
	x Precipitation (1)		x Part of wetland/upland (e.g. forest), complex (1)
	Seasonal/Intermittent surface water	er (3)	Part of riparian or upland corridor (1)
	Perennial surface water (lake or str	` '	
			Duration inundation/saturation.
	3c. Maximum water depth. Select only 1.		(select one or double check & average)
	>0.7 (27.6in) (3)		Semi- to permanently inundated/saturated (4)
	0.4 to 0.7m (15.7 to 27.6in) (2)		Regularly inundated/saturated (3)
	x <0.4m (<15.7in) (1)		Seasonally inundated (2)
			x Seasonally saturated in upper 30cm (12in) (1)
	3e. Modifications to natural hydrologic regime.		Check all disturbances observed
	(select one or double check & average)		ditch point source (nonstormwater)
	None or none apparent (12)		
	x Recovered (7)		_ 3,3 + 3
	Recovering (3)  Recent or no recovery (1)		
	Recent of no recovery (1)	1=	stormwater input  other- list
			other-list
35 8	Metric 4. Habitat Alteration and Dev	elopment. (max 20	pts.) Other - Strip Mining
Subtotal Points	4a. Substrate disturbance. Score one or double	e check and average.	, ,
	None or none apparent (4)	-	
	x Recovered (3)	4c.	Habitat alteration. Score one or double check and average.
	Recovering (2)		None or none apparent (9)
	Recent or no recovery (1)		Recovered (6)
			x Recovering (3)
	4b. Habitat development. Select one.		Recent or no recovery (1)
	Excellent (7)	Observation 11 11 11 11	
	Very good (6)	Check all disturband	_
	<del></del>	mowing	shrub/sapling removal
		grazing	herbaceous/aquatic bed removal
		clearcutting	sedimentation
		selective cutting	dredging
		woody debris removal	farming
		toxic pollutants	nutrient emrichment

Cito: Crookavilla North November	138 kV Transmission Line Rebuil	Data:	luno 2, 2020		
	130 KV Transmission Line Rebuil		June 2, 2020		
<b>Wetland:</b> w-bl-20200602-11		Rater:	BL, SM		
35 subtotal first page					
	ecial Wetlands. (max 10 pts.)				
Subtotal Points <u>Check all that ap</u>	ply and score as indicated				
	Bog (10 pts)				
	Fen (10 pts) Old Growth Forest (10 pts)				
	Mature forested wetland (5 pts)				
	Lake Erie coastal/tributary wetland-unre	stricted hydrol	ogy (10 pts)		
	Lake Erie coastal/tributary wetland-restr	•			
	Lake Plain Sand Prairies (Oak Openings	s) (10 pts)			
	Relict Wet Prairies (10 pts)				
	Known occurrence state/federal threater				
	Significant migatory songbird/waterfowl				
	Category 1 Wetland. See Question 1 of	Qualitative Ra	aung. (-10 pts)		
40 5 Metric 6. Pla	ant Communities, interspersion	, microtop	ography. (max 20 pts.)		
	getation Communities				
· · · · · · · · · · · · · · · · · · ·	using 0 to 3 scale	Vegetatio	n Community Cover Scale		
0	Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area		
0	Emergent		, , , , , ,		
1	Shrub	4	Present and either comprises small part of wetland's vegetation and is		
0	Forest Mudflats	1	of moderate quality, or comprises a significant part but is of low quality		
0	Open water		Present and either comprises significant part of wetlendle ver-t-ti		
0	Other (list)	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high		
	] ()	_	quality		
6b. Horizontal (p	olan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation		
Select only one	<b>7</b>		and is of high quality		
	High (5)	Marrativa	Description of Vocatation Quality		
	Moderately high (4) Moderate (3)	ivaliative	Description of Vegetation Quality		
	Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species		
	Low (1)		Native spp are dominant component of the vegetation, although		
x 6c. Coverage of		moderate	nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp		
Refer to Table 1	Refer to Table 1 ORAM long form for list. Add or deduct points for coverage		A predominance of native species, with nonnative spp and/or		
Add or deduct po			disturbance tolerant native spp absent or virtually absent, and high sp		
	Extensive >75 % cover (-5)	high	diversity and often, but not always, the presence of rare, threatened, or endangered spp		
	Moderate 25-75% cover (-3)		ondangorod opp		
	Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality		
x	Absent (1)	0	Absent <0.1 ha (0.2471 acres)		
	](.)	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)		
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)		
6d. Microtopogra	<u>aphy</u>	3	High 4 ha (9.88 acres) or more		
·	tusing 0 to 3 scale				
1	Vegetated hummocks/tussocks		ography Cover Scale		
1	Coarse woody debris >15 cm (6")	0	Absent		
1	Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality		
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality		
		3	Present in moderate or greater amounts and of highest quality		



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 028

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing North



### Wetland 028

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 028

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing South



### Wetland 028

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 028

Date:

June 3, 2020

**Description:** 

PFO wetland

Category 2

Soil Pit



#### Wetland 029

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

THE TOTAL TOTAL TRANSPORTER TO THE TOTAL TRANSPORTER TO THE TANSPORTER TOTAL TRANSPORTER TO THE TANSPORTER TOTAL TRANSPORTER TO THE TANSPORTER TO THE TOTAL TO THE TOTAL THE T	Sampling Date. 02-30	in-20
	State: OH Sampling Point: W-bl-20.	200602-09
	Section, Township, Range: S 34 T 17N R 15W	
etc.): Terrace	Local relief (concave, convex, none): concave Slope: 2.0	% / 63.4 °
LRR N Lat.:	: 39.83518 Long.: -82.17765 Datum:	NAD83
Guernsey-Westmoreland silt loams, 15	to 25 percent slopes NWI classification: N/A	
itions on the site typical for this time of <code>\</code>	year? Yes  No (If no, explain in Remarks.)	
		No O
, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)	
	sampling point locations, transects, important feat	ures, etc.
sent? Yes No O		
	Is the Sampled Area  Yes No O	
? Yes ● No O	within a wetland?	
		on oxide in
m of one required; check all that apply)  True Aquatic Plan  Hydrogen Sulfide  Oxidized Rhizosph  Presence of Redu  Recent Iron Redu  Thin Muck Surface	Drainage Patterns (B10)  heres along Living Roots (C3)  □ Moss Trim Lines (B16)  □ Liced Iron (C4)  □ Dry Season Water Table (C2)  □ Crayfish Burrows (C8)  □ Saturation Visible on Aerial Imagery (C9)	)
Yes  No  Depth (inches):	1	
Yes  No Depth (inches):	0	
, , ,	Wetland Hydrology Present? Yes ● No ○	
iron-oxide deposits visible on surface. We	ry source of hydrology is inflow from intermittent stream s-bl-20200602-0 etland drains to southeast by intermittent stream s-bl-20200602-07 that at drains north to Jonathan Creek that drains east to Moxahala Creek tha	drains
i i i i i i i i i i i i i i i i i i i	Etc.): Terrace  LRR N	Section, Township, Range: S 34 T 17N R 15W  etc.): Terrace

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

			ominant ecies? -		Sampling Point: w-bl-20200602-09
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1. Acer rubrum	10	<b>✓</b>	100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC:5(A)
2	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		(-)
5.			0.0%		Percent of dominant Species That Are ORL FACW or FAC: 100.0% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
(Plot size: 15'r	10	= To	otal Cover		0BL speci es <u>15</u> x 1 = <u>15</u>
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	10	<b>✓</b>	24 20/	EAC	FACW speci es 108 x 2 = 216
1. Acer rubrum	10	<ul><li>✓</li></ul>	26.3%	FAC	FAC speci es <u>33</u> x 3 = <u>99</u>
2. Liquidambar styraciflua	10		26.3%	FACW	FACU speci es 0 x 4 = 0
3. Hypericum canadense	5		13.2%	FACW	UPL speci es x 5 =
4. Acer saccharinum	2		7.9%	FAC	Column Totals:156_ (A)330_ (B)
5. Viburnum lentago		$\Box$	0.0%	170	
6		$\Box$	0.0%		Prevalence Index = B/A = 2.115
7		$\Box$	0.0%		Hydrophytic Vegetation Indicators:
8		$\Box$	0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10			tal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)  1			0.0%		<ul> <li>Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover		of height.
1. Equisetum hyemale	60	<b>✓</b>	55.6%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Onoclea sensibilis	20		18.5%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Persicaria sagittata	10		9.3%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Eutrochium maculatum	8		7.4%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Juncus effusus	5		4.6%	FACW	in height.
6. Carex frankii	5		4.6%	OBL	Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15'r )	108	= Tc	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2.	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Lludraphytia
6.	0		0.0%		Hydrophytic Vegetation
	0	= To	otal Cove	-	Present? Yes No O
December 11 to 1					I

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

Hydrophytic vegetation indicators present as dominance test > 50%, dominant species are FACW and FAC. Sphagnum spp. covers 15% of herb stratum, not used in dominance calculations (non-vascular plant).

Soil Sampling Point: w-bl-20200602-09

Profile Descr	iption: (Describe to	the depth r	eeded to document the indicator or o	confirm the a	bsence of indicators.)	
Depth	Matrix		Redox Features	1		
(inches)	Color (moist)	%	Color (moist) % Tvpe	Loc <sup>2</sup> _	Texture	Remarks
0-3	7.5YR 4/3	100			Sandy Loam	
3-12	2.5Y 4/3	100			Sandy Clay Loam	
	$-\!-\!-\!-\!-$					
<sup>1</sup> Type: C=Cond	centration. D=Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand G	Grains 2Locat	tion: PL=Pore Lining. M=Ma	ntrix
Hydric Soil I	·					
Histosol (			☐ Dark Surface (S7)		Indicators for Proble	
l — '	pedon (A2)		Polyvalue Below Surface (S8) (MLF	οΛ 1 <i>4</i> 7 1 <i>4</i> 0\	2 cm Muck (A10)	(MLRA 147)
Black Hist			Thin Dark Surface (S9) (MLRA 147		Coast Prairie Redo	ox (A16)
✓ Hydrogen				, 148)	(MLRA 147,148)	
	Layers (A5)		Loamy Gleyed Matrix (F2)		Piedmont Floodpl	ain Soils (F19)
	k (A10) (LRR N)		Depleted Matrix (F3)		(MLRA 136, 147)	
			Redox Dark Surface (F6)		Very Shallow Darl	
	Below Dark Surface (A	11)	Depleted Dark Surface (F7)		✓ Other (Explain in	Remarks)
	k Surface (A12)		Redox Depressions (F8)	D.N.		
☐ Sandy Mu MLRA 147	ck Mineral (S1) (LRR N 7. 148)	I,	☐ Iron-Manganese Masses (F12) (LR MLRA 136)	K IV,		
	eyed Matrix (S4)		Umbric Surface (F13) (MLRA 136,	122)		
Sandy Red			Piedmont Floodplain Soils (F19) (N		<sup>3</sup> Indicators of	hydrophytic vegetation and
	Matrix (S6)		Red Parent Material (F21) (MLRA			Irology must be present, sturbed or problematic.
запрреат	victi ix (50)		Treat arent material (121) (MEICA	127, 147)	I I	starbed of problematic.
Restrictive La	ayer (if observed):					
Type:						
Depth (incl	hes):				Hydric Soil Present?	Yes ● No O
Remarks:						
naturally prob	olematic soils prev	ious strip m	ining excavation activity, soils satura	ated at surface	ce with iron-oxide depos	its present. Sample point meets
			nd hydrology with problematic soils			property of the property of th

Upland 029 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OF	Sampling Point: upl-bl-20200602-10
Investigator(s): BL, SKM	Section, Township, Range: S	34 T 17N R 15W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, r	none): convex Slope: <u>15.0</u> % / <u>86.2</u> °
Subregion (LRR or MLRA): LRR N Lat.:	39.83511 Lor	ng.: _82.17821
Soil Map Unit Name: Bethesda-Pits, surface mine complex, 25 to 70	percent slopes, unreclaimed	NWI classification: N/A
Are Vegetation ☐ , Soil ✓ , or Hydrology ☐ naturally	tly disturbed? Are "Normal problematic? (If needed,	explain in Remarks.)  Circumstances" present? Yes   No   explain any answers in Remarks.)
Summary of Findings - Attach site map showing :  Hydrophytic Vegetation Present? Yes No   No		is, transects, important reatures, etc.
y	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Yes No Semarks:		
Point out (Upland 029) to wetland 030, located about 15 feet east unreclaimed. Not a wetland point, hydrophytic vegetation and hydr Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Water Marks (B1) Presence of Redu	Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6)	Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Aquatic Fauna (B13)	Remarks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-neutral Test (D5)
Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial phot	Wetland Hydr	rology Present? Yes O No •
Remarks:  No hydrology indicators present.		

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

			minant		Sampling Point: upl-bl-20200602-10
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Carya cordiformis	20	<b>✓</b>	40.0%	FACU	That are OBL, FACW, or FAC: 2 (A)
2. Acer saccharum	20	<b>✓</b>	40.0%	FACU	Tatal Number of Descious
3. Fagus grandifolia	10	✓	20.0%	FACU	Total Number of Dominant Species Across All Strata: 8 (B)
4	0		0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 25.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 25.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
	50	= Tc	tal Cover	-	0BL speci es
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	15	<b>✓</b>	20 50/	EACH	FACW species 10 x 2 = 20
1. Fraxinus americana	10	<b>▼</b>	39.5%	FACU	FAC speciles 10 x 3 = 30
2. Lindera benzoin			26.3%	FACU	FACU speci es 86 x 4 = 344
3. Acer saccharum			26.3%	_	UPL species $0 \times 5 = 0$
4. Carya glabra			7.9%	FACU	Col umn Total s: 106 (A) 394 (B)
5			0.0%		100 ann 10 tal 01 100 100 100 100 100 100 100 100 100
6			0.0%		Prevalence Index = B/A = 3.717
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		☐ Dominance Test is > 50%
10		Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	38	= Tc	tal Cover	-	☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover	-	of height.
Boehmeria cylindrica	10	<b>✓</b>	55.6%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Rubus allegheniensis			27.8%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Quercus alba	3		16.7%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4	0		0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
5	0		0.0%		in height.
6.	0		0.0%		Fire Westerland Charles
7.	0		0.0%		Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	18	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )  1.	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	Ш	0.0%		height.
5	0		0.0%		Hydrophytic
6.	0		0.0%		Vegetation
	0	= To	otal Cove	r	Present? Yes V No •
Remarks: (Include photo numbers here or on a separate she	et.)				
No hydrophytic vegetation indicators present, dominant species are	FACW, FAC	and F	ACU.		

Upland 029

Soil

Sampling Point:

upl-bl-20200602-10

Dark Surface ( Polyvalue Belov Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	ed or Coated Sand Grains  (S7)  w Surface (S8) (MLRA 147, 148)  Matrix (F2)  ix (F3)  urface (F6)  Surface (F7)	Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)    3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
10YR 5/4    Thin Dark Surface (   Polyvalue Below   Thin Dark Surface     Depleted Matrix     Redox Dark Surface     Depleted Dark     Redox Depress     Iron-Manganes     MLRA 136)     Umbric Surface     Piedmont Floor	ed or Coated Sand Grains  (S7)  W Surface (S8) (MLRA 147, 148)  Matrix (F2)  ix (F3)  urface (F6)  Surface (F7)  sions (F8)  se Masses (F12) (LRR N, e (F13) (MLRA 136, 122)  odplain Soils (F19) (MLRA 14	As and Sandy Clay Loam  **PL=Pore Lining. M=Matrix**  **Indicators for Problematic Hydric Soils 3:  **Description of the problematic Hydric Soils 4:  **Description of the problematic Hydric Soils 5:  **Description of the problematic Hydric Soils 5:  **Description of the problematic Hydric Soils 5:  **Description of the problematic Hydric Soils 6:  **Description of the problematic Hydric Hydric Soils 6:  **Description of the problematic Hydric Hyd
Dark Surface ( Polyvalue Belov Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	ed or Coated Sand Grains  (S7)  W Surface (S8) (MLRA 147, 148)  Matrix (F2)  ix (F3)  urface (F6)  Surface (F7)  sions (F8)  se Masses (F12) (LRR N, e (F13) (MLRA 136, 122)  odplain Soils (F19) (MLRA 14	2Location: PL=Pore Lining. M=Matrix  Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)   3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Dark Surface ( Polyvalue Belov Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	(S7)  ow Surface (S8) (MLRA 147, 148)  Matrix (F2)  ix (F3)  urface (F6)  Surface (F7)  sions (F8)  se Masses (F12) (LRR N, e (F13) (MLRA 136, 122)  odplain Soils (F19) (MLRA 14	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)
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Dark Surface ( Polyvalue Belov Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	(S7)  ow Surface (S8) (MLRA 147, 148)  Matrix (F2)  ix (F3)  urface (F6)  Surface (F7)  sions (F8)  se Masses (F12) (LRR N, e (F13) (MLRA 136, 122)  odplain Soils (F19) (MLRA 14	Indicators for Problematic Hydric Soils <sup>3</sup> :  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)
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Polyvalue Beloo Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	ow Surface (S8) (MLRA 147, 148)  Matrix (F2) ix (F3)  Jurface (F6) Surface (F7) Sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122)  Sudplain Soils (F19) (MLRA 14	.148)  2 cm Muck (A10) (MLRA 147)  Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Polyvalue Beloo Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	ow Surface (S8) (MLRA 147, 148)  Matrix (F2) ix (F3)  Jurface (F6) Surface (F7) Sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122)  Sudplain Soils (F19) (MLRA 14	Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)   3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Thin Dark Surfa Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	Face (S9) (MLRA 147, 148) Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122) odplain Soils (F19) (MLRA 14	Coast Prairie Redox (A16) (MLRA 147,148)  Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)    3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface	Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122) odplain Soils (F19) (MLRA 14	Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)   3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Depleted Matri Redox Dark Su Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface Piedmont Floor	ix (F3) urface (F6) urface (F7) sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122) odplain Soils (F19) (MLRA 14	(MLRA 136, 147)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)
Depleted Dark Redox Depress Iron-Manganes MLRA 136) Umbric Surface Piedmont Floor	Surface (F7) sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122) odplain Soils (F19) (MLRA 14	Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Redox Depress Iron-Manganes MLRA 136) Umbric Surface Piedmont Floor	sions (F8) se Masses (F12) (LRR N, e (F13) (MLRA 136, 122) adplain Soils (F19) (MLRA 14	Other (Explain in Remarks)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
☐ Iron-Manganes MLRA 136) ☐ Umbric Surface ☐ Piedmont Floor	se Masses (F12) (LRR N, e (F13) (MLRA 136, 122) odplain Soils (F19) (MLRA 14	48) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
MLRA 136)  Umbric Surface  Piedmont Floor	e (F13) (MLRA 136, 122) odplain Soils (F19) (MLRA 14	wetland hydrology must be present,
Piedmont Floor	odplain Soils (F19) (MLRA 14	wetland hydrology must be present,
		wetland hydrology must be present,
Red Parent Ma	aterial (F21) (MLRA 127, 14	
		Hydric Soil Present? Yes No
chroma laver starting less	s than 6" denth does not	ot contain redox concentrations as soft masses or pore lin
chiloma layer starting less	Than o dopin does not	A contain react consentrations as sort masses or perc in

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 029

Site: Crook	sville-North Newark 138 kV Transmission Line Rebuild Pro	oject <b>D</b> a	<b>ate:</b> June 2, 2020					
Vetland:	w-bl-20200602-09	R	ater: BL, SM					
2 2	Metric 1. Wetland Area (size). (max 6 pts)							
ubtotal Points	<del></del>							
	>50 acres (>20.2ha) (6 pts)							
	25 to <50 acres (10.1 to <20.2ha) (5 pts)							
	10 to <25 acres (4 to <10.1ha) (4 pts)							
	3 to <10 acres (1.2 to <4ha) (3 pts)							
	x 0.3 to <3 acres (0.12 to <1.2ha) (2pts)							
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)							
	-0.1 acres (0.04πa) (0 μts)							
14 12	Metric 2. Upland buffers and surrounding land us	se (max 1	14 nts)					
ıbtotal Points	<b>-</b>	•						
blotal I office	x WIDE. Buffers average 50m (164ft) or more aroun		erimeter (7)					
	MEDIUM. Buffers average 25m to <50m (82 to <16	•	* *					
	NARROW. Buffers average 10m to <25m (32ft to	-						
	VERY NARROW. Buffers average <10m (<32ft) ar	-						
	2b. Intensity of surrounding land use (select one or double check	( & average)	_					
	VERY LOW. 2nd growth or older forest, prairie, sav	vannah, wild	life area, etc. (7)					
	x LOW. Old field (>10 years), shrubland, young seco							
	MODERATELY HIGH. Residential, fenced pasture	, park, conse	ervation tillage, new fallow field. (3)					
	HIGH. Urban, industrial, open pasture, row croppin	ng, mining, co	onstruction. (1)					
14	Matria O Hardrala var (mara 00 mta)							
34 20	Metric 3. Hydrology. (max 30 pts)							
ubtotal Points		3b. Con	nnectivity. Score all that apply.					
	High pH groundwater (5)		100 year floodplain (1)					
	x Other groundwater (3)		Between stream/lake and other human use (1)					
	x Precipitation (1)	×						
	x Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)	х	Part of riparian or upland corridor (1)					
	r erennial surface water (lake of stream) (3)	3d Dur	ration inundation/saturation.					
	3c. Maximum water depth. Select only 1.		elect one or double check & average)					
	>0.7 (27.6in) (3)	(30	Semi- to permanently inundated/saturated (4)					
	0.4 to 0.7m (15.7 to 27.6in) (2)	×						
	x <0.4m (<15.7in) (1)		Seasonally inundated (2)					
	X 30.1111 (110.1111) (1)		Seasonally saturated in upper 30cm (12in) (1)					
	3e. Modifications to natural hydrologic regime.							
	(select one or double check & average)		eck all disturbances observed					
	None or none apparent (12)	ditch						
	x Recovered (7)	dike	_ 3.3 - 3					
	Recovering (3)	☐ tile	road bed/RR track					
	Recent or no recovery (1)	☐ weir						
		storr	mwater input					
	_							
l8 <u>14</u>	Metric 4. Habitat Alteration and Development. (r	max 20 pt	<b>S.)</b> Other - Strip Mining					
ototal Points		rage.						
	None or none apparent (4)							
	x Recovered (3)	4c. Hai	bitat alteration. Score one or double check and average.					
	Recovering (2)		None or none apparent (9)					
	Recent or no recovery (1)	Х	<b>→</b> ``′					
	the United decides of 2 to 1	<u> </u>	Recovering (3)					
	4b. Habitat development. Select one.		Recent or no recovery (1)					
	Excellent (7)  Very good (6)  Check all dis	turbanasa	s observed					
	Vol.y good (0)	งเนเมสเเตยร	_					
	x Good (5)		shrub/sapling removal					
	Moderately good (4)		herbaceous/aquatic bed removal					
	Fair (3)		sedimentation					
	Poor to fair (2) selective cutting	0	dredging					
	Poor (1) woody debris		☐ farming					
	☐ toxic pollutant	İS	nutrient emrichment					

Site: Crooksville-North Newark 138 kV Transmission Line Rebuil	Date:	June 2, 2020
Wetland: w-bl-20200602-09	Rater:	BL, SM
subtotal first page		
48 0 Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points Check all that apply and score as indicated		
Bog (10 pts)		
Fen (10 pts)		
Old Growth Forest (10 pts)		
Mature forested wetland (5 pts)		
Lake Erie coastal/tributary wetland-unres	stricted hydrol	ogy (10 pts)
Lake Erie coastal/tributary wetland-restri	icted hydrolog	y (5 pts)
Lake Plain Sand Prairies (Oak Openings	s) (10 pts)	
Relict Wet Prairies (10 pts)		
Known occurrence state/federal threater	_	
Significant migatory songbird/waterfowl I		
Category 1 Wetland. See Question 1 of	Qualitative Ra	aung. (-10 pts)
59 11 Metric 6. Plant Communities, interspersion	, microton	ography. (max 20 pts.)
Subtotal Points 6a. Wetland Vegetation Communities		
Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale
0 Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
2 Emergent		7 355 TE G. TOTTIPITOGS TO LETTE (0.2-TE) actes/ continguous area
2 Shrub		Present and either comprises small part of wetland's vegetation and is
1 Forest	1	of moderate quality, or comprises a significant part but is of low quality
0 Mudflats		
0 Open water	2	Present and either comprises significant part of wetland's vegetation
Other (list)	2	and is of moderate quality or comprises a small part and is of high quality
6b. Horizontal (plan view) interspersion		Present and comprises significant part, or more, of wetland's vegetation
Select only one	3	and is of high quality
High (5)	N1	Book to the control of the
Moderately high (4)	Narrative	Description of Vegetation Quality
Moderate (3)	low	Low spp diversity and/or predominance of nonnative or disturbance
Moderately low (2)	-	tolerant native species
x Low (1) None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,
Hone (v)	moderate	and species diversity moderate to moderately high, but generally w/o
6c. Coverage of invasive plants.		presence of rare threatened or endangered spp
Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or
Add or deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp
Extensive >75 % cover (-5)	9.1	diversity and often, but not always, the presence of rare, threatened, or
Moderate 25-75% cover (-3)		endangered spp
Sparse 5-25% cover (-1)	Mudflat a	nd Open Water Class Quality
Nearly Absent <5% cover (0)  x Absent (1)	0	Absent <0.1 ha (0.2471 acres)
ADSCIR(1)	1	Low 0.1 ha to <1 ha (0.2471 acres)
	2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
6d. Microtopography	3	High 4 ha (9.88 acres) or more
Score all present using 0 to 3 scale		
1 Vegetated hummocks/tussocks	Microtopo	ography Cover Scale
2 Coarse woody debris >15 cm (6")	0	Absent
0 Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
	2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
	3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 029

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing North



### Wetland 029

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 029

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing South



### Wetland 029

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing West





### PHOTOGRAPHIC RECORD

**WETLANDS** 

**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 029

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit



#### Wetland 030

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

Project/Site: Crooksville-North Newark 138 kV Transm	ilssion Line City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: (	OH Sampling Point: W-bI-20200602-10
Investigator(s): BL, SKM	Section, Township, Range:	S 34 T 17N R 15W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex,	, none): concave Slope: 1.0 % / 45.0 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.83512 Lo	ong.: -82.17826 Datum: NAD83
Soil Map Unit Name: Bethesda-Pits, surface mine	complex, 25 to 70 percent slopes, unreclaimed	NWI classification: N/A
Are climatic/hydrologic conditions on the site typica	al for this time of year? Yes No (If r	no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology		nal Circumstances" present? Yes  No  No
Are Vegetation ✓ , Soil ✓ , or Hydrology		•
Are vegetation , soil , or hydrology	Triaturany problematic? (IT needed	d, explain any answers in Remarks.)
Summary of Findings - Attach site m	ap showing sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No		
Hydric Soil Present? Yes   No	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present? Yes   No	within a Wetland?	res C NO C
Remarks:		
Sample point in for PFO wetland 030. Wetland is	located in blocked channel of intermittent strear	m 036 (s-bl-20200602-06) in wooded area.
		etation present- not a pond. Wetland located in prior
strip-mine area = problematic soils. Wetland is or intermittent stream 035 (s-bl-20200602-07).	pen ended to south and drains to north to interm	nittent stream 036 (s-bl-20200602-06) to
Intermittent stream 033 (3-bi-20200002-07).		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; che	eck all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1)	True Aquatic Plants (B14)	✓ Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)
	Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	☐ Dry Season Water Table (C2)
Sediment Deposits (B2)  ✓ Drift deposits (B3)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
	Thin Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1)
Iron Deposits (B5)	✓ Other (Explain in Remarks)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
<b>✓</b> Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes   No   No	Depth (inches): 3	
Water Table Present? Yes ● No ○	Depth (inches): 6	rdrology Present? Yes ● No ○
Saturation Present? (includes capillary fringe)  Yes  No	Depth (inches): 0	diology Fresent: Tes C No C
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous inspections), if ava	ailable:
Remarks:		
hydrology naturally problematic due to stream cha	nnel blockage by woody debris, may be periodic	in nature.

			ominant		Sampling Point: w-bl-20200602-10
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Ulmus americana	20	<b>✓</b>	60.6%	FACW	That are OBL, FACW, or FAC:3 (A)
2. Carya glabra	10	<b>✓</b>	30.3%	FACU	
3. Fagus grandifolia			9.1%	FACU	Total Number of Dominant Species Across All Strata: 4 (B)
4			0.0%		(=)
5.			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 75.0% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC:
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
(Diet size), 451 a	33	= To	tal Cover		0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	00	<b>✓</b>	E7.40/	E 4 0) 4 /	FACW species 40 x 2 = 80
1. Fraxinus pennsylvanica				FACW	FAC speci es 10 x 3 = 30
2. Lindera benzoin	10	✓.	28.6%	FAC	FACU speci es 18 x 4 = 72
3. Carya qlabra			14.3%	FACU	UPL species $0 \times 5 = 0$
4			0.0%		Col umn Total s:68 (A)182 (B)
5			0.0%		Total of South
6		Η.	0.0%		Prevalence Index = B/A = <u>2.676</u>
7		Η.	0.0%		Hydrophytic Vegetation Indicators:
8		Η.	0.0%		Rapid Test for Hydrophytic Vegetation
9		$\square$	0.0%		✓ Dominance Test is > 50%
10	0	Ш.	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	35	= Tc	tal Cover		☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2			0.0%		☐ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover		of height.
1.	0		0.0%		Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2.			0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants,
3	0		0.0%		regardless of size, and all other plants less than 3.28 ft tall.
4	0		0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
5	0		0.0%		in height.
6.	0		0.0%		Five Vegetation Streets
7	0		0.0%		Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
•	0	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	_	$\Box$			species, except woody vines, less than approximately 3 ft (1 m)
2	0 0		0.0%		in height.
3		Η.			Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5	0	Η.	0.0%		Hydrophytic
6	0	Щ.	0.0%		Vegetation Present? Yes No No No
	0	= To	otal Cove	r	11030111

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

Hydrophytic vegetation indicator present dominance test > 50%, dominant species are FACW, FAC and FACU. Vegetation naturally problematic as sparsely vegetated concave surface, vegetation present is limited to edges of wetland on higher elevations.

Soil Sampling Point: w-bl-20200602-10

Type: C-Conventionism. D- Depletion. RM-Reduced Matrix. CS-Covered or Cooked Sand Craim.  14-17 10/18   52   30   10/18   10/	(inches)_		Matrix			Re	edox Featu	ıres				
Type: C-Concentration. D-Depletion. RM-Reduced Matrix. CS-Covered or Coaled Sand Grains **Location: PL-Pore Lining. M-Matrix PHydric Soil Indicators: Hydric Soil Indicators: Histosoi (A1) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Hydric Soil Surface (S7) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F8) MLRA 147, 148) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) MLRA 147, 148) MLRA 147, 148) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) MIRA 147, 148) Simpleted Redow Dark Surface (A11) Depleted Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Gleyed Matrix (S6) Red Parent Material (F21) (MLRA 127, 147)  Restrictive Layer (If observed): Type: Depth (inches): Remarks:  Hydric Soil Present? Yes No			(moist)		Color				Loc²		Rer	marks
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains   2Location: PL=Pore Lining. M=Matrix  +ydric Soil Indicators:	5-14	10YR	4/2	95	10YR	4/6	5	С	PL	Sandy Clay Loam	di sti nct concentra	redox ti ons
Hydric Soil Indicators:  Histosol (A1)  Dark Surface (S7)  Histic Epipedon (A2)  Polyvalue Below Surface (S9) (MLRA 147,148)  Black Histic (A3)  Thin Dark Surface (S9) (MLRA 147, 148)  Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Depleted Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 142)  Sandy Gleyed Matrix (S4)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 136, 122)  Piedmont Floodplain in Remarks)  Tother (Explain in Remarks)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Redemarks:  Redemarks:  Arric Soil Indicator for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydric Soils 3:  Indicators for Problematic Hydrology Mark A147, 148)  Coast Prairie Redox (A16)  (MLRA 147, 148)  Piedmont Floodplain Soils (F19)  (MLRA 136, 147)  Very Shallow Dark Surface (F12)  Very Shallow Dark Surface (F12)  Wery Shallow Dark Surface (F12)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Remarks:  Remarks:  Redox Depleted Matrix (F2)  Indicators for Problematic Hydrology Mark A147, 148)  Indicators for Problematic Hydrology Mark A147, 148  Indicators for Problematic Hydrology Mark A147, 148  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Remarks:	14-17	10YR	5/2	80	10YR	5/6	20	С	М	Sandy Clay Loam		
Hydric Soil Indicators:    Histosol (A1)												
Histosol (A1) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Polyvalue Below Surface (F13) (MLRA 147, 148)  Depleted Below Dark Surface (A12) Sandy Redox Ox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Other (Explain in Remarks)  Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Stripped Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) (MLRA 148) Stripped Matrix (S6)  Bestrictive Layer (if observed): Type: Depth (inches):  Hydric Soil Present? Yes No O	* '		D=Depletion	on. RM=Redu	ced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	ins <sup>2</sup> Loca	tion: PL=Pore Lining. N	1=Matrix	
Histic Epipedon (A2)	<u> </u>				□ Darl	Surface	(\$7)			Indicators for Pr	oblematic Hydri	ic Soils <sup>3</sup> :
Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Matrix (F2)  Depleted Matrix (F3)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Depleted Matrix (S6)  Depleted Dark Surface (F12)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  MLRA 136, 122)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19)  MLRA 136, 122)  Hydric Soil Present? Yes No Cemarks:  Mortic soil indicator present as depleted matrix in sandy soils starting less than or equal to 6" depth with distinct redox concentrations as pore	Histic Epip Black Hist	pedon (A2) ic (A3)			Poly	value Belo	w Surface (			Coast Prairie	Redox (A16)	
Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Piedmont Floodplain Soils (F19) (MLRA 127, 147)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Destrictive Layer (if observed):  Type:  Depth (inches):  Depth (i	Stratified	Layers (A5)			Dep	leted Matr	ix (F3)	)		Piedmont Flo (MLRA 136,	odplain Soils (F19) 147)	
Thick Dark Surface (A12)  Sandy Muck Mineral (S1) (LRR N, MLRA 136)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Estrictive Layer (if observed):  Type:  Depth (inches):  Depth (inches):  Detail Thick Dark Surface (A12)  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Umbric Surface (F13) (MLRA 136, 122)  Piedmont Floodplain Soils (F19) (MLRA 148)  Red Parent Material (F21) (MLRA 127, 147)  Bestrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No O  Redox Depressions (F8)  Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No O	_			111)			, ,	7)				
MLRA 147, 148)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Piedmont Floodplain Soils (F19) (MLRA 148)  Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Pestrictive Layer (if observed):  Type:  Depth (inches):  Type:  Depth (inches):  Depth (inches):  dric soil indicator present as depleted matrix in sandy soils starting less than or equal to 6" depth with distinct redox concentrations as pore	_			(11)	Red	ox Depres	sions (F8)					
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6)  Red Parent Material (F21) (MLRA 127, 147)  Pestrictive Layer (if observed):  Type: Depth (inches):  epth (inches):  Type: Depth (inches): Depth			S1) (LRR N	٧,			se Masses (	(F12) (LRR I	٧,			
Sandy Redox (S5)	_	,	(S4)		_	,	e (F13) (ML	RA 136, 12	2)	2		
Type:	Sandy Red	dox (S5)								wetland hydrology must be present,		
Type:	estrictive La	ayer (if obs	served):									
Remarks:  ydric soil indicator present as depleted matrix in sandy soils starting less than or equal to 6" depth with distinct redox concentrations as pore												
ydric soil indicator present as depleted matrix in sandy soils starting less than or equal to 6" depth with distinct redox concentrations as pore	Depth (inch	nes):								Hydric Soil Presen	it? Yes $lacksquare$	No O
	dric soil inc	dicator pre are natural	sent as d ly proble	lepleted ma matic due t	trix in sand o past stri	dy soils s o-mining	tarting les activities,	s than or our or our or our or our our our our	equal to 6 led.	" depth with distinct	redox concentra	ations as pore

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 030

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Date: June 2, 2020

	sville-North Newark 138 kV Transmission Line	Rebuild Project	<b>Date:</b> June 2, 2020
Wetland:	w-bl-20200602-10		Rater: BL, SM
0 0	Metric 1. Wetland Area (size). (max 6	pts)	
Subtotal Points	Select one size class and assign score.		
	>50 acres (>20.2ha) (6 pts)		
	25 to <50 acres (10.1 to <20.2ha) (5	pts)	
	10 to <25 acres (4 to <10.1ha) (4 pts		
	3 to <10 acres (1.2 to <4ha) (3 pts)	,	
	0.3 to <3 acres (0.12 to <1.2ha) (2pts	s)	
	0.1 to <0.3 acres (0.04 to <0.12ha) (	•	
	x <0.1 acres (0.04ha) (0 pts)		
12 12	Metric 2. Upland buffers and surround	ling land use. (ma	ax 14 pts)
Subtotal Points	2a. Calculate average buffer width (select one, do		
	x WIDE. Buffers average 50m (164ft)		d perimeter (7)
	MEDIUM. Buffers average 25m to <		
	NARROW. Buffers average 10m to		
	VERY NARROW. Buffers average <	-	
	2b. Intensity of surrounding land use (select one o.	r double check & avera	(ne)
	VERY LOW. 2nd growth or older for		
	x LOW. Old field (>10 years), shrublar		
			onservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pastu		
29 17	Metric 3. Hydrology. (max 30 pts)		
Subtotal Points	3a. Sources of Water. Score all that apply.	26	Connectivity. Score all that apply.
Sublotal Politis	High pH groundwater (5)	30.	100 year floodplain (1)
			Between stream/lake and other human use (1)
	x Precipitation (1) Seasonal/Intermittent surface water (	.3)	x Part of wetland/upland (e.g. forest), complex (1) x Part of riparian or upland corridor (1)
	Perennial surface water (lake or stream	,	T art of fipariant of uplantic confident (1)
	1 cremmar surface water (lake or such		Duration inundation/saturation.
	3c. Maximum water depth. Select only 1.	ou.	(select one or double check & average)
	>0.7 (27.6in) (3)		Semi- to permanently inundated/saturated (4)
	0.4 to 0.7m (15.7 to 27.6in) (2)		x Regularly inundated/saturated (3)
	x <0.4m (<15.7in) (1)		Seasonally inundated (2)
	X 30.4III (\$10.7III)(1)		Seasonally saturated in upper 30cm (12in) (1)
	3e. Modifications to natural hydrologic regime.		No all district and a second
	(select one or double check & average)		Check all disturbances observed ditch  point source (nonstormwater)
	None or none apparent (12)	1=	Ξ' ' Ι
	x Recovered (7)		_ 3/3/4/3
	Recovering (3)	□t	
	Recent or no recovery (1)		_ 3 3
			stormwater input  other- list
39 10	Metric 4. Habitat Alteration and Devel	opment. (max 20	pts.) Other - Strip Mining
Subtotal Points	4a. Substrate disturbance. Score one or double of	heck and average.	
	None or none apparent (4)		
	x Recovered (3)	4c.	Habitat alteration. Score one or double check and average.
	Recovering (2)		None or none apparent (9)
	Recent or no recovery (1)		Recovered (6)
	<u></u>		x Recovering (3)
	4b. Habitat development. Select one.		Recent or no recovery (1)
	Excellent (7)		
	Very good (6)	Check all disturban	ces observed
		mowing	shrub/sapling removal
	<del></del>	grazing	herbaceous/aquatic bed removal
		clearcutting	sedimentation
		selective cutting	☐ dredging
		woody debris removal	farming
		toxic pollutants	nutrient emrichment
	-		

DRAM v. 5.0 Field Form Quantita			T .	
	North Newark	138 kV Transmission Line Rebui	Date:	June 2, 2020
Wetland: w-bl	-20200602-10		Rater:	BL, SM
39 subtotal first pa	ge			
·				
39 0	Metric 5. Sp	ecial Wetlands. (max 10 pts.)		
Subtotal Points	•	ply and score as indicated		
	OTTO OTT OTT OTT OTT OTT OTT OTT OTT OT	Bog (10 pts)		
		Fen (10 pts)		
		Old Growth Forest (10 pts)		
	<u> </u>	Mature forested wetland (5 pts)		
	<u> </u>	Lake Erie coastal/tributary wetland-unre	etricted hydrol	logy (10 nts)
	<u> </u>	Lake Erie coastal/tributary wetland-restr	-	
		Lake Plain Sand Prairies (Oak Opening		y (0 pts)
			3) (10 pts)	
	<u> </u>	Relict Wet Prairies (10 pts)	nod or ondona	vared energies (10)
	<u> </u>	Known occurrence state/federal threate	_	
		Significant migatory songbird/waterfowl		
	<u> </u>	Category 1 Wetland. See Question 1 o	i Qualitative Ra	aung. (-10 pts)
44 5	Motrio 6 Dia	ant Communities, interspersior	mioroton	ography (may 20 nto )
		•	i, iiiicrotop	ography. (max 20 pts.)
Subtotal Points		getation Communities	Variatio.	n Community Cover Cools
		using 0 to 3 scale	vegetatio	n Community Cover Scale
	0	Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	0	Emergent		
	0	Shrub		Present and either comprises small part of wetland's vegetation and is
	1	Forest	1	of moderate quality, or comprises a significant part but is of low quality
	0	Mudflats		
	0	Open water		Present and either comprises significant part of wetland's vegetation
		Other (list)	2	and is of moderate quality or comprises a small part and is of high
				quality
		olan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
	Select only one	1		and is of high quality
		High (5)		
		Moderately high (4)	Narrative	Description of Vegetation Quality
		Moderate (3)	low	Low spp diversity and/or predominance of nonnative or disturbance
		Moderately low (2)		tolerant native species
		Low (1)		Native spp are dominant component of the vegetation, although
	Х	None (0)	moderate	nonnative and/or disturbance tolerant native spp can also be present,
			ouo.uto	and species diversity moderate to moderately high, but generally w/o
	6c. Coverage of	invasive plants.		presence of rare threatened or endangered spp
		ORAM long form for list.		A predominance of native species, with nonnative spp and/or
	Add or deduct po	ints for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp
		Extensive >75 % cover (-5)	iligii	diversity and often, but not always, the presence of rare, threatened, or
		Moderate 25-75% cover (-3)		endangered spp
		Sparse 5-25% cover (-1)	•	
		Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality
	х	Absent (1)	0	Absent <0.1 ha (0.2471 acres)
		-	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
			2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopogra	aphy	3	High 4 ha (9.88 acres) or more
		using 0 to 3 scale		
	0	Vegetated hummocks/tussocks	Microtopo	ography Cover Scale
	2	Coarse woody debris >15 cm (6")	0	Absent
	0	Standing dead > 25 cm (10") dbh		
	1	Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
	<u> </u>		_	Present in moderate amounts, but not of highest quality or in small
			2	amounts of highest quality
			_	,
			3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 030

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing North



### Wetland 030

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 030

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing South



### Wetland 030

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 030

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Soil Pit



#### Wetland 031

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

Project/Site: Crooksville-No	orth Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: <u>02-Jun-20</u>
Applicant/Owner: AEP		State: OH	Sampling Point: w-bl-20200602-08
Investigator(s): BL, SKM		Section, Township, Range: S 27	T 17N R 15W
Landform (hillslope, terrace,	etc.): Swale	Local relief (concave, convex, none):	concave Slope: <u>5.0</u> % / 78.7 °
Subregion (LRR or MLRA):	LRR N La	it.: 39.83574 Long.: -8	2.17827 Datum: NAD83
Soil Map Unit Name: Bethe	esda-Pits, surface mine complex, 25 to	70 percent slopes, unreclaimed	NWI classification: N/A
Are climatic/hydrologic cond	ditions on the site typical for this time o	fyear? Yes 💿 No 🔾 (Ifno, explai	n in Remarks.)
Are Vegetation . , Soi	il 🗌 , or Hydrology 🔲 significa	antly disturbed? Are "Normal Circum	nstances" present? Yes 💿 No 🔾
Are Vegetation . , Soi	il 🗹 , or Hydrology 🗌 natural	ly problematic? (If needed, explain	any answers in Remarks.)
Summary of Finding	,	g sampling point locations, tra	ansects, important features, etc.
Hydrophytic Vegetation Pre			
Hydric Soil Present?	Yes O No O	Is the Sampled Area	O No O
Wetland Hydrology Present	t? Yes • No O	within a Wetland?	
naturally problematic due			d receives drainage from ephemeral stream
Wetland Hydrology Indicat			
Primary Indicators (minimal Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aeric  Water-Stained Leaves (B9)  Aquatic Fauna (B13)	um of one required; check all that apply  True Aquatic PI  Hydrogen Sulfid  Oxidized Rhizos  Presence of Re  Recent Iron Re  Thin Muck Surf  Other (Explain	y)  Su  Jants (B14)  de Odor (C1)  Spheres along Living Roots (C3)  duced Iron (C4)  Dr.  Dr.  Dr.  Dr.  Dr.  Dr.  Dr.  Dr	dary Indicators (minimum of two required) urface Soil Cracks (B6) uarsely Vegetated Concave Surface (B8) uainage Patterns (B10) uss Trim Lines (B16) uy Season Water Table (C2) uayfish Burrows (C8) uturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) unted or Stressed Plants (D1) united Aquitard (D3) crotopographic Relief (D4) u.C-neutral Test (D5)
Field Observations: Surface Water Present?	Yes   No   Depth (inches	s): 3	
Water Table Present?	Yes   No   Depth (inches		
Saturation Present?	Yes No Depth (inches	Wetland Hydrology F	Present? Yes • No O
Remarks: Multiple primary and secon rich groundwater seepage,	tream gauge, monitoring well, aerial phandary hydrology indicators present. Primiron-oxide deposits visible on surface. Creek that drains east to Buckeye Fork	otos, previous inspections), if available:	

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

			minant		Sampling Point: <b>w-bl-20200602-08</b>
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1. Carya laciniosa	40	<b>✓</b>	100.0%	FAC	That are OBL, FACW, or FAC:  (A)
2	0		0.0%		Total Number of Deminest
3			0.0%		Total Number of Dominant Species Across All Strata:7 (B)
4			0.0%	,,	
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 85.7% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 85.7% (A/B)
7	0		0.0%	,,	Prevalence Index worksheet:
8	0		0.0%	,,	Total % Cover of: Multiply by:
	40	= To	tal Cover	-	0BL speci es 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	1 -	<b>✓</b>	E0.00/	FAC	FACW species 43 x 2 = 86
1. Acer rubrum		<b>✓</b>	50.0%	FACU	FAC speci es 60 x 3 = 180
2. Liriodendron tulipifera		<b>✓</b>	16.7%	FACU	FACU species $\frac{5}{}$ x 4 = $\frac{20}{}$
3. Fraxinus pennsylvanica		<b>▼</b>	16.7%	FACW	UPL species 0 x 5 = 0
4. Ulmus americana			16.7%	FACW	Col umn Total s: 108 (A) 286 (B)
5			0.0%		Total of Tot
6			0.0%		Prevalence Index = B/A = 2.648
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10		Ш	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	30	= Tc	tal Cover	-	☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%	,,	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0		0.0%	,,	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover		of height.
1. Rubus setosus	15	<b>✓</b>	39.5%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Carex granularis	10	<b>✓</b>	26.3%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
Impatiens pallida	5	$\Box$	13.2%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
Parathelypteris noveboracensis	5		13.2%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Woodwardia areolata	3		7.9%	FACW	in height.
6.	0		0.0%		Fire We notation Charter
7.	0		0.0%		Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12	0	$\Box$	0.0%		Shrub stratum – Consists of woody plants, excluding woody
	_	= To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )			0.00/		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0		0.0%		
5			0.0%		Hydrophytic
6		Ш	0.0%		Vegetation Present? Yes No No
	0	= To	otal Cove	r	Tresent:
Remarks: (Include photo numbers here or on a separate sheethydrophytic vegetation indicators present as dominance test $> 50\%$ ,		pecie	es are FAC\	W, FAC and	FACU.

<sup>\*</sup>Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: w-bl-20200602-08

Profile Description: (	Describe to	the depth r	needed to document	the indicator or con	firm the a	bsence of indicators	s.)	
Depth	Matrix			dox Features				
	or (moist)		Color (moist)		Loc <sup>2</sup>	Texture	Remarks	
<b>0-1</b> 10YF	2/1	100				Loam		
<b>1-10</b> 7.5YF	R 3/4	100				Loam	frangible spoils	
							`	
	_						4	
				,,			<u>,</u>	
							`	
	-						<u>,                                      </u>	
							<del></del>	
			$\overline{}$				· · · · · · · · · · · · · · · · · · ·	
							<u> </u>	
<sup>1</sup> Type: C=Concentration	n. D=Depletio	n. RM=Redu	ced Matrix, CS=Covere	d or Coated Sand Grai	ns <sup>2</sup> Locat	ion: PL=Pore Lining. I	M=Matrix	
Hydric Soil Indicator	•							
Histosol (A1)	5.		☐ Dark Surface (\$	`7\		Indicators for P	Problematic Hydric Soils <sup>3</sup> :	
	2)			*	47.440)	2 cm Muck	(A10) (MLRA 147)	
Histic Epipedon (A2	2)			v Surface (S8) (MLRA 1		Coast Prairie	e Redox (A16)	
Black Histic (A3)				ice (S9) (MLRA 147, 14	.8)	(MLRA 147,		
Hydrogen Sulfide (			Loamy Gleyed I			Piedmont Fl	oodplain Soils (F19)	
Stratified Layers (A			Depleted Matrix	` '		(MLRA 136,	147)	
2 cm Muck (A10) (	_RR N)		Redox Dark Sur	face (F6)		☐ Very Shallov	w Dark Surface (TF12)	
Depleted Below Da	rk Surface (A	11)	Depleted Dark	Surface (F7)		✓ Other (Expla	ain in Remarks)	
☐ Thick Dark Surface	(A12)		Redox Depress	ions (F8)		_ ` ` '	,	
Sandy Muck Minera	al (S1) (LRR N	l,	☐ Iron-Manganes	e Masses (F12) (LRR N	,			
MLRÁ 147, 148)			MLRA 136)					
Sandy Gleyed Matr	ix (S4)		Umbric Surface	(F13) (MLRA 136, 122	2)	3		
Sandy Redox (S5)			Piedmont Flood	lplain Soils (F19) (MLR	4 148)	o Indicato Wetlan	ors of hydrophytic vegetation and nd hydrology must be present,	
Stripped Matrix (Se	)		Red Parent Ma	terial (F21) (MLRA 127	147)	unless disturbed or problematic.		
				. , ,				
Restrictive Layer (if	observed):							
Туре:							10	
Depth (inches):						Hydric Soil Prese	nt? Yes • No O	
Remarks:						<u> </u>		
naturally problematic	snils snoil	s nresent f	rom nrevious strin m	nining excavation ac	tivity Ton	laver is denleted w	vith low chroma and low value, soils	
saturated at surface.								

### Upland 030 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission	Line City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: (	OH Sampling Point: upl-bl-20200602-08
nvestigator(s): BL, SKM	Section, Township, Range:	S 34 T 17N R 15W
andform (hillslope, terrace, etc.): Shoulder slope	Local relief (concave, convex	x, none): convex Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.83562 L	ong.: -82.17824 Datum: NAD83
Soil Map Unit Name: GwC - Guernsey-Westmoreland sill	_	NWI classification: N/A
-		
Are climatic/hydrologic conditions on the site typical for t		no, explain in Remarks.)
Are Vegetation U , Soil U , or Hydrology U	significantly disturbed? Are "Norm	nal Circumstances" present? Yes Son No Constant
Are Vegetation . , Soil . , or Hydrology	naturally problematic? (If needed	d, explain any answers in Remarks.)
Summary of Findings - Attach site map s	howing sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes O No •		
Hydric Soil Present? Yes No •	Is the Sampled Area	¹ Yes ○ No •
Wetland Hydrology Present? Yes O No •	within a Wetland?	Yes U No U
Remarks:		
Point out (Upland 030) to wetland 0318, about 15 feet	southeast of wetland boundary. Not a we-	tland point, no wetland criteria met.
,		'
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all	that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	e Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	rogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	dized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
	sence of Reduced Iron (C4)	Dry Season Water Table (C2)
	ent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
	n Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9)
	er (Explain in Remarks)	☐ Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:		
	epth (inches):	
Water Table Present? Yes No O	epth (inches):	
Saturation Procent?	Wetland Hy	ydrology Present? Yes O No 🖲
(includes capillally ininge)	epth (inches):	
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, previous inspections), if av	ailable:
Demonstra		
Remarks:		
No hydrology indicators present.		

### Upland 030

			ominant		Sampling Point: <u>upl-bl-20200602-08</u>
	Absolute % Cover	Re	oecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:
1. Quercus rubra		<b>✓</b>		FACU	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. Carya ovata	10		18.2%	FACU	
3. Ulmus americana	10		18.2%	FACW	Total Number of Dominant Species Across All Strata: 5 (B)
4. Quercus alba	-		9.1%	FACU	Species / M. et.a. d
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 40.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 40.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0	Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	55	= To	otal Cover	-	0BL speci es x 1 =
Magnolia acuminata		<b>✓</b>	44.4%	FACU	FACW species 35 x 2 = 70
Fraxinus pennsylvanica		<b>✓</b>	33.3%	FACW	FAC speci es $25$ x 3 = $75$
3. Acer rubrum	_		11.1%	FAC	FACU speci es $114 \times 4 = 456$
4. Quercus rubra	2		6.7%	FACU	UPL speci es x 5 =
5. Liriodendron tulipifera			4.4%	FACU	Column Totals: <u>174</u> (A) <u>601</u> (B)
6.			0.0%		Prevalence Index = B/A = 3.454
7			0.0%		Hydrophytic Vegetation Indicators:
8.			0.0%		Rapid Test for Hydrophytic Vegetation
9.			0.0%		Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	45	= To	otal Cover	-	Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0	= To	otal Cover		of height.
1. Podophyllum peltatum	40	<b>✓</b>	54.1%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Toxicodendron radicans	15	<b>✓</b>	20.3%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Poa palustris	10		13.5%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Acer rubrum	5		6.8%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Parthenocissus quinquefolia	2		2.7%	FACU	in height.
6. Urtica dioica	2		2.7%	FACU	Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0	Ш	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	74	= To	otal Cover	-	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.			0.0%		height.
5	0		0.0%	,	Hydrophytic
6.	0		0.0%		Vegetation V O N O
	0	= T	otal Cove	r	Present? Yes O No O
Remarks: (Include photo numbers here or on a separate shee	et.)				
No hydrophytic vegetation indicators present, dominant species are F	ACW, FAC a	and F	ACU.		

Upland 030

Soil

Soil							Sampling P	oint: up	I-bI-20200602-08
Profile Descr	iption: (De	scribe to	the depth r	needed to docum	ent the indicator or co	nfirm the a	bsence of indicators.)		
Depth		Matrix			Redox Features				
(inches)	Color	(moist)	%	Color (moist)		Loc <sup>2</sup> _	Texture	Rer	narks
0-2	2.5Y	4/2	100				Sandy Loam		
2-16	2.5Y	6/4	100				Sandy Loam		
		`					,		
		,					,		
							-		
		`					,		
		`							
		D=Depletio	n. RM=Redu	iced Matrix, CS=Cov	vered or Coated Sand Gra	ains <sup>2</sup> Locat	ion: PL=Pore Lining. M=Ma	trix	
Hydric Soil I							Indicators for Proble	matic Hydri	c Soils <sup>3</sup> :
Histosol (A				☐ Dark Surfac		447.445	2 cm Muck (A10)	(MLRA 147)	
	pedon (A2)				elow Surface (S8) (MLRA		Coast Prairie Redo	x (A16)	
Black Hist		`			urface (S9) (MLRA 147, 1	148)	(MLRA 147,148)	, ,	
	Sulfide (A4) Layers (A5)	)			red Matrix (F2)		Piedmont Floodpla	in Soils (F19)	)
		) NI)		☐ Depleted M	atrix (F3) . Surface (F6)		(MLRA 136, 147)		
	k (A10) (LRF		11)		ark Surface (F7)		☐ Very Shallow Dark		12)
	Below Dark		11)		ressions (F8)		Other (Explain in F	Remarks)	
	k Surface (A				nese Masses (F12) (LRR	N			
MLRA 147	ck Mineral ( 7, 148)	51) (LRR N	١,	MLRA 136)	riese Masses (F12) (ERR	14,			
Sandy Gle	yed Matrix	(S4)		Umbric Sur	face (F13) (MLRA 136, 12	22)			
Sandy Red		. ,		☐ Piedmont F	loodplain Soils (F19) (ML	RA 148)	<sup>3</sup> Indicators of h wetland hydi	nydrophytic v	egetation and
	Matrix (S6)			Red Parent	Material (F21) (MLRA 12	7, 147)		turbed or pro	
Restrictive La	ayer (if obs	served):							
Туре:		,							
Depth (inch	hes):						Hydric Soil Present?	Yes O	No •
Remarks:									
	Lindinatana								
No hydric soil	indicators	present.							

Site: Crooksv	ille-North Newark 138 kV Transmission Line F	ebuild Project	Date:	June 2, 2020
Wetland:	Wetland 031		Rater:	BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max 6 p  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pt)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  0.3 to <3 acres (0.12 to <1.2ha) (2pts)  0.1 to <0.3 acres (0.04 to <0.12ha) (1  x <0.1 acres (0.04ha) (0 pts)	s)		w-bl-20200602-08
12 12 Subtotal Points	Metric 2. Upland buffers and surroundi  2a. Calculate average buffer width (select one, do n  X WIDE. Buffers average 50m (164ft) o  MEDIUM. Buffers average 25m to <5  NARROW. Buffers average 10m to <  VERY NARROW. Buffers average <1  2b. Intensity of surrounding land use (select one or or or or or or or or or or or or or	int double check) more around wetland im (82 to <164ft) arou 25m (32ft to <82ft) ar 0m (<32ft) around we couble check & avera t, prairie, savannah, v young second growl ced pasture, park, co	d perimeter (7) und wetland perin round wetland pe etland perimeter (  ge) wildlife area, etc. th forest. (5) onservation tillage	rimeter (1) 0) (7) e, new fallow field. (3)
27.5 15.5 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5) Other groundwater (3)  X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime. (select one or double check & average) None or none apparent (12) X Recovered (7) Recovering (3) Recent or no recovery (1)	3d. 1	Duration inundati (select one or de  Regularly  X Seasonal  Check all distudite  Ille	ore all that apply.  floodplain (1)  stream/lake and other human use (1)  etland/upland (e.g. forest), complex (1)  arian or upland corridor (1)  fon/saturation.  buble check & average)  permanently inundated/saturated (4)  inundated/saturated (3)  ly inundated (2)  ly saturated in upper 30cm (12in) (1)  urbances observed  point source (nonstormwater)  filling/grading  road bed/RR track  dredging  other- list
44.5 17 Subtotal Points	x Good (5)  Moderately good (4)  Fair (3)  Poor to fair (2)  Poor (1)	eck and average.	Habitat alteration  X None or r Recoverie Recoverii Recent of	Other - Strip Mining  n. Score one or double check and average. none apparent (9) rd (6)

Sito: Crookevi	lle-North Newark 138 kV Transmission Line Rebui	IDato:	June 2, 2020
Wetland: V	Vetland 031	Rater:	BL, SM
44.5 subtotal firs	st page		
44.5 0	Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points	Check all that apply and score as indicated		
	Bog (10 pts)		
	Fen (10 pts)		
	Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		
	Lake Erie coastal/tributary wetland-unre	estricted hydro	logy (10 pts)
	Lake Erie coastal/tributary wetland-rest	ricted hydrolog	gy (5 pts)
	Lake Plain Sand Prairies (Oak Opening	js) (10 pts)	
	Relict Wet Prairies (10 pts)		
	Known occurrence state/federal threate	-	
	Significant migatory songbird/waterfowl		
	Category 1 Wetland. See Question 1 o	of Qualitative R	lating. (-10 pts)
50.5 6	Metric 6. Plant Communities, interspersion	n microton	ography (may 20 nts )
Subtotal Points	6a. Wetland Vegetation Communities	i, illiciotop	rography. (max 20 pts.)
Oubtotal 1 ollits	Score all present using 0 to 3 scale	Vegetatio	on Community Cover Scale
	Aquatic bed		
	0 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	0 Shrub		
	2 Forest	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
	Mudflats		of moderate quality, or comprises a significant part but is or low quality
	Open water		Present and either comprises significant part of wetland's vegetation
	Other (list)	2	and is of moderate quality or comprises a small part and is of high
			quality
	6b. Horizontal (plan view) interspersion Select only one	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	High (5)		3 1 7
	Moderately high (4)	Narrative	Description of Vegetation Quality
	Moderate (3)	le	Low spp diversity and/or predominance of nonnative or disturbance
	Moderately low (2)	low	tolerant native species
	Low (1)		Native spp are dominant component of the vegetation, although
	x None (0)	moderate	nonnative and/or disturbance tolerant native spp can also be present,
			and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
	<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.		- ''
	Add or deduct points for coverage		A predominance of native species, with nonnative spp and/or
	Extensive >75 % cover (-5)	high	disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or
	Moderate 25-75% cover (-3)		endangered spp
	Sparse 5-25% cover (-1)		
	Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality
	x Absent (1)	0	Absent <0.1 ha (0.2471 acres)
		1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or more
	Score all present using 0 to 3 scale		
	0 Vegetated hummocks/tussocks		ography Cover Scale
	2 Coarse woody debris >15 cm (6")	0	Absent
	1 Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
		3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 031

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing North



### Wetland 031

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 031

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing South



### Wetland 031

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 031

Date:

June 2, 2020

**Description:** 

PFO wetland

Category 2

Soil Pit



#### Wetland 032a

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

Project/Site: Crooksville-North Newark 13	38 kV Transmission Line City/C	County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP		State: OH	Sampling Point: w-bl-20200602-07a
Investigator(s): BL, SKM	Section	on, Township, Range: S 27	T 17N R 15W
Landform (hillslope, terrace, etc.): Sw	vale Local r	relief (concave, convex, none):	concave Slope: 2.0 % / 63.4 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.830	683 Long.: -82.	18112 Datum: NAD83
Soil Map Unit Name: Bhs4D - Bethesda	channery silt loam, 8 to 25 percent s	slopes, unreclaimed NW	VI classification: N/A
Are climatic/hydrologic conditions on the	e site typical for this time of year? `	Yes   No   (If no, explain i	*
Are Vegetation . , Soil . , or	r Hydrology 🔲 significantly distu	rbed? Are "Normal Circumst	tances" present? Yes • No O
Are Vegetation . , Soil 🗸 , or	r Hydrology 🔲 naturally problem	atic? (If needed, explain a	ny answers in Remarks.)
	1 9 1	ing point locations, tran	nsects, important features, etc.
3. 1. 3	es No O		
	res O No O	Is the Sampled Area within a Watland? Yes	No O
Wetland Hydrology Present? Ye	res   No   No   No   No   No   No   No   N	within a Wetland?	
south to ephemeral stream 038 (s-bl-2			delineated by topography. Wetland drains ned land = problematic soils.
Hydrology			
Wetland Hydrology Indicators:  Primary Indicators (minimum of one reconstructions)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  Field Observations:  Surface Water Present?  Yes	☐ True Aquatic Plants (B14) ☐ Hydrogen Sulfide Odor (C1) ☑ Oxidized Rhizospheres alon ☐ Presence of Reduced Iron ( ☐ Recent Iron Reduction in T ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	Surfa  Spars  Spars  Drain  g Living Roots (C3)  (C4)  illed Soils (C6)  Crayl  Stunt  Geon  Shall  Micro	ry Indicators (minimum of two required) ace Soil Cracks (B6) sely Vegetated Concave Surface (B8) nage Patterns (B10) s Trim Lines (B16) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ated or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) neutral Test (D5)
		)	
	No Depth (inches):	 Wetland Hydrology Pre	esent? Yes • No O
(includes capillary fringe) Yes U	No Depth (inches):		
Describe Recorded Data (stream gauge	e, monitoring well, aerial photos, previ	ous inspections), if available:	
Remarks:			
Multiple primary and secondary hydrolodrainage swale. Wetland drains to sout			

			ominant		Sampling Point: w-bl-20200602-07a
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)
2			0.0%		Total Number of Dominant
3		$\square$	0.0%		Species Across All Strata:6(B)
4		Щ	0.0%		
5	0	Ц	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		That Are OBE, Thow, or Tho.
7			0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	)	= To	otal Cover	•	0BL speci es <u>15</u> x 1 = <u>15</u>
Liquidambar styraciflua	3		75.0%	FAC	FACW species <u>42</u> x 2 = <u>84</u>
Acer rubrum		$\Box$	25.0%		FAC speci es x 3 =60
3			0.0%		FACU speci es x 4 =
4			0.0%		UPL speci es x 5 =
5.			0.0%		Column Totals: <u>77</u> (A) <u>159</u> (B)
6.			0.0%		Prevalence Index = $B/A = 2.065$
7			0.0%		
8			0.0%		Hydrophytic Vegetation Indicators:
9.			0.0%		Rapid Test for Hydrophytic Vegetation
10.	0		0.0%		Dominance Test is > 50%
		 = Тс	otal Cover		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)					Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2			0.0%		
3			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4					Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		Щ, т.	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: <u>5' r</u> )	0 =		otal Cover	•	of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Scirpus cyperinus	30	✓.	44.1%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus atrovirens	10	✓.	14.7%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Agrostis gigantea	10	✓.	14.7%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Typha latifolia	5		7.4%	OBL	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Acer rubrum	5		7.4%	FAC	
6. Vernonia gigantea	3		4.4%	FAC	Five Vegetation Strata:
7. Euthamia graminifolia	3		4.4%	FAC	Tree - Woody plants, excluding woody vines, approximately 20
8. Ulmus americana			2.9%	FACW	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0	$\square$	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	68=	= To	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1. Toxicodendron radicans	5	✓.	100.0%	FAC	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2.	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5.	0		0.0%		
6.	0		0.0%		Hydrophytic Vegetation
<u> </u>	5	= To	otal Cover	r	Present? Yes No
Remarks: (Include photo numbers here or on a separate shee					
Hydrophytic vegetation indicator present dominance test > 50%, dor	,	es ar	re OBL, FAG	CW and FAC	

Soil Sampling Point: w-bl-20200602-07a

Profile Description: (Describe to the Depth Matrix	·	the indicator or coredox Features	rirm the a	bsence of indicators.	)
(inches) Color (moist)	% Color (moist)	%Tvpe_1	Loc²_	Texture	Remarks
<b>0-2</b> 10YR 3/2 10	00	<u>,</u>		Silt Loam	
<b>2-11</b> 10YR 4/1 90	0 10YR 5/6	10 C	PL	Sandy Clay Loam	prominent redox concentrations
11					gravel
		, , , , , , , , , , , , , , , , , , , ,			· ·
					<del>.</del>
					<u>`</u>
					·
Time C. Compositorine D. Dominion D.	M. Dadward Matrix CC Caves		21	in D. Dona Linian M	NA-A-1
ype: C=Concentration. D=Depletion. R	M=Reduced Matrix, CS=Cover	ed of Coaled Sand Grai	ns ztocat		
lydric Soil Indicators:  Histosol (A1)	☐ Dark Surface (	(C7)		Indicators for Pro	oblematic Hydric Soils <sup>3</sup> :
Histic Epipedon (A2)		.s/) w Surface (S8) (MLRA :	147 148)	2 cm Muck (A	10) (MLRA 147)
Black Histic (A3)		ace (S9) (MLRA 147, 14		Coast Prairie F	
Hydrogen Sulfide (A4)	Loamy Gleyed		/	(MLRA 147,14	
Stratified Layers (A5)	Depleted Matri			Piedmont Floo (MLRA 136, 1	odplain Soils (F19) 47)
2 cm Muck (A10) (LRR N)	Redox Dark Su			_ `	Dark Surface (TF12)
Depleted Below Dark Surface (A11)	☐ Depleted Dark	Surface (F7)		Other (Explain	
Thick Dark Surface (A12)	Redox Depress	sions (F8)		Other (Explain	Till Kellianes)
Sandy Muck Mineral (S1) (LRR N,		se Masses (F12) (LRR N	l,		
MLRÅ 147, 148)	MLRA 136)	- (E12) (MLDA 12/ 12/	2)		
Sandy Gleyed Matrix (S4)		e (F13) (MLRA 136, 12)		<sup>3</sup> Indicators	s of hydrophytic vegetation and
Sandy Redox (S5)		dplain Soils (F19) (MLR		wetland	hydrology must be present,
Stripped Matrix (S6)	☐ Red Parent Ma	iterial (F21) (MLRA 127	, 14/)	unies	s disturbed or problematic.
estrictive Layer (if observed):					
Туре:					- 0 0
Depth (inches):				Hydric Soil Present	t? Yes O No O
Remarks:					
ydric soil indicator present as deple		tarting less than or e	qual to 6'	depth with distinct r	redox concentrations as pore
ings. Shovel refusal at 11" due to	gravel.				

#### Wetland 032b

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: W-bl-20200602-07b
Investigator(s): BL, SKM	Section, Township, Range: S 27 T 17N R 15W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N Lat.	: 39.83711 Long.: -82.1809 Datum: NAD83
Soil Map Unit Name: Bhs4D - Bethesda channery silt loam, 8 to 25	percent slopes, unreclaimed NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes  No (If no, explain in Remarks.)
	ntly disturbed? Are "Normal Circumstances" present? Yes   No
Are Vegetation ☐ , Soil ✓ , or Hydrology ☐ naturally	problematic? (If needed, explain any answers in Remarks.)
Common of Findings Attack site was about on	
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present?  Yes No Vestand Hydrology Present?  Yes No Vestand Hydrology Present?	Is the Sampled Area within a Wetland?
Wetland Hydrology Present? Yes No Remarks:	
south to ephemeral stream 038 (s-bl-20200602-04), potentially isc	PSS wetland complex. Wetland boundary delineated by topography. Wetland drains plated. Wetland located in former strip-mined land = problematic soils.
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  True Aquatic Plar	
✓ High Water Table (A2)  Hydrogen Sulfide  Hydrogen Sulfide	
✓ Saturation (A3) Oxidized Rhizosp	heres along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Redu	
	uction in Tilled Soils (C6)
☐ Drift deposits (B3) ☐ Thin Muck Surfaction ☐ Algal Mat or Crust (B4) ☐ Other (Explain in	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)  Aquatic Fauna (B13)	
Field Observations:	FAC-neutral Test (D5)
Surface Water Present? Yes No Depth (inches):	0
Water Table Present? Yes   No  Depth (inches):	
Saturation Present?  (includes confident friege)  Yes  No  Depth (inches):	Wetland Hydrology Present? Yes   No   ○
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photographics)	tos, previous inspections), if available:
Remarks:	
Multiple primary and secondary hydrology indicators present. Primal	ry source of hydrology is concentration of precipitation and surface runoff into 20200602-04 that flows southwest outside study area, potentially isolated.
uramage swale. Wetland drains to south to epitemeral stream s-bi-2	2020002-04 that nows southwest outside study area, potentially isolated.

			minant		Sampling Point: <b>w-bl-20200602-07b</b>
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	n.otiat.	Indicator Status	Dominance Test worksheet:
1			0.0%	,	Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)
2.	0		0.0%		
3			0.0%		Total Number of Dominant Species Across All Strata:6(B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6	0		0.0%		That Are Obt., FACW, OF FAC.
7	0		0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )	0	= Tc	tal Cover		0BL speci es 10 x 1 = 10
1. Acer rubrum	40	<b>✓</b>	54.1%	FAC	FACW species $50 \times 2 = 100$
2. Salix interior		<b>✓</b>	27.0%	FACW	FAC speciles <u>62</u> x 3 = <u>186</u>
3. Ulmus rubra	10		13.5%	FAC	FACU speci es $\frac{4}{3}$ x 4 = $\frac{16}{3}$
4. Rosa multiflora	2		2.7%	FACU	UPL speci es $\frac{3}{}$ x 5 = $\frac{15}{}$
5. Liriodendron tulipifera	2		2.7%	FACU	Col umn Total s: 129 (A) 327 (B)
6	0		0.0%		Prevalence Index = B/A = 2.535
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9	0		0.0%		✓ Dominance Test is > 50%
10		Ш	0.0%		✓ Prevalence Index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size:)		= To	tal Cover		☐ Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		☐ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0		0.0%		Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	$\Box$	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0		tal Cover		of height.  Sapling/shrub stratum – Consists of woody plants, excluding
1. Solidago gigantea	20	<b>✓</b>	40.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Agrimonia parviflora	10	<b>✓</b>	20.0%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Carex lacustris	10	<b>✓</b>	20.0%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Acer rubrum	- 5		10.0%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Rubus occidentalis	3		6.0%	UPL	
6. Dichanthelium clandestinum	0		0.0%	FAC	Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0	П	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10 11	0	$\Box$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	50	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Toxicodendron radicans	5	<b>✓</b>	100.0%	FAC	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Hydrophytic
6	0	Ш	0.0%		Vegetation Present? Yes No No
	5	= To	otal Cover		Tresent:
Remarks: (Include photo numbers here or on a separate shee	,				
Hydrophytic vegetation indicator present dominance test > 50%, don	ninant speci	es ar	e OBL, FAG	CW and FAC	

Soil Sampling Point: w-bl-20200602-07b

Profile Descri	iption: (De	escribe to	the depth	needed to	documen	t the indi	cator or con	firm the a	bsence of indicators	.)		
Depth		Matrix				edox Feat	1	1	T- 1	D I .		
(inches) 0-1	Color_ 10YR	(moist) 2/1	<u>%</u> 100	Color I	(moist)	%	Tvpe_	Loc <sup>2</sup>	Texture Muck	Remarks		
				-	-				-			
1-3	10YR	32	100						Clay Loam	prominent redox		
3-12	10YR	5/1	60	10YR	5/8	40	C	M	Silty Clay Loam	concentrations		
		`	`									
		,								· ·		
		· · · · ·					$\overline{}$			·		
		,										
<sup>1</sup> Type: C=Cond	centration.	D=Depleti	on. RM=Red	uced Matrix,	CS=Cover	ed or Coat	ed Sand Grai	ns ²Locat	ion: PL=Pore Lining. M	1=Matrix		
Hydric Soil I										roblematic Hydric Soils <sup>3</sup> :		
Histosol (A				☐ Dari	k Surface	(S7)						
Histic Epip							(S8) (MLRA	47,148)		A10) (MLRA 147)		
☐ Black Histi							MLRA 147, 14		Coast Prairie (MLRA 147,1)			
Hydrogen	Sulfide (A4	.)		Loar	my Gleyed	Matrix (F2	2)		_ `	odplain Soils (F19)		
	Layers (A5)				leted Matr				(MLRA 136,			
<b>✓</b> 2 cm Muck	k (A10) (LR	R N)				urface (F6)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
Depleted I	Below Dark	Surface (A	A11)			Surface (F	<del>-</del> 7)					
	k Surface (A					sions (F8)						
	ck Mineral (	(S1) (LRR	N,	∐ Iron MLR	-Mangane !A 136)	ese Masses	(F12) (LRR N	,				
MLRA 147	,	(C 1)				e (F13) (M	ILRA 136, 122	))				
Sandy Gle	yed Matrix	(54)					s (F19) (MLR		<sup>3</sup> Indicators of hydrophytic vegetation and			
Stripped N							I) (MLRA 127		wetland hydrology must be present, unless disturbed or problematic.			
Stripped in	//dti ix (50)			Reu	rai ciit ivi	ateriai (i z i	I) (IVILIA 127	, 147)	driic.	33 disturbed of problematic.		
Restrictive La	ayer (if ob	served):										
Type:									Hydric Soil Presen	it? Yes • No O		
Depth (inch	nes):								Trydric 3011 Fresen	res S No C		
Remarks:												
						within 6"	of surface,	and deple	eted matrix in loamy	soils starting less than or equal to		
4" depth with	distinct re	edox con	centrations	as pore lin	ings.							

## Upland 031 WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Section, Township, Range: S 27 T 17N R 15W  Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): convex Slope: 10.0 % / 84.3  Subregion (LRR or MLRA): LRR N Lat.: 39.83722 Long.: -82.18177 Datum: NAD83  Soil Map Unit Name: Bethesda-Pits, surface mine complex, 8 to 25 percent slopes, unreclaimed NWI classification: N/A  Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No O	Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Landform (hillstope, terrace, etc.)   Hillside   Local relief (concave, convex, none):   Convex   Stope:   10.0 % / Pa.3	Applicant/Owner: AEP	State: (	OH Sampling Point: upl-bl-20200602-07
Solf Map Unit Name: Bethesda-Pits, surface mine complex, 8 to 25 percent slopes, unreclaimed NVI classification: N/A Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks)  Are Vegetation , soil , or Hydrology  naturally problematic? (if no, explain in Remarks)  Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc Hydrology Present? Yes No Weltand Hydrology Present? Yes No Weltand Hydrology Present? Yes No Weltand Hydrology Present? Yes No Weltand Hydrology Present? Yes No Weltand Hydrology Present? Yes No Weltand Hydrology Indicators: Point out (Upland 031) to weltands 032 and 033, about 10' east of wetland 033, 30' west of wetland 032. Location on un-reclaimed mine lands = problematic soils. Not a welfand point, hydric soil and hydrology criteria not met.  Hydrology  Weltland Hydrology Indicators: Primary Indicators: (minimum of one required: check all that apply)  Surface Water (A1)	Investigator(s): BL, SKM	Section, Township, Range:	S 27 T 17N R 15W
Soli Map Unit Name: Bethesda-Pits, surface mine complex, 8 to 25 percent slopes, unreclaimed  NWI classification: N/A  Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)  Are Vegetation Soli of Hydrology significantly disturbed? Are Normal Circumstances' present? Yes No Are Vegetation   Soli of or Hydrology   naturally problematic? (If needed, explain any answers in Remarks.)  Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc  Hydrophytic Vegetation Present? Yes No Wall of Soli of No Wall of No Wall	Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex	, none):
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Are Vegetation   Soil   Or Hydrology   significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation   Soil   Or Hydrology   naturally problematic? (If needed, explain any answers in Remarks.)  Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes No   No   Hydric Soil Present? Yes No   No   Hydric Soil Present? Yes No   No   Hydric Soil Present? Yes No   No   Hydric Soil Present? Yes No   No   Hydric Soil Present? Yes No   No   Hydrology Present? Yes No   No   Hydrology Present? Yes No   No   Hydrology Present? Yes No   No   Hydrology Present? Yes No   No   Hydrology Present? Yes No   No   Hydrology Citeria not met.   Hydrology Present? Yes   No   Hydrology Citeria not met.   Hydrology Indicators: Primary Indicators (minimum of nor required; check all that apply)   Surface Water (A1)	Subregion (LRR or MLRA): LRR N L	at.: 39.83722 L	ong.: -82.18177 Datum: NAD83
Are Vegetation   Soil   Or Hydrology   significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation   Soil   Or Hydrology   naturally problematic? (If needed, explain any answers in Remarks.)  Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes No   No   Is the Sampled Area within a Wetland? Yes No   Wetland Hydrology Present? Yes No   No   Wetland Hydrology Present? Yes No   No   Wetland O33, about 10' east of wetland 033, 30' west of wetland 032. Location on un-reclaimed mine lands = problematic soils. Not a wetland point, hydric soil and hydrology criteria not met.  Hydrology  Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply)   Secondary Indicators (minimum of two required)   Surface Soil Crack (80)   Su	Soil Map Unit Name: Bethesda-Pits, surface mine complex, 8 to 2	25 percent slopes, unreclaimed	NWI classification: N/A
Are Vegetation	Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes • No O (If r	
Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes			al Circumstances" present? Yes 💿 No 🔾
Hydrophytic Vegetation Present? Yes  No  Wo  Is the Sampled Area within a Wetland Hydrology Present? Yes  No  Wo  Wetland Hydrology Present? Yes  No  Wo  Within a Wetland? Yes  No  Wo  Within a Wetland O32. Location on un-reclaimed mine lands = problematic soils. Not a wetland so 32 and soil and hydrology criteria not met.  Hydrology  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required: check all that apply)  Surface Soil Cracks (B6)  Surface Water (A1)  True Aqualte Plants (B14)  Sparsely Vegetated Concave Surface (B8)  High Water Table (A2)  Oxidized Rhizospheres along Living Roots (C3)  Moss Trim Lines (B16)  Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Ory Season Water Table (C2)  Sediment Deposits (B2)  Thin Muck Surface (C7)  Saturation Visible on Aerial Imagery (C9)  In Iron Deposits (B3)  Sturted or Stressed Plants (D1)  Iron Deposits (B3)  Sturted or Stressed Plants (D1)  Iron Deposits (B3)  McCrobopy aphic Relief (D4)  Aqualic Fauna (B13)  FAC-neutral Test (D5)  Field Observations:  Surface Water Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No Depth (inches):  Wetland Hydrology Present?  Yes No Dept	Are Vegetation 🔲 , Soil 🗹 , or Hydrology 🗌 natura	lly problematic? (If needec	d, explain any answers in Remarks.)
Hydric Soil Present? Yes No No No No No No No No No No No No No	Summary of Findings - Attach site map showin	g sampling point locatio	ons, transects, important features, etc.
Wetland Hydrology Present? Yes ○ No ● within a Wetland? Yes ○ No ● Depth (inches): Surface Water Present? Yes ○ No ● Depth (inches): Surface Recorded Data (stream gauge, monitoring well, a aerial photos, previous inspections), if available:	9 1 9 9		
Wetland Hydrology Present? Yes No ● within a Wetland?  Remarks:  Point out (Upland 031) to wetlands 032 and 033, about 10' east of wetland 033, 30' west of wetland 032. Location on un-reclaimed mine lands = problematic soils. Not a wetland point, hydric soil and hydrology criteria not met.  Hydrology  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required: check all that apply)   Surface Soil Cracks (Be)   Surface Water (A1)   True Aquatic Plants (B14)   Sparsely Vegetated Concave Surface (B8)   High Water Table (A2)   Hydrogen Sulfde Odor (C1)   Dralnage Patterns (B10)   Saturation (A3)   Oxidized Rhizospheres along Living Roots (C3)   Moss Trim Lines (B16)   Dry Season Water Table (C2)   Crayfish Burrows (C8)   Drift deposits (B3)   Thin Muck Surface (C7)   Saturation Visible on Aerial Imagery (C9)   Stallard (D3)   Water Stained Leaves (B9)   Microtopographic Relief (D4)   Shallow Aquatard (D3)   Water Stained Leaves (B9)   Microtopographic Relief (D4)   Saturation (B13)   FAC-neutral Test (D5)   Face Water Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (inches):   Wetland Hydrology Present? Yes No ● Depth (in	. 9		Yes ○ No •
Point out (Upland 031) to wetlands 032 and 033, about 10' east of wetland 033, 30' west of wetland 032. Location on un-reclaimed mine lands = problematic soils. Not a wetland point, hydric soil and hydrology criteria not met.  Hydrology  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Soil Cracks (86)  Surface Water (A1)  Hydrogen Sulfide Odor (C1)  Saturation (A3)  Oxidized Rhizospheres along Living Roots (C3)  Mater Marks (B1)  Presence of Reduced Iron (C4)  Sediment Deposits (B2)  Recent Iron Reduction in Tilled Soils (C6)  Trin Agual Mat or Crust (B4)  Hother (Explain in Remarks)  Mater Table Present?  Water-Stained Leaves (B9)  Aguatic Fauna (B13)  Field Observations:  Surface Water Present?  Yes No Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Yes No Pepth (inches):  Remarks:	Wetland Hydrology Present? Yes O No 💿	within a Wetland?	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required: check all that apply)  Surface Soil Cracks (B6)  Surface Water (A1)  High Water Table (A2)  Water Marks (B1)  Saturation (A3)  Oxidized Rhizospheres along Living Roots (C3)  Sediment Deposits (B2)  Thin Muck Surface (C7)  Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Infundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  Fed-neutral Test (D5)  Depth (inches):  Saturation Present?  Yes No Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			and 032. Location on un-reclaimed mine lands =
Primary Indicators (minimum of one required; check all that apply)  Surface Soil Cracks (B6)  Surface Water (A1)  High Water Table (A2)  Hydrogen Sulfide Odor (C1)  Saturation (A3)  Water Marks (B1)  Recent Iron Reduction in Tilled Soils (C6)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Aquatic Fauna (B13)  Field Observations:  Surface Water Present?  Water Marks (B9)  Depth (inches):  Suturation Present?  Suturation Present?  Suturation Present?  Suturation Visible on Aerial Imagery, More Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drinal prainage Patterns (B10)  Sparsely Vegetated Concave Surface (B8)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Moss Trim Lines (B10)  Moss Trim Lines (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Moss Trim Lines (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Moss Trim Lines (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Mater Table (C2)  Crafish Burrows (C8)  Saturation Visible on Aerial Imagery (C7)  Saturation Visible on Aerial Imagery (E7)  Microtopographic Relief (D4)  Prosental Imagery (F)  Saturation	Hydrology		
Water Table Present? Yes No Depth (inches): Saturation Present? (includes capillary fringe)  Depth (inches):  Depth (inches): Wetland Hydrology Present? Yes No Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	Primary Indicators (minimum of one required; check all that apple Surface Water (A1)	Plants (B14) ide Odor (C1) ospheres along Living Roots (C3) educed Iron (C4) eduction in Tilled Soils (C6) face (C7) in Remarks)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	Surface Water Present? Yes No Depth (inches	es): <u> </u>	
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			No O
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	Ves ( ) No ( ) Denth (inche	vvetianu ny es):	arology Present? res C No C
		notos, previous inspections), if ava	ailable:

			ominant becies? -		Sampling Point: upl-bl-20200602-07
Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:  4 (A)
2	0		0.0%		T I I I I I I I I I I I I I I I I I I I
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4.			0.0%		
5			0.0%		Percent of dominant Species
6.			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	0 :	= Tc	tal Cover		0BL speci es
Sapling-Sapling/Shrub Stratum (Plot size: 15' r		_			FACW speci es 85 x 2 = 170
1. Alnus glutinosa	15	<b>✓</b>	53.6%	FACW	FAC species $0 \times 3 = 0$
2. Robinia pseudoacacia	5		17.9%	FACU	
3. Rosa multiflora	5		17.9%	FACU	
4. Hypericum prolificum			10.7%	FACU	UPL speci es $\frac{3}{}$ x 5 = $\frac{15}{}$
5.			0.0%		Col umn Total s: 101 (A) 237 (B)
6.			0.0%		Prevalence Index = B/A =2.347_
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9.			0.0%		
10.			0.0%		Dominance Test is > 50%
		 = Tc	otal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)					Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2	0		0.0%		
3			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			0.0%		
5	0		0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:  Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0 :	= To	otal Cover	-	of height.
1. Elymus virginicus	20	<b>✓</b>	27.4%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Agrimonia parviflora	20	✓	27.4%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Solidago gigantea	15	<b>✓</b>	20.5%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Poa palustris	10		13.7%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Agrostis gigantea	5		6.8%	FACW	in neight.
6. Leucanthemum vulgare	3		4.1%	UPL	Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	73	= Tc		-	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	_				species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0		0.0%		-
5			0.0%		Hydrophytic
6.		Ш	0.0%		Vegetation Present? Yes No No
	0	= To	otal Cove	r	Trosont:
Remarks: (Include photo numbers here or on a separate sheat Hydrophytic vegetation indicators present as dominance test $> 50\%$ ,		oecie	es are FAC\	W and FACL	J.

Upland 031
Sampling Point:

Soil

upl-bl-20200602-07

(inches)		Matrix				edox Featu	1 -			_	
0-2	Color	(moist) 4/3	100	Color	(moist)	%	Type	Loc <sup>2</sup>	Texture Silt Loam	Rer	narks
2-9	10YR	4/4	80	10YR	3/2	20	D -		Sandy Loam		
_						_					
9-15	10YR	5/3	60	10YR	6/2	40	D	М	Sandy Clay Loam		
					•						
		`			`	_			`		
		2	DM D	1.5.4 . 1 . 2	00.0		1616	21	See Bl. Beer History M. Mai	1.2	
		D=Depletic	n. RIVI=Real	ucea Matrix,	CS=Cover	ed or Coate	ed Sand Grair	ns <sup>2</sup> Locat	ion: PL=Pore Lining. M=Ma		
ydric Soil Ir ] Histosol (A				□ Dar	k Surface	(57)			Indicators for Proble		c Soils <sup>3</sup> :
Histic Epip						. ,	(S8) (MLRA 1	47.148)	2 cm Muck (A10)	(MLRA 147)	
Black Histi							/ILRA 147, 14		Coast Prairie Redo (MLRA 147,148)	x (A16)	
_	Sulfide (A4)	)		Loar	my Gleyed	Matrix (F2)	)		Piedmont Floodpla	in Soils (E10)	
	Layers (A5)				leted Matr				(MLRA 136, 147)	1111 30113 (1 17)	
2 cm Muck	k (A10) (LRF	RN)				urface (F6)			Very Shallow Dark	Surface (TF1	12)
	Below Dark		11)	Depleted Dark Surface (F7)				Other (Explain in F	Remarks)		
-	k Surface (A					sions (F8)	(F12) (LRR N				
Sandy Mud MLRA 147	ck Mineral ( ', 148)	S1) (LRR N	٧,	MLR	-iviarigarie A 136)	se Masses (	(F 12) (LKK N	,			
Sandy Gleyed Matrix (S4)  Umbric Surface (F13) (MLRA 136, 122)					2						
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148)					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,						
☐ Stripped M	Matrix (S6)			Red	Parent Ma	aterial (F21)	) (MLRA 127	, 147)	unless disturbed or problematic.		
estrictive La	aver (if ohs	served).									
00111011110 20	ayo. ( oo:										
Type:									Hydric Soil Present?	Yes O	No •
Type: Depth (inch	nes):										
Depth (inch	nes):										
Depth (inchemarks:		present.									
Depth (inch		present.									
Depth (inchemarks:		present.									
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Depth (inch		present.									
Depth (inch		present.									
		present.									
Depth (inch		present.									
Depth (inchemarks:		present.									
Depth (inchemarks:		present.									

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 032ab

Site: Crook	sville-North Newark 138 kV Transmission Line Rebuild Pro	oject	<b>Date:</b> June 2, 2020
Wetland:	w-bl-20200602-07		Rater: BL, SM
0 0	Metric 1. Wetland Area (size). (max 6 pts)		
Subtotal Points	<del></del>		
	>50 acres (>20.2ha) (6 pts)		
	25 to <50 acres (10.1 to <20.2ha) (5 pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 pts)		
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)		
	10.1 acies (0.04iia) (0 pis)		
11 11	Metric 2. Upland buffers and surrounding land u	ıse. (ma	x 14 pts)
Subtotal Points	<b>-</b>	•	. ,
	x WIDE. Buffers average 50m (164ft) or more arour		d perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <1	164ft) arou	ind wetland perimeter (4)
	NARROW. Buffers average 10m to <25m (32ft to	<82ft) ard	ound wetland perimeter (1)
	VERY NARROW. Buffers average <10m (<32ft) a	around wet	tland perimeter (0)
	2b. Intensity of surrounding land use (select one or double check		
	VERY LOW. 2nd growth or older forest, prairie, sa		
	x LOW. Old field (>10 years), shrubland, young sec		
	x MODERATELY HIGH. Residential, fenced pasture		
	HIGH. Urban, industrial, open pasture, row croppii	ng, mining	, construction. (1)
25.5 14.5	Metric 3. Hydrology. (max 30 pts)		
Subtotal Points		2h (	Connectivity. Score all that apply.
Sublotal Follits	High pH groundwater (5)	3 <i>D.</i> [	100 year floodplain (1)
	x Other groundwater (3)	ŀ	Between stream/lake and other human use (1)
	x Precipitation (1)		x Part of wetland/upland (e.g. forest), complex (1)
	Seasonal/Intermittent surface water (3)		Part of riparian or upland corridor (1)
	Perennial surface water (lake or stream) (5)	L	
		3d. L	Duration inundation/saturation.
	3c. Maximum water depth. Select only 1.		(select one or double check & average)
	>0.7 (27.6in) (3)		Semi- to permanently inundated/saturated (4)
	0.4 to 0.7m (15.7 to 27.6in) (2)		Regularly inundated/saturated (3)
	x <0.4m (<15.7in) (1)		x Seasonally inundated (2)
		L	x Seasonally saturated in upper 30cm (12in) (1)
	3e. Modifications to natural hydrologic regime.		Check all disturbances observed
	(select one or double check & average)		
	None or none apparent (12)		
	x Recovered (7)	l di	_ 33.53
	Recovering (3)		
	Recent or no recovery (1)		tormwater input
			Other-list
34.5 9	Metric 4. Habitat Alteration and Development. (	max 20	pts.)
Subtotal Points	<u></u>		
	None or none apparent (4)	Ū	
	x Recovered (3)	4c.	Habitat alteration. Score one or double check and average.
	Recovering (2)		None or none apparent (9)
	Recent or no recovery (1)		Recovered (6)
			x Recovering (3)
	4b. Habitat development. Select one.		Recent or no recovery (1)
	Excellent (7)	-4 1	
	voly good (o)	sturband	ces observed
	Good (5)		shrub/sapling removal
	Moderately good (4)		herbaceous/aquatic bed removal
	x Fair (3)		sedimentation
	Poor to fair (2)	0	dredging
	Poor (1) woody debris		☐ farming
	toxic pollutan	nts	nutrient emrichment

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 032ab

Site: Crooksville	e-North Newark	138 kV Transmission Line Rebuil	Date:	June 2, 2020			
Wetland: w-b	bl-20200602-07		Rater:	BL, SM			
34.5 subtotal first p	page						
34.5 0	Metric 5. Sp	ecial Wetlands. (max 10 pts.)					
Subtotal Points	Check all that app	<u>oly and score as indicated</u>					
		Bog (10 pts)					
		Fen (10 pts)					
		Old Growth Forest (10 pts)					
		Mature forested wetland (5 pts)	And a Karal Income a	(40 - 4-)			
		Lake Erie coastal/tributary wetland-unres	-				
		Lake Erie coastal/tributary wetland-restri		y (5 pis)			
		Lake Plain Sand Prairies (Oak Openings Relict Wet Prairies (10 pts)	) (TO pts)				
		Known occurrence state/federal threaten	ed or endand	ered species (10)			
		Significant migatory songbird/waterfowl h	_				
		Category 1 Wetland. See Question 1 of					
40.5 6	Metric 6. Pla	int Communities, interspersion,	, microtop	ography. (max 20 pts.)			
Subtotal Points		<u>letation Communities</u>					
	Score all present	using 0 to 3 scale	Vegetatio	n Community Cover Scale			
		Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area			
	0	Emergent					
	0	Shrub Forest	1	Present and either comprises small part of wetland's vegetation and is			
		Mudflats	Į.	of moderate quality, or comprises a significant part but is of low quality			
		Open water		Dragant and either comprises significant part of wetland's vegetation			
		Other (list)	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high			
				quality			
	6b. Horizontal (p	lan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation			
	Select only one	1	3	and is of high quality			
		High (5)	N1	D			
		Moderately high (4)	Narrative	Description of Vegetation Quality			
		Moderate (3)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species			
		Moderately low (2) Low (1)					
	X	None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,			
		1110110 (0)	moderate	and species diversity moderate to moderately high, but generally w/o			
	6c. Coverage of	invasive plants.		presence of rare threatened or endangered spp			
	Refer to Table 1	ORAM long form for list.		A predominance of native species, with nonnative spp and/or			
	Add or deduct po	ints for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp			
		Extensive >75 % cover (-5)	high	diversity and often, but not always, the presence of rare, threatened, or			
		Moderate 25-75% cover (-3)		endangered spp			
		Sparse 5-25% cover (-1)	N4	ad Ones Meter Olese Ovelto			
		Nearly Absent <5% cover (0)		nd Open Water Class Quality			
	Х	Absent (1)	1	Absent <0.1 ha (0.2471 acres)  Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)			
			2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)			
	6d. Microtopogra	anhv	3	High 4 ha (9.88 acres) or more			
		using 0 to 3 scale	<u> </u>	ing. The (clos delect) of more			
	1	Vegetated hummocks/tussocks	Microtopo	ography Cover Scale			
	0	Coarse woody debris >15 cm (6")	0	Absent			
	0	Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality			
			2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality			
			3	Present in moderate or greater amounts and of highest quality			



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 032a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 032a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 032a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 032a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 032a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 032b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing North



### Wetland 032b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

**Project No.** 60616110

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Wetland 032b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing South



### Wetland 032b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 032b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit



#### Wetland 033

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: w-bl-20200602-06
Investigator(s): BL, SKM	Section, Township, Range: S 27 T 17N R 15W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): concave Slope: 2.0 % / 63.4 °
Subregion (LRR or MLRA): LRR N Lat.:	39.83729 Long.: -82.18179 Datum: NAD83
Soil Map Unit Name: Bethesda-Pits, surface mine complex, 25 to 70 p	percent slopes, unreclaimed NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 significantl	ly disturbed? Are "Normal Circumstances" present? Yes 🇿 No 🔾
Are Vegetation 🔲 , Soil 🗹 , or Hydrology 🔲 naturally pr	oroblematic? (If needed, explain any answers in Remarks.)
	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area  yes No O
Wetland Hydrology Present? Yes   No	within a Wetland?
problematic soils. Wetland extends to north outside study area and c	ated in pasture. Wetland is located in a previously strip-mined area = drains south to ephemeral stream 039 (s-bl-20200602-03) (potentially isolated).
Hydrology	
Water Marks (B1) Sediment Deposits (B2) Presence of Reduce Recent Iron Reduct Thin Muck Surface Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations:	Dodor (C1)  Prainage Patterns (B10)  Peres along Living Roots (C3)  Moss Trim Lines (B16)  Pry Season Water Table (C2)  Which in Tilled Soils (C6)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
Surface Water Present? Yes No Depth (inches):	0
Water Table Present? Yes O No O Depth (inches):	- Var 🙆 Na 🔾
Saturation Present? (includes capillary fringe)  Yes No   Depth (inches):	Wetland Hydrology Present? Yes ● No ○
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:
Remarks:	
	v source of hydrology is concentration of precipitation and surface runoff into 0200602-03 that flows south outside study area.

			ominant		Sampling Point: <b>w-bl-20200602-06</b>
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	JI.Otiat.	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:  6 (A)
2	0		0.0%		Total Number of Dominant
3	0		0.0%		Species Across All Strata:6(B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		That Are OBE, FACW, OF FAC.
7	0	$\square$	0.0%		Prevalence Index worksheet:
8	0	Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )	0	= Tc	otal Cover		OBL speci es 35 x 1 = 35
1. Liquidambar styraciflua	5	<b>✓</b>	55.6%	FAC	FACW species $45$ x 2 = $90$
2. Acer rubrum		<b>✓</b>	22.2%	FAC	FAC speci es x 3 =60
Fraxinus pennsylvanica		<b>✓</b>	22.2%	FACW	FACU speci es $\frac{5}{}$ x 4 = $\frac{20}{}$
4.			0.0%		UPL speci es x 5 =
5.			0.0%		Column Totals: <u>105</u> (A) <u>205</u> (B)
6.			0.0%		Prevalence Index = B/A = 1.952
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0	$\Box$	0.0%		data in Remarks or on a separate sheet)
2.	0	$\Box$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	20	<b>✓</b>	20.8%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding
Carex vulpinoidea     Agrimonia parviflora	20		20.8%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Agrimonia parviflora     Scirpus atrovirens	15	<b>✓</b>	15.6%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
Juncus effusus	10	П	10.4%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Euthamia graminifolia	10		10.4%	FAC	in height.
6. Agrostis gigantea	10		10.4%	FACW	Fire We notation Charter
7. Medicago lupulina	5		5.2%	FACU	Five Vegetation Strata:
8. Rumex crispus	3		3.1%	FAC	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9. Cyperus strigosus	3		3.1%	FACW	diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	96	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0	$\Box$	0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0	$\Box$	0.0%		Woody vines – Consists of all woody vines, regardless of
3	0	$\Box$	0.0%		height.
4 5	0		0.0%		
5	0		0.0%		Hydrophytic Vegetation
U	0	, ت Tr =	otal Cover		Present? Yes No
Demorks, (Include place a visible as Inc.		1 (	a. oove		l
Remarks: (Include photo numbers here or on a separate sheethydrophytic vegetation indicator present dominance test > 50%, dominance		es ar	e OBL, FAG	CW and FAC	

Soil Sampling Point: w-bl-20200602-06

Profile Descr	iption: (De	escribe to	the depth	needed to	documen	t the indic	cator or co	nfirm the a	absence of indicator	s.)			
Depth Matrix Redox Features				ures									
(inches)	Color	(moist)	%	Color	(moist)	%	Tvpe_1	Loc <sup>2</sup>	Texture	Rem	narks		
0-3	10YR	2/2	90	10YR	3/4	20	. C	PL	Silt Loam				
3-16	10YR	5/1	80	10YR	5/6	20	С	PL	Sandy Clay Loam	distinct r concentrat			
		`			•	1	1			`			
										'			
						-				4			
										4			
										4			
			-						. ——	·			
							_			· · · · · · · · · · · · · · · · · · ·			
										<del>.</del>			
<sup>1</sup> Type: C=Con	centration.	D=Depletio	on. RM=Red	uced Matrix.	CS=Cover	ed or Coate	ed Sand Gra	nins <sup>2</sup> Loca	tion: PL=Pore Lining.	M=Matrix			
Hydric Soil I											0 11 3		
Histosol (				□ Darl	k Surface (	(S7)				Problematic Hydric	Soils ":		
	pedon (A2)						(S8) (MLRA	147 148)	2 cm Muck	(A10) (MLRA 147)			
Black Hist							VLRA 147, 1			e Redox (A16)			
	Sulfide (A4	)				Matrix (F2		1 10)	(MLRA 147,	,			
	Layers (A5)				leted Matr		.)			oodplain Soils (F19)			
	k (A10) (LR			_		urface (F6)				(MLRA 136, 147)			
	Below Dark		111)			Surface (F			<ul><li>✓ Very Shallow Dark Surface (TF12)</li><li>✓ Other (Explain in Remarks)</li></ul>				
	k Surface (A	•	(11)		ox Depres		,						
	ck Mineral		VI				(F12) (LRR	N,					
MLRA 147	7, 148)	(51) (21111)	*1	MLR	A 136)								
Sandy Gle	yed Matrix	(S4)		Uml	oric Surfac	e (F13) (M	LRA 136, 12	22)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
✓ Sandy Re	dox (S5)			Pied	lmont Floc	dplain Soil:	s (F19) (ML	RA 148)					
Stripped N	Matrix (S6)			Red	Parent Ma	aterial (F21	) (MLRA 12	7, 147)					
Dootslativa	over (if ob	con (ad).											
Restrictive La	ayer (II ob	serveu):											
Type:	hos):								Hydric Soil Prese	nt? Yes •	No O		
Depth (incl													
Remarks:													
	dicator pre	esent as c	depleted m	atrix in sand	dy soils s	tarting les	ss than or	equal to 6	" depth with distinc	t redox concentra	tions as pore		
linings.													

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 033

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project | Date: June 2, 2020

	ilie-North Newark 138 KV Transmission Li	ne Rebuild Project	<b>Date:</b> June 2, 2020
Wetland:	w-bl-20200602-06		Rater: BL, SM
1 1 Subtotal Points	Metric 1. Wetland Area (size). (max Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha  10 to <25 acres (4 to <10.1ha) (4  3 to <10 acres (1.2 to <4ha) (3 pt  0.3 to <3 acres (0.12 to <1.2ha) (  x 0.1 to <0.3 acres (0.04 to <0.12h  <0.1 acres (0.04ha) (0 pts)	) (5 pts) ; pts) ts) (2pts)	
12 11 Subtotal Points	Metric 2. Upland buffers and surrou  2a. Calculate average buffer width (select one.  X WIDE. Buffers average 50m (16 MEDIUM. Buffers average 25m NARROW. Buffers average 10m VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select one.)  VERY LOW. 2nd growth or older  X LOW. Old field (>10 years), shru  MODERATELY HIGH. Residenti HIGH. Urban, industrial, open pa	do not double check) 4ft) or more around wetlan to <50m (82 to <164ft) aroun to <25m (32ft to <82ft) ar ge <10m (<32ft) around we the or double check & avera r forest, prairie, savannah, tibland, young second grow tial, fenced pasture, park, co	and perimeter (7)  nund wetland perimeter (4)  round wetland perimeter (1)  etland perimeter (0)  age)  wildlife area, etc. (7)  with forest. (5)  conservation tillage, new fallow field. (3)
24 12 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  X Precipitation (1)  Seasonal/Intermittent surface wa Perennial surface water (lake or state of the state of th	tter (3) stream) (5)  3d.	Connectivity. Score all that apply.  100 year floodplain (1) Between stream/lake and other human use (1)  x Part of wetland/upland (e.g. forest), complex (1)  part of riparian or upland corridor (1)  Duration inundation/saturation.  (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) x Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch  point source (nonstormwater) dike  filling/grading tile  road bed/RR track weir  dredging stormwater input other- list
33 9 Subtotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or doub.  None or none apparent (4)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  X Fair (3)  Poor to fair (2)  Poor (1)	ole check and average.	Dipts.)  Habitat alteration. Score one or double check and average.  None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)  nces observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

Site: Crooksville-	-North Newark 138 kV Transmission Line Rebui	Date:	June 2, 2020									
	1-20200602-06	Rater:	BL, SM									
	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,									
33 subtotal first pa	age											
33 0	Metric 5. Special Wetlands. (max 10 pts.)											
Subtotal Points	Check all that apply and score as indicated											
	Bog (10 pts)											
	Fen (10 pts)											
	Old Growth Forest (10 pts)											
	· · · · · ·	Mature forested wetland (5 pts)  Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)										
	Lake Erie coastal/tributary wetland-resti	-										
	Lake Plain Sand Prairies (Oak Opening		y (o pis)									
	Relict Wet Prairies (10 pts)	(10 pts)										
	Known occurrence state/federal threate	ned or endand	pered species (10)									
	Significant migatory songbird/waterfowl	_										
	Category 1 Wetland. See Question 1 o											
37 4	Metric 6. Plant Communities, interspersion	n, microtop	ography. (max 20 pts.)									
Subtotal Points	6a. Wetland Vegetation Communities											
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale									
	0 Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area									
	1 Emergent		, , ,									
	0 Shrub		Present and either comprises small part of wetland's vegetation and is									
	0 Forest	1	of moderate quality, or comprises a significant part but is of low quality									
	0 Mudflats											
	0 Open water	2	Present and either comprises significant part of wetland's vegetation									
	Other (list)	2	and is of moderate quality or comprises a small part and is of high quality									
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation									
	Select only one	3	and is of high quality									
	High (5)	Mannathra	Description of Versetation Quality									
	Moderately high (4)	Narrative	Description of Vegetation Quality									
	Moderate (3)  Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species									
	x Low (1)											
	None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,									
		moderate	and species diversity moderate to moderately high, but generally w/o									
	6c. Coverage of invasive plants.		presence of rare threatened or endangered spp									
	Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or									
	Add or deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp									
	Extensive >75 % cover (-5)	mgn	diversity and often, but not always, the presence of rare, threatened, or									
	Moderate 25-75% cover (-3)		endangered spp									
	Sparse 5-25% cover (-1)	NA £ 4										
	Nearly Absent <5% cover (0)		nd Open Water Class Quality									
	x Absent (1)	1	Absent <0.1 ha (0.2471 acres)									
		2	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)  Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)									
	6d Microtonography	3	High 4 ha (9.88 acres) or more									
	6d. Microtopography Score all present using 0 to 3 scale		1a (0.00 d0100) of filoro									
	1 Vegetated hummocks/tussocks	Microtope	ography Cover Scale									
	0 Coarse woody debris >15 cm (6")	0	Absent									
	0 Standing dead > 25 cm (10") dbh	1	Present very small amounts or if more common of marginal quality									
	0 Amphibian breeding pools		. 1995. 1979 official difficulties of it more common of marginal quality									
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality									
		3	Present in moderate or greater amounts and of highest quality									



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 033

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 033

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

### Wetland 033

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing South



### Wetland 033

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing West





Site Location:

AEP Crooksville-North Newark 138 kV Transmission Line Rebuild Project

**Project No.** 60616110

Wetland 033

**Client Name:** 

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit



#### Wetland 034a

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

Project/Site: Crooksville-North Newark 138 kV Transmission	Line City/County:	Perry	Sampling Date: <u>02-Jun-20</u>
Applicant/Owner: AEP		State: OH	Sampling Point: w-bl-20200602-05a
Investigator(s): BL, SKM	Section, Town	nship, Range: S 27	T 17N R 15W
Landform (hillslope, terrace, etc.):	Local relief (cor	ncave, convex, none):	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.84001	Long.: -82.1	8585 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethesda silt loam, 0 to 8	percent slopes, reclaimed	NWI	classification: N/A
Are climatic/hydrologic conditions on the site typical for t	this time of year? Yes	No O (If no, explain in	
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲	significantly disturbed?	Are "Normal Circumsta	ances" present? Yes 💿 No 🔾
Are Vegetation ☐ , Soil ✔ , or Hydrology ☐	naturally problematic?	(If needed, explain any	y answers in Remarks.)
Summary of Findings - Attach site map s	showing sampling po	int locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present? Yes   No			
Hydric Soil Present? Yes • No •		Sampled Area Yes   N	No ()
Wetland Hydrology Present? Yes   No	within	a Wetland?	
Sample point in for wetland 034a, PEM component of lopen field of ROW. Wetland fully delineated, located action pond to a stream (potentially isolated).  Hydrology			
Wetland Hydrology Indicators:			
High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift deposits (B3)  Hyc  Oxi  Pre	that apply) the Aquatic Plants (B14) drogen Sulfide Odor (C1) dized Rhizospheres along Living Resence of Reduced Iron (C4) tent Iron Reduction in Tilled Soils on Muck Surface (C7) ther (Explain in Remarks)	Sparse  Draina  Roots (C3)  Moss 1  Dry Se  (C6)  Crayfis  Satura  Stunte  Geome Shallov  Microte	ce Soil Cracks (B6) cely Vegetated Concave Surface (B8) cage Patterns (B10) Trim Lines (B16) ceason Water Table (C2) csh Burrows (C8) cation Visible on Aerial Imagery (C9) cel or Stressed Plants (D1) corphic Position (D2) w Aquitard (D3) copographic Relief (D4) ceutral Test (D5)
	epth (inches): 0		
Water Table Present? Yes ○ No • D	epth (inches):		
Saturation Present?	epth (inches):	Wetland Hydrology Pres	sent? Yes • No O
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well		ections), if available:	
Remarks:			
Multiple primary and secondary hydrology indicators prearea and overflow from agricultural pond p-bl-20200602 north, potentially isolated.			

			minant		Sampling Point: w-bl-20200602-05a
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	ecies? <b>-</b> I.Strat. ver	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:6(A)
2	0	$\square$	0.0%		Total Number of Deminant
3			0.0%		Total Number of Dominant Species Across All Strata:6(B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		Inat Are OBL, FACW, or FAC:
7	0		0.0%		Prevalence Index worksheet:
8	0	Ц,	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )		= To	tal Cover	•	0BL speci es <u>30</u> x 1 = <u>30</u>
4 Alexandra et attenda	15	<b>✓</b>	51.7%	FACW	FACW speci es <u>62</u> x 2 = <u>124</u>
1. Alnus qlutinosa			17.2%	FAC	FAC species <u>20</u> x 3 = <u>60</u>
2. Acer rubrum		$\Box$	17.2%	FAC	FACU speci es x 4 =
3. Liquidambar styraciflua		Π,	6.9%	UPL	UPL speci es $\frac{2}{x}$ x 5 = $\frac{10}{x}$
4. Elaeagnus umbellata		Η.	6.9%	FACW	Column Totals:114 (A)224 (B)
5. Ulmus americana		Η.	0.9%	FACW	of anni fotal of (i)
6		Η,			Prevalence Index = B/A = 1.965
7			0.0%		Hydrophytic Vegetation Indicators:
8		Η.	0.0%		Rapid Test for Hydrophytic Vegetation
9		Η.	0.0%		✓ Dominance Test is > 50%
10		Ц,	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0	$\sqcup$	0.0%		data in Remarks or on a separate sheet)
2	0	$\sqsubseteq$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3	0	$\sqcup$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4	0	Ц,	0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6	0		0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5'r )	0	= To	tal Cover	-	of height.
1. Scirpus atrovirens	20	<b>✓</b>	23.5%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Elymus virginicus	20	<b>v</b>	23.5%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Carex vulpinoidea	10	<b>v</b>	11.8%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Juncus effusus	10	<b>✓</b>	11.8%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Scirpus cyperinus	10	<b>v</b>	11.8%	FACW	in height.
6. Dichanthelium clandestinum	5		5.9%	FAC	Eivo Vogotation Strata
7. Solidago gigantea	5		5.9%	FACW	Five Vegetation Strata:
8. Juncus tenuis	5		5.9%	FAC	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum - Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	85	= To	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0	Щ	0.0%		in height.
3	0	닏.	0.0%		Woody vines – Consists of all woody vines, regardless of height.
4		$\sqcup$	0.0%		noigne
5	0	$\sqsubseteq$	0.0%		Hydrophytic
6	0	$\sqcup$	0.0%		Vegetation Vegetation
	0	= Tc	otal Cove	r	Present? Yes V No V
Remarks: (Include photo numbers here or on a separate shee	et.)				
Hydrophytic vegetation indicators present as rapid test, dominant spe	ecies are OB	L and	FACW		

Soil Sampling Point: w-bl-20200602-05a

Profile Descri	ption: (De	escribe to	the depth	needed to	documen	t the indic	cator or con	ifirm the a	bsence of indicators.)		
Depth		Matrix				edox Feat	1				
(inches) 0-2	Color 2.5Y	(moist) 3/2	<u>%</u> 100	Color_	(moist)	%_	Type	Loc <sup>2</sup>	Texture Sandy Loam	Remarks	
2-12	2.5Y	6/1	80	2.5Y	5/6	20		PL	Sandy Clay Loam	prominent redox	
	2.31	0/1		2.31	370				Salidy Clay Loani	concentrations in PL and M	
			on. RM=Red	uced Matrix,	CS=Cover	ed or Coat	ed Sand Grai	ns <sup>2</sup> Locat	tion: PL=Pore Lining. M	=Matrix	
Hydric Soil Ir									Indicators for Pro	oblematic Hydric Soils <sup>3</sup> :	
Histosol (A Histic Epip Black Histic	edon (A2) c (A3)			Poly	n Dark Surf	ow Surface face (S9) (I	(S8) (MLRA 1		2 cm Muck (A Coast Prairie F (MLRA 147,14	10) (MLRA 147) Redox (A16)	
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N)			Dep	leted Matr	Matrix (F2 ix (F3) urface (F6)	()		Piedmont Floodplain Soils (F19) (MLRA 136, 147)  Very Shallow Dark Surface (TF12)			
Thick Dark	<ul> <li>□ Depleted Below Dark Surface (A11)</li> <li>□ Thick Dark Surface (A12)</li> <li>□ Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)</li> <li>□ Sandy Gleyed Matrix (S4)</li> </ul>		Red	lox Depres n-Mangane		(F12) (LRR N	١,	Other (Explain in Remarks)			
MLRA 147			1 4,	MLF	RA 136)		LRA 136, 122				
Sandy Red	lox (S5)	(6.1)					s (F19) (MLR ) (MLRA 127		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive La Type: Depth (inch		served):							Hydric Soil Present	? Yes ● No ○	
Remarks: Hydric soil ind linings.	licator pre	esent as c	depleted m	atrix in san	dy soils s	tarting le	ss than or e	equal to 6'	" depth with distinct r	redox concentrations as pore	

#### Wetland 034b

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

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: w-bl-20200602-05b
Investigator(s): BL, SKM	Section, Township, Range: S 27 T 17N R 15W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): concave Slope: 1.0 % / 45.0 °
Subregion (LRR or MLRA): LRR N Lat.	: 39.8383 Long.: -82.1835 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethesda silt loam, 0 to 8 percent slo	pes, reclaimed NWI classification: PUBGx
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes   No (If no, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significan	ntly disturbed? Are "Normal Circumstances" present? Yes 🏵 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No	
Hydric Soil Present? Yes   No	Is the Sampled Area Yes   No
Wetland Hydrology Present? Yes   No	within a Wetland?
open field (PEM) of ROW. Wetland fully delineated, located across  Hydrology	reclaimed strip mined land, soils = problematic. Potentially isolated.
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plan	
High Water Table (A2) Hydrogen Sulfide	
	heres along Living Roots (C3) Moss Trim Lines (B16)
✓ Water Marks (B1) Presence of Redu	
	uction in Tilled Soils (C6)
✓ Drift deposits (B3) ☐ Thin Muck Surface  Algal Mat or Crust (B4) ☐ Other (Explain in	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	✓ FAC-neutral Test (D5)
Field Observations: Surface Water Present?  Yes No Depth (inches):	0
Water Table Present? Yes No Depth (inches):	
Saturation Present?  (includes conillary friege)  Yes O No O Depth (inches):	Wetland Hydrology Present? Yes  No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photostream)	· · · · · · · · · · · · · · · · · · ·
Remarks:	
	ry source of hydrology is overflow from agricultural pond p-bl-20200602-02, pond
appears to drain to north via overland flow to possible drainage feat	ture going to north, potentially isolated.

			ominant		Sampling Point: w-bl-20200602-05b
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:2 (A)
2	0		0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata: 2 (B)
4			0.0%		S. I. C. I. I. Charatta
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		That Are obe, Thow, or The.
7			0.0%		Prevalence Index worksheet:
8		$\Box$	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	)	= 10	otal Cover		0BL speci es <u>5</u> x 1 = <u>5</u>
1. Fraxinus pennsylvanica	30	<b>✓</b>	65.2%	FACW	FACW species $70 \times 2 = 140$
2. Alnus glutinosa	5		10.9%	FACW	FAC speci es $20 \times 3 = 60$
3. Acer rubrum	5		10.9%	FAC	FACU speci es $\frac{9}{15}$ x 4 = $\frac{36}{15}$
4. Prunus serotina			6.5%	FACU	UPL speci es $\frac{3}{}$ x 5 = $\frac{15}{}$
5. Elaeagnus umbellata			6.5%	UPL	Col umn Total s:107 (A)256 (B)
6.			0.0%		Prevalence Index = B/A =2.393
7			0.0%		Hydrophytic Vegetation Indicators:
8.			0.0%		Rapid Test for Hydrophytic Vegetation
9.			0.0%		✓ Dominance Test is > 50%
10	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	46	= Tc	otal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0_		0.0%		data in Remarks or on a separate sheet)
2.			0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r )	0 :	= Tc	otal Cover		of height.
1. Elymus virginicus	30	<b>✓</b>	51.7%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Dichanthelium clandestinum	10		17.2%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Agrimonia parviflora	5		8.6%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Toxicodendron radicans	5		8.6%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Scirpus atrovirens	5		8.6%	OBL	in neight.
6. Asclepias syriaca	3		5.2%	FACU	Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8			0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).  Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	58=	= Tc	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1. Parthenocissus quinquefolia	3		100.0%	FACU	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4			0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation Ves (A) No (C)
	3	= To	otal Cover	-	Present? Yes VIVO
Remarks: (Include photo numbers here or on a separate shee Hydrophytic vegetation indicators present as rapid test, dominant specific vegetation indicators present as rapid test, dominant specific vegetation.)	,	CW			

Soil Sampling Point: w-bl-20200602-05b

Profile Descri	iption: (De	escribe to	the depth	needed to d	documen	t the indic	cator or con	firm the a	bsence of indicators.	.)		
Depth		Matrix				edox Feat	1					
(inches) 0-2	Color_ 10YR	(moist)	100	Color	moist)	%	Tvpe_	Loc <sup>2</sup>	Texture Sandy Loam	Remarks		
2-4	10YR	5/3	100		-				Sandy Clay Loam	promi pont rodov		
4-10	10YR	4/1	80	10YR	6/6	20	C	PL	Sandy Clay Loam	promi nent redox concentrations		
10										gravel		
		`	`									
										·		
					-					<u> </u>		
<sup>1</sup> Type: C=Cond	centration. I	D=Depleti	on. RM=Red	uced Matrix,	CS=Cover	ed or Coate	ed Sand Grai	ns ²Locat	ion: PL=Pore Lining. M	1=Matrix		
Hydric Soil I										roblematic Hydric Soils <sup>3</sup> :		
Histosol (A	<b>A1</b> )			☐ Darl	k Surface	(S7)						
Histic Epip	pedon (A2)			Poly	value Belo	ow Surface	(S8) (MLRA	47,148)		A10) (MLRA 147)		
Black Histi	. ,			Thin	Dark Sur	face (S9) (N	MLRA 147, 14	18)	Coast Prairie (MLRA 147,14			
	Sulfide (A4	)				l Matrix (F2	)			odplain Soils (F19)		
	Layers (A5)				leted Matr				(MLRA 136, 1			
	k (A10) (LR					urface (F6)			☐ Very Shallow Dark Surface (TF12)			
	Below Dark		A11)			Surface (F	7)		Other (Explain in Remarks)			
	k Surface (A					sions (F8)	(E10) (LDD N					
∐ Sandy Mu MLRA 147	ck Mineral ( '. 148)	S1) (LRR	N,	MLR	-Mangane A 136)	ise iviasses	(F12) (LRR N	,				
	yed Matrix	(S4)		Uml	oric Surfac	e (F13) (M	LRA 136, 122	2)				
Sandy Red		(0.)		Piec	lmont Floo	odplain Soil:	s (F19) (MLR	A 148)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Stripped N							) (MLRA 127					
Destriction	(:6	1						-				
Restrictive La  Type:	ayer (II ob:	servea):										
Depth (inch	nes).								Hydric Soil Presen	t? Yes • No O		
Remarks:												
	dicator pro	cont ac	doploted m	atriv in con	dy coile c	tartina la	es than or s	aual to 4'	donth with distinct	rodov concentrations as nore		
linings. Shove	alcator pre el refusal a	t 10" du	e to aravel.	1111X III Saii0	ay sons s	starting les	SS THAIT OF E	qual to 6	depth with distinct	redox concentrations as pore		
g			g									

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Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH	Sampling Point: upl-bl-20200602-06
Investigator(s): BL, SKM	Section, Township, Range: S	27 T 17N R 15W
Landform (hillslope, terrace, etc.): Bench	Local relief (concave, convex, no	one): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR N Lat.:	39.83824 Long	j.: -82.1834 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethesda silt loam, 0 to 8 percent slope	es, reclaimed	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	ear? Yes • No O (If no, e	explain in Remarks.)
Are Vegetation $\ \square$ , Soil $\ \square$ , or Hydrology $\ \square$ significant	ly disturbed? Are "Normal (	Circumstances" present? Yes   No
Are Vegetation $\square$ , Soil $\checkmark$ , or Hydrology $\square$ naturally p	roblematic? (If needed, ex	xplain any answers in Remarks.)
Summary of Findings - Attach site map showing s	ampling point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes • No •		
Hydric Soil Present? Yes No •	Is the Sampled Area	Yes ○ No •
Wetland Hydrology Present? Yes O No •	within a Wetland?	
Remarks:		
Point out to wetland 034 (Upland 032), located about 5 feet east of		Area located on reclaimed strip-mine land =
problematic soils. Not a wetland point, hydric soil and hydrology crit	and not met.	
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	s (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Hydrogen Sulfide (	Odor (C1)	Drainage Patterns (B10)
	eres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)  Presence of Reduct  Only to the April (B2)	` ′	Dry Season Water Table (C2)
	tion in Tilled Soils (C6)	Crayfish Burrows (C8)
	` ′	Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Other (Explain in F	emarks)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	i	Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	l	Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:  Surface Water Present?  Yes No Depth (inches):	0	
		ology Present? Yes O No 💿
(includes capillary fringe) Yes V No Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if availa	ble:
Remarks:		
No hydrology indicators present.		

### Upland 032

			ominant		Sampling Point: upl-bl-20200602-06
	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2	0		0.0%		T. I.I.N. J. C.
3	0		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 66.7% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
7.			0.0%		Prevalence Index worksheet:
8.			0.0%		Total % Cover of: Multiply by:
	0	= Tc	tal Cover		0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )					FACW species 128 x 2 = 256
1. Alnus glutinosa			68.2%	FACW	FAC species 0 x 3 = 0
2. Elaeagnus umbellata			11.4%	UPL	FACU speci es $\frac{40}{100}$ x 4 = $\frac{160}{1000}$
3. Physocarpus opulifolius			11.4%	FACW	UPL species $\frac{15}{2}$ x 5 = $\frac{75}{2}$
4. Rubus occidentalis			5.7%	UPL	· (5)
5. Fraxinus pennsylvanica			3.4%	FACW	Column Totals: <u>183</u> (A) <u>491</u> (B)
6	0	$\square$	0.0%		Prevalence Index = B/A = 2.683
7	0	$\Box$	0.0%		Hydrophytic Vegetation Indicators:
8		Ш	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ш	0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
		$\Box$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2		$\Box$	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3		$\Box$	0.0%		be present, unless disturbed or problematic.
4			0.0%		Definition of Vegetation Strata:
5					Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш,	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: <u>5' r</u> )	0		otal Cover		of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Elymus virginicus	50	✓	52.6%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Alliaria petiolata	20	✓	21.1%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Parthenocissus quinquefolia	10		10.5%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Solidago altissima	10	$\sqcup$	10.5%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Agrimonia parviflora	5		5.3%	FACW	in neight.
6	0		0.0%		Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size: 15' r )	95	= Tc	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb stratum – Consists of all herbaceous (non-woody) plants,
	0		0.0%		including herbaceous vines, regardless of size, and woody
1					species, except woody vines, less than approximately 3 ft (1 m)
2	0 0		0.0%		in height.
3					Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5	0		0.0%		Hydrophytic
6	0	Ц,	0.0%		Vegetation Present? Yes O No O
	0	= To	otal Cover		11035Ht
Remarks: (Include photo numbers here or on a separate sheet Hydrophytic vegetation indicator present dominance test $>$ 50%,	,	es ar	e FACW, F	ACU and UF	PL.

Upland 032

Soil

Sampling Point: upl-bl-20200602-06

Depth -	Matrix			tedox Feat	1			
(inches)	Color (moist)	%	Color (moist)	%_	_Tvpe_	Loc <sup>2</sup> _	Texture	Remarks
0-18	7.5YR 4/6	80	7.5YR 4/2	20	D	M	Sandy Loam	
	<del></del>							
	<u>`</u>		· · · ·					
	· · · · · · · · · · · · · · · · · · ·		<del></del>					
	······							
	· · · · · · · · · · · · · · · · · · ·		<del></del>					
pe: C=Concen	tration. D=Depletio	n. RM=Reduc	ed Matrix, CS=Cove	red or Coat	ed Sand Grai	ns <sup>2</sup> Locati	ion: PL=Pore Lining. M=Ma	trix
dric Soil Ind	icators:						Indicators for Proble	matic Hydric Soils <sup>3</sup> .
Histosol (A1)			☐ Dark Surface	(S7)			2 cm Muck (A10)	
Histic Epiped	lon (A2)		Polyvalue Bel	ow Surface	(S8) (MLRA	147,148)		
Black Histic (	(A3)		☐ Thin Dark Su	rface (S9) (I	MLRA 147, 14	48)	Coast Prairie Redo (MLRA 147,148)	x (A16)
Hydrogen Su	ılfide (A4)		Loamy Gleye	d Matrix (F2	2)		_ `	(E10)
Stratified Lay	vers (A5)		Depleted Mat				Piedmont Floodpla (MLRA 136, 147)	3IN 20IIS (F 19)
2 cm Muck (A			Redox Dark S				Very Shallow Dark	Surface (TE12)
	ow Dark Surface (A	11)	Depleted Dar					
Thick Dark S		11)	Redox Depre		,		Other (Explain in I	Remarks)
	Mineral (S1) (LRR N	ı	☐ Iron-Mangan		(F12) (I RR N	I.		
MLRA 147, 1	48)	١,	MLRA 136)	000 Ma0000	(1.12) (2.111)	• /		
Sandy Gleyed			Umbric Surfa	ce (F13) (N	ILRA 136, 122	2)		
Sandy Redox			Piedmont Flo	odplain Soil	s (F19) (MLR	A 148)	<sup>3</sup> Indicators of	hydrophytic vegetation and
Stripped Mat			Red Parent N				wetland hyd	Irology must be present, sturbed or problematic.
3 Stripped Mat	11/ (30)		Red Falent N	nateriai (i z i	I) (IVILIA 127	, 147)	diffess dis	
strictive Laye	er (if observed):							
Туре:								
Depth (inches	s):						Hydric Soil Present?	Yes ○ No •
marks:								
	dicators procent:	roclaimed r	ning land though	coile boyo	docont do	olonmont	with high chroma matrix	,
Hyuric Soil ill	dicators present,	reciaimeu i	nine iana mougn	SUIIS Have	decent dev	reiopinent	With High Chroma math	ί.

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 034ab

Site: Crook	sville-North Newark 138 kV Transmission Line Rebuild F	Project Date: June 2, 2020			
Wetland:	w-bl-20200602-05	Rater: BL, SM			
4					
1 1	Metric 1. Wetland Area (size). (max 6 pts)				
Subtotal Points					
	>50 acres (>20.2ha) (6 pts)				
	25 to <50 acres (10.1 to <20.2ha) (5 pts)				
	10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts)				
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)				
	x 0.1 to <0.3 acres (0.12 to <1.21a) (2pts)				
	<0.1 acres (0.04ha) (0 pts)				
	10.1 doies (0.04fla) (0 pts)				
12 11	Metric 2. Upland buffers and surrounding land	d use. (max 14 pts)			
Subtotal Points	2a. Calculate average buffer width (select one, do not double check)				
	x WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)				
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)				
	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)				
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)				
	2b. Intensity of surrounding land use (select one or double check & average)				
	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)				
	x LOW. Old field (>10 years), shrubland, young second growth forest. (5)				
	x MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)				
	HIGH. Urban, industrial, open pasture, row crop	pping, mining, construction. (1)			
29 17	Metric 3. Hydrology. (max 30 pts)				
		3b. Connectivity. Score all that apply.			
btotal Points	High pH groundwater (5)	100 year floodplain (1)			
	Other groundwater (3)	x Between stream/lake and other human use (1)			
	x Precipitation (1)	x Part of wetland/upland (e.g. forest), complex (1)			
	Seasonal/Intermittent surface water (3)	Part of riparian or upland corridor (1)			
	x Perennial surface water (lake or stream) (5)	rattor i panari or apiana comaci (1)			
		3d. Duration inundation/saturation.			
	3c. Maximum water depth. Select only 1.	(select one or double check & average)			
	>0.7 (27.6in) (3)	Semi- to permanently inundated/saturated (4)			
	0.4 to 0.7m (15.7 to 27.6in) (2)	Regularly inundated/saturated (3)			
	x <0.4m (<15.7in) (1)	Seasonally inundated (2)			
		x Seasonally saturated in upper 30cm (12in) (1)			
	3e. Modifications to natural hydrologic regime.				
	(select one or double check & average)	Check all disturbances observed ☐ ditch ☐ point source (nonstormwater)			
	None or none apparent (12)				
	x Recovered (7)	_ 3/3// 3			
	Recovering (3)	☐ tile ☐ road bed/RR track ☐ weir ☐ dredging			
	Recent or no recovery (1)				
		stormwater input other- list			
20 0	Metric 4. Habitat Alteration and Development.	(may 20 nte )			
38 9	4a. Substrate disturbance. Score one or double check and average.				
Subtotal Points	None or none apparent (4)	average.			
	x Recovered (3)	4c. Habitat alteration. Score one or double check and average.			
	Recovering (2)	None or none apparent (9)			
	Recent or no recovery (1)	Recovered (6)			
	recent of no recovery (1)	x Recovering (3)			
	4b. Habitat development. Select one.	Recent or no recovery (1)			
	Excellent (7)				
	` ' '	disturbances observed			
	Good (5)	☐ shrub/sapling removal			
	Moderately good (4)	herbaceous/aquatic bed removal			
	x Fair (3)	<u> </u>			
	Poor to fair (2)	¥ =			
	Poor (1)				
	toxic polluta	-			
	toxic points				

Site: Crooksville-	-North Newark 138 kV Transmission Line Rebui	Date:	June 2, 2020			
	ol-20200602-05	Rater:	BL, SM			
	- /		,			
38 subtotal first page						
	38 0 Metric 5. Special Wetlands. (max 10 pts.)					
Subtotal Points	Check all that apply and score as indicated					
	Bog (10 pts)					
	Fen (10 pts)					
	Old Growth Forest (10 pts)  Mature forested wetland (5 pts)					
	Lake Erie coastal/tributary wetland-unre	estricted hydrol	logy (10 pts)			
		Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)				
Lake Plain Sand Prairies (Oak Openings) (10 pts)						
	Relict Wet Prairies (10 pts)	, , ,				
Known occurrence state/federal threaten Significant migatory songbird/waterfowl I			ed or endangered species (10)			
			nabitat or usage (10 pts)			
	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)					
43 Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)						
Subtotal Points	6a. Wetland Vegetation Communities	V4-4!-	- O			
	Score all present using 0 to 3 scale	vegetatio	n Community Cover Scale			
	0 Aquatic bed 1 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area			
	0 Shrub					
	0 Forest	1	Present and either comprises small part of wetland's vegetation and is			
	0 Mudflats		of moderate quality, or comprises a significant part but is of low quality			
	0 Open water		Present and either comprises significant part of wetland's vegetation			
	Other (list)	2	and is of moderate quality or comprises a small part and is of high			
			quality			
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation			
	Select only one		and is of high quality			
	High (5)  Moderately high (4)	Narrativo	Description of Vegetation Quality			
	Moderate (3)	Namative	Low spp diversity and/or predominance of nonnative or disturbance			
	Moderate (3)  Moderately low (2)	low	tolerant native species			
	x Low (1)		Native spp are dominant component of the vegetation, although			
	None (0)		nonnative and/or disturbance tolerant native spp can also be present,			
		moderate	and species diversity moderate to moderately high, but generally w/o			
	6c. Coverage of invasive plants.		presence of rare threatened or endangered spp			
	Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or			
	Add or deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp			
	Extensive >75 % cover (-5)		diversity and often, but not always, the presence of rare, threatened, or endangered spp			
	Moderate 25-75% cover (-3)		ondangorou opp			
	Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality			
	x Absent (1)	0	Absent <0.1 ha (0.2471 acres)			
	/ / Moont (1)	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)			
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)			
	6d. Microtopography	3	High 4 ha (9.88 acres) or more			
	Score all present using 0 to 3 scale	-				
	1 Vegetated hummocks/tussocks	Microtopo	ography Cover Scale			
	0 Coarse woody debris >15 cm (6")	0	Absent			
	0 Standing dead > 25 cm (10") dbh 1 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality			
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality			
		3	Present in moderate or greater amounts and of highest quality			



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 034a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing North



### Wetland 034a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

#### Wetland 034a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing South



# Wetland 034a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 034a

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 2

Soil Pit





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 034b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing North



# Wetland 034b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 034b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing South



# Wetland 034b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 034b

Date:

June 2, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit



#### Wetland 035

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: OH Sampling Point: w-bl-20200602-04
Investigator(s): BL, SKM	Section, Township, Range: S 27 T 17N R 15W
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (concave, convex, none): 5 Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR N Lai	t.: 39.84001 Long.: -82.18585 Datum: NAD83
Soil Map Unit Name: WuE2 - Westmoreland-Guernsey silt loams, 2	25 to 40 percent slopes, eroded NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	f year? Yes   No  (If no, explain in Remarks.)
	antly disturbed? Are "Normal Circumstances" present? Yes 🍑 No 🔾
Are Vegetation 🔲 , Soil 🗹 , or Hydrology 🗌 naturall	y problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes No O	Is the Sampled Area Yes  No O
Wetland Hydrology Present? Yes   No	within a Wetland?
Remarks:  Sample point in for PEM wetland 035. Area is disturbed, heavily e observed along north edge. Wetland is fully delineated, drains via	eroded soils. Soils are shallow and very red (naturally problematic). Coal fines a UDF to southwest offsite to pond, potentially isolated.
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply	
Surface Water (A1)	
High Water Table (A2)  Hydrogen Sulfid	
	spheres along Living Roots (C3) Moss Trim Lines (B16)
	duced Iron (C4)  Dry Season Water Table (C2)
	duction in Tilled Soils (C6)  Crayfish Burrows (C8)  Seturation Visible on Aerial Imageny (C9)
Algal Mat or Crust (B4)  Iron Deposits (B5)  Other (Explain i	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present?  Yes  No  Depth (inches	a. o
	Wetland Hydrology Present? Yes ♥ No ♥
(includes capillary fringe) Yes V No V Depth (inches	s):
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks:	
	ary source of hydrology is concentration of precipitation into low area. Wetland drains
to southwest via upland drainage feature off-site to pond, potentia	

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

			minant ecies? -		Sampling Point: w-bl-20200602-04
	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
	0		0.0%	Status	Number of Dominant Species
1		Η.	0.0%		That are OBL, FACW, or FAC: 3 (A)
2		$\Box$	0.0%		Total Number of Dominant
3		H,	0.0%		Species Across All Strata: 5 (B)
4		$\Box$	0.0%		Percent of dominant Species
5		$\Box$	0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)
6 7			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
	0 :	= To	tal Cover		OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15' r					FACW speci es 65 x 2 = 130
1. Rubus occidentalis	5		38.5%	UPL	FAC speciles <u>5</u> x 3 = <u>15</u>
2. Liquidambar styraciflua	3		23.1%	FAC	FACU speci es $\frac{5}{}$ x 4 = $\frac{20}{}$
3. Hypericum prolificum	3	<b>✓</b>	23.1%	FACU	UPL species $\frac{10}{10} \times 5 = \frac{50}{10}$
4. Liriodendron tulipifera	- 2		15.4%	FACU	Col umn Total s:85 (A)215 (B)
5		$\Box$	0.0%		(i)
6		H	0.0%		Prevalence Index = B/A = 2.529
7		H	0.0%		Hydrophytic Vegetation Indicators:
8		$\Box$	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	$\Box$	0.0%		Dominance Test is > 50%
10		ш,	tal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1		$\mathbb{H}$	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2		$\square$	0.0%		
3			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		$\Box$	0.0%		Definition of Vegetation Strata:
5	0	$\Box$	0.0%		Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ц,	0.0% otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' r</u> )					Sapling/shrub stratum – Consists of woody plants, excluding
1. Scirpus cyperinus	30	✓,	41.7%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Juncus effusus		<b>✓</b>	27.8%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Hypericum canadense		H	13.9%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
4. Rubus setosus	5		6.9%	FACW	in height.
5. Potentilla canadensis		$\exists$	6.9%	UPL	
6. Acer rubrum	2	$\mathbb{H}^{1}$	2.8%	FAC	Five Vegetation Strata:
7	0 0	Η,	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0	$\Box$			ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0	Η,	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0	$\Box$	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11 12	0	$\Box$	0.0%		Shrub stratum – Consists of woody plants, excluding woody
	_	, — To =	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	0	$\Box$	0.0%		species, except woody vines, less than approximately 3 ft (1 m)
2		$\square$	0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4			0.0%		
5			0.0%		Hydrophytic
6	0	$\Box$	0.0%		Vegetation Present? Yes No No
	0	= To	otal Cover		Trosont:

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

Hydrophytic vegetation indicators present as dominance test > 50%, dominant species are FACW, FAC, FACU and UPL. Sphagnum spp. covers 10% of herb stratum, not used in dominance calculations (non-vascular plant).

Soil Sampling Point: w-bl-20200602-04

Profile Descri	iption: (De	escribe to	the depth	needed to	documer	nt the indic	cator or co	nfirm the a	absence of indicators.	)	
Depth		Matrix			R	edox Feat	ures				
(inches)	Color	(moist)	%	Color	(moist)	%		Loc <sup>2</sup>	Texture	Ren	marks
0-3	10YR	5/6	100						Sandy Clay Loam		
3-8	2.5y	4/2	40	2.5y	4/3	40	С	М	Sandy Clay Loam	mixed mat	ri x
		`		10YR	5/8	20	С	PL		promi nent	redox
										concentra	LI OHS
										4	
						_					
										,	
									. ——		
							_			· ·	
<sup>1</sup> Type: C=Cond	centration.	D=Depletio	on. RM=Red	uced Matrix.	CS=Cove	red or Coate	ed Sand Gra	ins <sup>2</sup> Loca	tion: PL=Pore Lining. M	=Matrix	
Hydric Soil I		•									3
Histosol (A				□ Dar	k Surface	(\$7)			Indicators for Pr		c Soils ":
Histic Epip	,					` '	(S8) (MLRA	147 148)	2 cm Muck (A	(MLRA 147)	
Black Histi							VLRA 147, 1		Coast Prairie		
	Sulfide (A4	)				d Matrix (F2		.0)	(MLRA 147,14		
	Layers (A5)				leted Mati		.)		☐ Piedmont Flo (MLRA 136, 1	odplain Soils (F19)	)
2 cm Muck				'		urface (F6)				Dark Surface (TF1	10)
	Below Dark		(11)			k Surface (F			_		12)
	k Surface (A	•	(11)			ssions (F8)	,		✓ Other (Explain	n in Remarks)	
	ck Mineral	,	N.			. ,	(F12) (LRR	N,			
MLRA 147		(31) (EIXIC	٧,	MLF	RA 136)		, , ,				
☐ Sandy Gle	yed Matrix	(S4)		Um Um	bric Surfac	ce (F13) (M	LRA 136, 12	22)	2		
Sandy Red	dox (S5)			☐ Pied	dmont Floo	odplain Soil:	s (F19) (MLF	RA 148)	³ Indicator wetland	s of hydrophytic v I hydrology must t	egetation and ne present
Stripped N	Matrix (S6)			Red	Parent M	laterial (F21	) (MLRA 12	7, 147)		ss disturbed or pro	
5	(16.1										
Restrictive La	ayer (if ob	served):									
Type:									Hydric Soil Presen	t? Yes •	No O
Depth (inch	nes):								11,4110 00111100011	163 0	110 0
Remarks:											
									, redox concentration		
depleted matr	rix in dual	/mixed m	atrix; loca	ion meets	hydrophy	ytic vegeta	ation and h	nydrology (	criteris, deemed a we	tland point with	n disturbed soils.

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP	State: (	OH Sampling Point: upl-bl-20200602-04
Investigator(s): BL, SKM	Section, Township, Range:	S 27 T 17N R 15W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex,	none): convex Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N L	at.: 39.83982 Lo	ong.: -82.185596 Datum: NAD83
Soil Map Unit Name: Bhs4D - Bethesda channery silt loam, 8 to 2	25 percent slopes, unreclaimed	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time (	of year? Yes O No O (If n	o, explain in Remarks.)
		al Circumstances" present? Yes   No
Are Vegetation 🔲 , Soil 🗹 , or Hydrology 🔲 natura	ally problematic? (If needed	l, explain any answers in Remarks.)
Summary of Findings - Attach site map showin	ng sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes O No •		
Hydric Soil Present? Yes No O	Is the Sampled Area	Yes ○ No •
Wetland Hydrology Present? Yes ○ No •	within a Wetland?	
Point out to wetland 035 (Upland 034), about 5' south of bound Not a wetland point, hydrophytic vegetation and hydrology crite		nallow soils previously disturbed at wetland point in.
Hydrology		
Saturation (A3)  Water Marks (B1)  Oxidized Rhize  Presence of R	Plants (B14) fide Odor (C1) pospheres along Living Roots (C3) reduced Iron (C4) reduction in Tilled Soils (C6) rface (C7)	Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  Microtopographic Relief (D4)  FAC-neutral Test (D5)
Surface Water Present? Yes No Depth (inche	es):0	
Water Table Present? Yes O No O Depth (inche Saturation Present? Yes O No O Depth (inche inches)	Wetland Hy	drology Present? Yes O No 🖲
Describe Recorded Data (stream gauge, monitoring well, aerial pl	hotos, previous inspections), if ava	ailable:
Remarks: No hydrology indicators present.		

			ominant		Sampling Point: upl-bl-20200602-04
Tree Stratum (Plot size: 30' r )	Absolute % Cover	Re	JI.Otiat.	Indicator Status	Dominance Test worksheet:  Number of Dominant Species
1			0.0%		That are OBL, FACW, or FAC:  1 (A)
2	0		0.0%		Total Number of Dominant
3	0		0.0%		Species Across All Strata:5(B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)
6			0.0%		That Are OBE, TAGW, OF TAG.
7	0	$\square$	0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' r )		= Tc	otal Cover		0BL speci es x 1 =
Liriodendron tulipifera	10	<b>✓</b>	40.0%	FACU	FACW species $35 \times 2 = 70$
2. Hypericum prolificum	10	<b>✓</b>	40.0%	FACU	FAC speci es x 3 =
3. Rubus occidentalis		<b>✓</b>	20.0%	UPL	FACU speci es $35 \times 4 = 140$
4.			0.0%		UPL speci es $\frac{25}{100}$ x 5 = $\frac{125}{100}$
5.			0.0%		Column Totals: <u>95</u> (A) <u>335</u> (B)
6.			0.0%		Prevalence Index = B/A = 3.526
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators:  Rapid Test for Hydrophytic Vegetation
9			0.0%		Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations <sup>1</sup> (Provide supporting
1	0	$\Box$	0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	0		0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' r )	0	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	20	<b>✓</b>	28.6%	UPL	Sapling/shrub stratum – Consists of woody plants, excluding
0 5	20		28.6%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb stratum – Consists of all herbaceous (non-woody) plants,
Elymus virginicus     Rubus hispidus	10		14.3%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
Hypericum prolificum	10		14.3%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Schizachyrium scoparium	5		7.1%	FACU	in height.
6. Rubus setosus	5		7.1%	FACW	Five Manatation Chuston
7.	0		0.0%		Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r )	70	= Tc	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0	$\Box$	0.0%		Woody vines – Consists of all woody vines, regardless of
3 4	0		0.0%		height.
	0		0.0%		
5 6	0		0.0%		Hydrophytic Vegetation
U	0		otal Cover		Present? Yes No
Remarks: (Include photo numbers here or on a separate shee					
No hydrophytic vegetation indicators present, dominant species are F		and	UPL.		

Soil

Upland 034
Sampling Point: <u>upl-bl-20200602-04</u>

Profile Descr	iption: (Describe to	the depth r	needed to documer	t the indic	ator or cor	nfirm the a	bsence of indicators.)	
Depth	Matrix		R	edox Featı	ures			
_(inches)_	Color (moist)		Color (moist)	%_	Tvpe_	Loc <sup>2</sup> _	Texture	Remarks
0-4	10YR 5/6	80	10YR 4/3		C	M	Sandy Clay Loam	
4-10	2.5Y 4/3	60	10YR 56	40	C	M	Sandy Clay Loam	
10								bedrock
	$\overline{}$							
								·
								-
	<del></del>							
<sup>1</sup> Type: C=Con	centration. D=Depletic	n. RM=Redu	ced Matrix, CS=Cover	ed or Coate	ed Sand Gra	ns <sup>2</sup> Locat	ion: PL=Pore Lining. M=N	Matrix
Hydric Soil I	ndicators:						Indicators for Prob	lematic Hydric Soils <sup>3</sup> :
Histosol (	A1)		☐ Dark Surface	(S7)			2 cm Muck (A10	
Histic Epip	pedon (A2)		Polyvalue Belo	ow Surface	(S8) (MLRA	147,148)		, ,
Black Hist			☐ Thin Dark Sur	face (S9) (N	ЛLRA 147, 1	48)	Coast Prairie Red (MLRA 147,148)	dox (A16)
	Sulfide (A4)		Loamy Gleyed	Matrix (F2	)		Piedmont Floods	plain Soils (F19)
	Layers (A5)		Depleted Mati	ix (F3)			(MLRA 136, 147	
2 cm Muc	k (A10) (LRR N)		Redox Dark S				Very Shallow Da	rk Surface (TF12)
Depleted	Below Dark Surface (A	.11)	Depleted Dark		7)		Other (Explain in	n Remarks)
Thick Dar	k Surface (A12)		Redox Depres					
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR N 7, 148)	١,	☐ Iron-Mangane MLRA 136)	ese Masses	(F12) (LRR I	١,		
Sandy Gle	eyed Matrix (S4)		Umbric Surfac	ce (F13) (M	LRA 136, 12	2)	3	
Sandy Re	dox (S5)		Piedmont Floo	odplain Soils	s (F19) (MLF	RA 148)	Indicators o wetland h	f hydrophytic vegetation and ydrology must be present,
Stripped N	Matrix (S6)		Red Parent M	aterial (F21	) (MLRA 127	', 147)		disturbed or problematic.
Postrictive I	ayer (if observed):							
Type:	ayer (ii observed).							
Depth (inc	hos).						Hydric Soil Present?	Yes ○ No •
	nes)							
Remarks:								
Shovel refusa	al at 10". No hydric :	soil indicato	ers present.					

ORAM v. 5.0 Field Form Quantitative Rating Wetland 035

Site: Crooksville	-North Newark 138 kV Transmission L	ine Rebuild Project	<b>Date:</b> June 2, 2020
Wetland: w-k	ol-20200602-04		Rater: BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (ma  Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2h.  10 to <25 acres (4 to <10.1ha) (  3 to <10 acres (1.2 to <4ha) (3 pt)  0.3 to <3 acres (0.12 to <1.2ha)  0.1 to <0.3 acres (0.04 to <0.12 to <1.2ha)  x <0.1 acres (0.04ha) (0 pts)	a) (5 pts) (4 pts) ots) (2pts)	
11 11 Subtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  X WIDE. Buffers average 50m (1)  MEDIUM. Buffers average 25m  NARROW. Buffers average 10i  VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select of the control of the con	e, do not double check) 64ft) or more around wetlan 1 to <50m (82 to <164ft) aro 1 to <25m (32ft to <82ft) a 1 aage <10m (<32ft) around w 1 around wetlan 1 to <25m (saft) around w 1 around server 1 forest, prairie, savannah 1 ubland, young second grountial, fenced pasture, park, o	nd perimeter (7) pund wetland perimeter (4) around wetland perimeter (1) vetland perimeter (0)  vetland perimeter (0)  vetland perimeter (7)  vetland perimeter (7)  vetland perimeter (8)  vetland perimeter (9)  vetland perimeter (1)  vetland perimeter (1)  vetland perimeter (5)  vetland perimeter (6)  vetland perimeter (7)  vetland perimeter (8)  vetland perimeter (1)  vetland perimeter (2)
18 7 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  x Precipitation (1)  Seasonal/Intermittent surface w Perennial surface water (lake or  3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  x <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime (select one or double check & average None or none apparent (12)  Recovered (7)  x Recovering (3)  Recent or no recovery (1)	ater (3) stream) (5) 3d	. Connectivity. Score all that apply.  100 year floodplain (1) Between stream/lake and other human use (1) x Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1)  Duration inundation/saturation. (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) x Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed   ditch
25 7 Subtotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or dout None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1)  4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	ible check and average.	. Habitat alteration. Score one or double check and average.  None or none apparent (9)  Recovered (6)  X Recovering (3)  Recent or no recovery (1)  nces observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

25 subtotal this page coal fines

ORAM v. 5.0 Field Form	Quantitative Rating		Wetland 035
Site: Crooks	ville-North Newark 138 kV Transmission Line Rebui	Date:	June 2, 2020
Wetland:	w-bl-20200602-04	Rater:	BL, SM
25 subtotal f	Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points	Check all that apply and score as indicated  Bog (10 pts) Fen (10 pts) Old Growth Forest (10 pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-unre Lake Erie coastal/tributary wetland-rest Lake Plain Sand Prairies (Oak Opening Relict Wet Prairies (10 pts) Known occurrence state/federal threate Significant migatory songbird/waterfowl Category 1 Wetland. See Question 1 o	ricted hydrolog (s) (10 pts) ened or endang habitat or usa f Qualitative F	gy (5 pts)  gered species (10)  age (10 pts)  Rating. (-10 pts)
Subtotal Points	6a. Wetland Vegetation Communities Score all present using 0 to 3 scale	Venetatio	on Community Cover Scale
	Aquatic bed  1 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	0 Shrub Forest Mudflats	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
	Open water Other (list)	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
	6b. Horizontal (plan view) interspersion Select only one	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	High (5) Moderately high (4)	Narrative	Description of Vegetation Quality
	Moderate (3) Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
	x Low (1) None (0)  6c. Coverage of invasive plants.	moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
	Refer to Table 1 ORAM long form for list.  Add or deduct points for coverage  Extensive >75 % cover (-5)  Moderate 25-75% cover (-3)	high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp
	Sparse 5-25% cover (-1)  Nearly Absent <5% cover (0)	Mudflat a	and Open Water Class Quality
	x Absent (1)	0	Absent <0.1 ha (0.2471 acres)
		1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	Score all present using 0 to 3 scale	3 Migraton	High 4 ha (9.88 acres) or more
	1 Vegetated hummocks/tussocks	0 WIICTOLOP	ography Cover Scale Absent
	0 Coarse woody debris >15 cm (6") 0 Standing dead > 25 cm (10") dbh 0 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
	<del></del>	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



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 035

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 1

Facing North



# Wetland 035

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 035

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 1

Facing South



# Wetland 035

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 035

Date:

June 2, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission L	ine Rebuild Proje	ect City/Cou	nty: Perry C	ounty	Sampling Date: 06/03/2020
Applicant/Owner: AEP				State: OH	Sampling Point: w-bl-20200603-
Investigator(s): SM, BL		Section, T	ownship, Ra	nge: S 28 T 17N R 15	W
Landform (hillside, terrace, etc.): Shoulder			Local relief (c	concave, convex, none):	concave
Slope (%): 5 Lat: 39.84162		Long: -	82.18770		Datum: WGS 84
Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to	15 percent slc		·	NWI classi	fication: N/A
Are climatic / hydrologic conditions on the site typical	-	-	Yes x		plain in Remarks.)
Are Vegetation, Soil, or Hydrology		•			Yes x No
Are Vegetation, Soil, or Hydrology	<del>-</del> -			plain any answers in Re	
SUMMARY OF FINDINGS – Attach site m	<del>-</del>				•
	No		Sampled A		· ·
	No		n a Wetland?		No
	No		14 110		
Remarks:					
Sampling point for w-bl-20200603-02 point in to PEN Fully delienated. Potentially isolated.	/I Wetland 036	. Wetland is a	ı small wet de	epression at edge of fallo	ow field and grass field drive.
VEGETATION – Use scientific names of pla	ants.				
<u> </u>	Absolute	Dominant	Indicator	T	
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test wo	rksheet:
1.				Number of Dominant	•
2.				Are OBL, FACW, or F	
3. 4.	- ——			Total Number of Dom Across All Strata:	•
4 5.					
5		=Total Cover		Percent of Dominant Are OBL, FACW, or F	•
Sapling/Shrub Stratum (Plot size: 15'	)	· Total Gover		Ale Obe, i Aovv, or i	AC. 100.070 (742)
1	<b>-</b> /			Prevalence Index w	orksheet:
2.				Total % Cover o	
3.				_	x 1 = 60
4.					23 x 2 = 46
5.	· ——			FAC species	0 x 3 = 0
	·=	=Total Cover		FACU species 2	28 x 4 = 112
Herb Stratum (Plot size: 5' )				' <u> </u>	3 x 5 = 15
1. Carex stipata	30	Yes	OBL	·	14 (A) <u>233</u> (B)
2. Scirpus atrovirens	30	Yes	OBL	Prevalence Index	= B/A = 2.04
3. Poa compressa	20	No	FACU		
4. Elymus virginicus	10	No No	FACW	Hydrophytic Vegeta	
5. Agrostis gigantea	10	No No	FACU		r Hydrophytic Vegetation
Lolium perenne     Solidago gigantea	<u>5</u> 3	No No	FACU FACW	X 2 - Dominance To X 3 - Prevalence In	
8. Trifolium repens	3	No	FACU		idex is ≤3.0 I Adaptations¹ (Provide supportir
9. Lamium purpureum	3	No	UPL		ks or on a separate sheet)
10.	. <u> </u>				rophytic Vegetation <sup>1</sup> (Explain)
	114 =	Total Cover			soil and wetland hydrology must
Woody Vine Stratum (Plot size: 30'	)				sturbed or problematic.
1.				Hydrophytic	•
2.				Vegetation	
	·=	=Total Cover		•	XNo
Remarks: (Include photo numbers here or on a sepa	arate sheet.)				
Hydrophytic vegetation indicator present as dominan	ice test > 50%	, dominant sp	ecies are OB	BL.	

US Army Corps of Engineers

SOIL Sampling Point: bl-20200603-

		o the dep				tor or c	onfirm the absence of	of indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u></u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 4/2	95	10YR 4/4	5	<u>C</u>	PL	Loamy/Clayey	sandy to silty clay loam
4-11	10YR 4/1	90	10YR 4/6	10	<u> </u>	PL	Loamy/Clayey	sandy clay loam
11-16	10YR 5/6	70	10YR 5/2	30	D	M	Loamy/Clayey	sandy clay loam
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, N	MS=Mas	ked Sand	Grains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		•	· · · · · · · · · · · · · · · · · · ·					s for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gle	yed Matr	rix (S4)		? Coas	t Prairie Redox (A16)
Histic Ep	pipedon (A2)		Sandy Red	dox (S5)			Iron-N	Manganese Masses (F12)
Black Hi	istic (A3)		Stripped M	•	6)			Parent Material (F21)
	en Sulfide (A4)		Dark Surfa				Very	Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu	-			Other	(Explain in Remarks)
	uck (A10)		Loamy Gle	-				
	d Below Dark Surface	(A11)	X Depleted N	•	,		3	
	ark Surface (A12)		Redox Dar		` '			s of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted [		, ,			nd hydrology must be present,
_	ucky Peat or Peat (S3	)	X Redox De	pressions	s (F8)		unies	s disturbed or problematic.
	Layer (if observed):							
Type:								
Depth (ii	nches):		<u> </u>				Hydric Soil Present	? Yes X No
Remarks:								
	rm is revised from Mic 2018. (https://www.ni							s of Hydric Soils in the United States,
								ore linings, in closed depression subject
to ponding.	'		3				,	,
HYDROLO	OGY							
	drology Indicators:							
	cators (minimum of or	ne is reaui	red check all that	annly)			Secondar	y Indicators (minimum of two required)
X Surface	•	io io roqui	Water-Stai		ves (B9)			ce Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					age Patterns (B10)
X Saturation	` '		True Aqua					Season Water Table (C2)
	larks (B1)		Hydrogen					
Sedimer	nt Deposits (B2)						Crayt	ish Burrows (C8)
			X Oxidized F					ation Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)			Rhizosph	eres on L	iving Ro	oots (C3) Satur	` '
	posits (B3) at or Crust (B4)		X Oxidized F	Rhizospho of Reduc	eres on L ed Iron (	iving Ro	oots (C3) Satur	ation Visible on Aerial Imagery (C9)
Algal Ma			X Oxidized F	Rhizospho of Reduc on Reduct	eres on L ed Iron ( tion in Til	iving Ro	oots (C3) Satur Stunt s (C6) X Geon	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Algal Ma Iron Dep Inundati	at or Crust (B4) posits (B5) on Visible on Aerial In		X Oxidized F Presence of Recent Iro Thin Muck Gauge or V	Rhizospho of Reduct on Reduct Surface Well Data	eres on Leed Iron (tion in Till (C7) a (D9)	iving Ro	oots (C3) Satur Stunt s (C6) X Geon	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Algal Ma Iron Dep Inundati	at or Crust (B4) posits (B5)		X Oxidized F Presence of Recent Iro Thin Muck Gauge or V	Rhizospho of Reduct on Reduct Surface Well Data	eres on Leed Iron (tion in Till (C7) a (D9)	iving Ro	oots (C3) Satur Stunt s (C6) X Geon	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Algal Ma Iron Dep Inundati	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave		X Oxidized F Presence of Recent Iro Thin Muck Gauge or V B8) Other (Exp	Rhizospho of Reduct on Reduct Surface Well Data olain in R	eres on L ced Iron ( tion in Til (C7) a (D9) emarks)	iving Ro	oots (C3) Satur Stunt s (C6) X Geon	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Algal Ma Iron Dep Inundati X Sparsely Field Obser Surface Wat	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Yes	Surface (E	X Oxidized F Presence of Recent Iro Thin Muck Gauge or V B8) Other (Exp	Rhizospho of Reduction Reduction Surface Well Data Dain in R	eres on Led Iron (tion in Till (C7) a (D9) emarks)	iving Ro C4) led Soils	oots (C3) Satur Stunt s (C6) X Geon	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Algal Ma Iron Dep Inundati X Sparsely Field Obser Surface Wat Water Table	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Yes	Surface (I	X Oxidized F Presence of Recent Iro Thin Muck Gauge or N Other (Exp	Rhizospho of Reduct on Reduct Surface Well Data Dain in R Depth (in Depth (in	eres on Leed Iron (tion in Till (C7) a (D9) emarks)	iving Ro	Saturt Stunt S (C6) X Geon X FAC-	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Algal Maler Iron Deput Inundation X Sparsely  Field Obsert Surface Watter Table Saturation P	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Yes Present? Yes	Surface (E	X Oxidized F Presence of Recent Iro Thin Muck Gauge or N Other (Exp	Rhizospho of Reduction Reduction Surface Well Data Dain in R	eres on Leed Iron (tion in Till (C7) a (D9) emarks)	iving Ro	oots (C3) Satur Stunt s (C6) X Geon	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Algal Malor Iron Deputation Inundation X Sparsely  Field Obser Surface Water Table Saturation P (includes ca	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Yes pillary fringe)	Surface (E	X Oxidized F Presence ( Recent Iro Thin Muck 7) Gauge or ( B8) Other (Exp No No X No	Rhizospho of Reduction Reduction Surface Well Data Dain in R Depth (in Depth (in	eres on L leed Iron ( tion in Til (C7) a (D9) emarks) nches): nches): nches):	iving Ro C4) led Soils 4	Saturt Stunt S (C6) X FAC- Wetland Hydrolog	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Algal Malor Iron Deputation Inundation X Sparsely  Field Obser Surface Water Table Saturation P (includes ca	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Yes Present? Yes	Surface (E	X Oxidized F Presence ( Recent Iro Thin Muck 7) Gauge or ( B8) Other (Exp No No X No	Rhizospho of Reduction Reduction Surface Well Data Dain in R Depth (in Depth (in	eres on L leed Iron ( tion in Til (C7) a (D9) emarks) nches): nches): nches):	iving Ro C4) led Soils 4	Saturt Stunt S (C6) X FAC- Wetland Hydrolog	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Algal Malor Iron Deput Inundation X Sparsely  Field Obser Surface Water Table Saturation Policides care Describe Reserved.	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Yes pillary fringe)	Surface (E	X Oxidized F Presence ( Recent Iro Thin Muck 7) Gauge or ( B8) Other (Exp No No X No	Rhizospho of Reduction Reduction Surface Well Data Dain in R Depth (in Depth (in	eres on L leed Iron ( tion in Til (C7) a (D9) emarks) nches): nches): nches):	iving Ro C4) led Soils 4	Saturt Stunt S (C6) X FAC- Wetland Hydrolog	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Algal Malor Iron Deput Inundation X Sparsely Field Obser Surface Water Table Saturation Political Control (includes cand Describe Remarks:	at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Yes Present? Yes pillary fringe) ecorded Data (stream	Surface (I	X Oxidized F Presence of Recent Iro Thin Muck Gauge or N Other (Exp No No X No Onitoring well, aeria	Rhizosphoof Reduction Reduction Reduction Surface Well Data Data Diain in Reduction Depth (in De	eres on Leed Iron (tion in Til (C7) a (D9) emarks) nches): _nches): _nches): _	iving Ro C4) led Soils 4 4	oots (C3) Satur Stunt S (C6) X Geon X FAC-	ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission L	ine Rebuild Proje	ect City/Cou	nty: Perry Co	ounty	Sampling Date	e: 06/03/2020
Applicant/Owner: AEP				State: OH	Sampling Poir	nt: upl-bl-20200603-02
Investigator(s): SM, BL		Section, T	ownship, Rar	nge: S 28 T 17N R	15W	
Landform (hillside, terrace, etc.): Shoulder		I	Local relief (c	oncave, convex, nor	ne): convex	
Slope (%):15 Lat: 39.84166		Long: -	82.18765		Datum: WGS 84	1
Soil Map Unit Name: GwC - Guernsey-Westmoreland	silt loams, 8	to 15 percent	slopes	NWI cla	assification: N/A	
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes x	No (If no,	, explain in Remarks	.)
Are Vegetation, Soil, or Hydrology	significantly of	disturbed? A	ادد "Normal C	Circumstances" prese		
Are Vegetation , Soil , or Hydrology	_			plain any answers in		
SUMMARY OF FINDINGS – Attach site m	_				•	eatures, etc.
Hydrophytic Vegetation Present? Yes N	No X	Is the	Sampled Ar	'ea		
	No X		n a Wetland?		No_X_	
	No X					
Remarks: Sampling point (Upland 035) out for Wetland 036, ab  VEGETATION – Use scientific names of pla		of wetland bou	undary. Not a	wetland point as no	wetland criteria met	
<u> </u>	Absolute	Dominant	Indicator	_		
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test		
1.	0			Number of Domin	•	ο (Δ)
2. 3.	- ——			Are OBL, FACW,		0 (A)
4.	- ——			Total Number of D Across All Strata:	Dominant Species	2 (B)
5.	. ——			Percent of Domina		<u></u> (-,
	•	=Total Cover		Are OBL, FACW,	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15'	_)					
1	0			Prevalence Index	x worksheet:	
2.				Total % Cove	er of: Mult	iply by:
3				OBL species	10 x 1 =	10
4	- ——			FACW species	10 x 2 =	20
5	- ——	<del></del>		FAC species	15 x 3 =	45
Diet circ. Fl.		=Total Cover		FACU species	68 x 4 =	272
Herb Stratum (Plot size: 5' )  1. Trifolium repens	40	Yes	FACU	UPL species  Column Totals:	5 x 5 =	25 372 (B)
Dactylis glomerata	15	Yes	FACU	Prevalence Ind		.44
Schedonorus arundinaceus	10	No	FACU	110101001001	EX - D//	· <del>···</del>
4. Carex vulpinoidea	10	No	FACW	Hydrophytic Veg	etation Indicators:	
5. Scirpus atrovirens	10	No	OBL		t for Hydrophytic Ve	
6. Juncus tenuis	10	No	FAC		e Test is >50%	
7. Daucus carota	5	No	UPL		e Index is ≤3.0 <sup>1</sup>	
8. Poa pratensis	5	No	FAC		jical Adaptations <sup>1</sup> (P	
9. Achillea millefolium	3	No	FACU		narks or on a separa	
10				<u> </u>	lydrophytic Vegetati	
(District)	108	=Total Cover		•	ric soil and wetland h	, ,,
Woody Vine Stratum (Plot size: 30'	_)			•	s disturbed or proble	matic.
1. 2.	0			Hydrophytic		
Z		=Total Cover		Vegetation Present?	res No	Х
Demarks: //walisda nhata numbara hara ar an a sans		-10101 0010.		11630111.		
Remarks: (Include photo numbers here or on a sepa No hydrophytic vegetation indicators present, domina	•	e FACU				
,	w. 15 - 15 -	• • • • • • • • • • • • • • • • • • • •				

Upland 035

SOIL Sampling Point: -bl-20200603

Depth Matrix			icator or o	confirm the absence o	f indicators.)
· —		eatures	1 . 2	_	
(inches) Color (moist) %	Color (moist)	% Typ		Texture	Remarks
0-4 10YR 4/3 80	10YR 5/4	20 C	PL	Loamy/Clayey	sandy to silty clay loam
4-15 10YR 5/4 100				Loamy/Clayey	sandy clay loam
·					
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=F	Reduced Matrix MS	=Masked S	and Grains	2l ocation	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	,		-		s for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleye	d Matrix (S	.)		Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox	x (S5)		Iron-M	langanese Masses (F12)
Black Histic (A3)	Stripped Mat	, ,		Red P	arent Material (F21)
Hydrogen Sulfide (A4)	Dark Surface	e (S7)			Shallow Dark Surface (F22)
Stratified Layers (A5)	Loamy Muck		-	Other	(Explain in Remarks)
2 cm Muck (A10)	Loamy Gleye	•	2)		
Depleted Below Dark Surface (A11)	Depleted Ma	` '		3	
Thick Dark Surface (A12)	Redox Dark	•			of hydrophytic vegetation and
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Depleted Dar	,	-7)		nd hydrology must be present, s disturbed or problematic.
<u> </u>	Redox Depre	essions (Fo)	1	unles	s disturbed or problematic.
Restrictive Layer (if observed):					
Type: Depth (inches):	_			Hydric Soil Present	? Yes No X
Remarks:				nyunc son Fresent	resNO
This data form is revised from Midwest Region Version 8.2, 2018. (https://www.nrcs.usda.gov No hydric soil indicators present					of Flydric dolls in the office otates,
			142p2_	_U53171.pdf)	
HYDROLOGY				_U53171.pdi)	
Wetland Hydrology Indicators:	d; check all that ap				/ Indicators (minimum of two required)
	d; check all that app Water-Staine	ply)		<u>Secondar</u>	/ Indicators (minimum of two required) tee Soil Cracks (B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is require		ply) ed Leaves (I		Secondary	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require  Surface Water (A1)	Water-Staine	ply) ed Leaves (I na (B13)	9)	Secondar Surfac Draina	ce Soil Cracks (B6)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su	ply) ed Leaves (I na (B13) Plants (B14	99) ) C1)	Secondary Surface Draina Dry-S Crayfi	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi	ply) ed Leaves (I na (B13) Plants (B14 Ilfide Odor ( zospheres (	9) ) C1) n Living R	Secondary Surface Draina Dry-S Crayfi	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of	ply) ed Leaves (I na (B13) Plants (B14 Ilfide Odor ( zospheres o	(9) (21) (31) (32) (32) (33) (43) (44)	SecondarySurfaceDrainaDry-SCrayfi coots (C3)SaturaStunte	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F	ply)  ed Leaves (I na (B13)  Plants (B1 ulfide Odor ( zospheres o Reduced Iro Reduction ir	(9) (21) (31) (32) (32) (33) (43) (44)	Secondary	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2)
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Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We	ply) ad Leaves (I a (B13) Plants (B14 Ilfide Odor ( zospheres o Reduced Iro Reduction ir urface (C7)	e9) C1) on Living R n (C4) Tilled Soil	Secondary	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We	ply) ad Leaves (I a (B13) Plants (B14 Ilfide Odor ( zospheres o Reduced Iro Reduction ir urface (C7)	e9) C1) on Living R n (C4) Tilled Soil	Secondary	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2)
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Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Si Gauge or We Other (Explain No X De	ply)  ed Leaves (I na (B13)  Plants (B14  ellfide Odor ( grospheres of Reduced Irr  Reduction ir  urface (C7)  ell Data (D9  in in Remar	(s) (c) (c) (c) (c) (d) (d) (d) (d) (d) (e) (e) (e) (e) (f) (f) (f) (f) (f) (f) (f) (f) (f) (f	Secondary	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explain No X De No X De	ply) ad Leaves (I na (B13) Plants (B14 Ilfide Odor ( zospheres o Reduced Iro Reduction ir urface (C7) ell Data (D9 in in Remar epth (inches epth (inches	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	Secondary Surface Draina Dry-S Crayfit Soots (C3) Satura Stunte Style Secondary Crayfit Soots (C4) Satura Style Secondary Surface Style Secondary Surface Surface Style Surface  ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  (includes capillary fringe)  Describe Recorded Data (stream gauge, mon	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explain No X De No X De	ply) ad Leaves (I na (B13) Plants (B14 Ilfide Odor ( zospheres o Reduced Iro Reduction ir urface (C7) ell Data (D9 in in Remar epth (inches epth (inches	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	Secondary Surface Draina Dry-S Crayfit Soots (C3) Satura Stunte Style Secondary Crayfit Soots (C4) Satura Style Secondary Surface Style Secondary Surface Surface Style Surface  ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  (includes capillary fringe)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explain No X De No X De	ply) ad Leaves (I na (B13) Plants (B14 Ilfide Odor ( zospheres o Reduced Iro Reduction ir urface (C7) ell Data (D9 in in Remar epth (inches epth (inches	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	Secondary Surface Draina Dry-S Crayfit Soots (C3) Satura Stunte Style Secondary Crayfit Soots (C4) Satura Style Secondary Surface Style Secondary Surface Surface Style Surface  ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 036

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project Date: June 3, 2020

	ie-North Newark 138 kV Transmission L	ine Rebuild Project	Date: June 3, 2020
Wetland: w	/-bl-20200603-02		Rater: BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score.  >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) 10 to <25 acres (4 to <10.1ha) ( 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12) x <0.1 acres (0.04ha) (0 pts)	a) (5 pts) 4 pts) ots) (2pts)	
5 5 Subtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  WIDE. Buffers average 50m (11  MEDIUM. Buffers average 25m  X NARROW. Buffers average 10i  VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select of the surrounding land use)  X LOW. Old field (>10 years), shr  X MODERATELY HIGH. Residen  HIGH. Urban, industrial, open p	e, do not double check) 64ft) or more around wetlan 1 to <50m (82 to <164ft) around 1 to <25m (32ft to <82ft) around 1 age <10m (<32ft) around we 1 age <10m (support of the check and the correct of the	d perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0)  lige) wildlife area, etc. (7) th forest. (5) onservation tillage, new fallow field. (3)
15 10 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  X Precipitation (1) Seasonal/Intermittent surface water (lake or Perennial surface water (lake or Perennial surface water (lake or Sc. Maximum water depth. Select only 1.  >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2)  X <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime. (select one or double check & average None or none apparent (12) Recovered (7)  X Recovering (3) Recent or no recovery (1)	ater (3) stream) (5)  3d.	Connectivity. Score all that apply.  100 year floodplain (1) Between stream/lake and other human use (1)  x Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1)  Duration inundation/saturation.  (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) x Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch
22 7 Subtotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or dou  None or none apparent (4)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  Fair (3)  Poor to fair (2)  x Poor (1)	ble check and average.	Habitat alteration. Score one or double check and average.  None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)  Ces observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

ORAM v. 5.0 Field Form Quanti	-	Doto	luna 2, 2020
	North Newark 138 kV Transmission Line Rebui		June 3, 2020
Wetland: w-b	I-20200603-02	Rater:	BL, SM
22 subtotal first pa	age		
22 0 Subtotal Points	Metric 5. Special Wetlands. (max 10 pts.)  Check all that apply and score as indicated  Bog (10 pts) Fen (10 pts) Old Growth Forest (10 pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-unre Lake Plain Sand Prairies (Oak Opening	ricted hydrolog	
26 4	Relict Wet Prairies (10 pts)  Known occurrence state/federal threate Significant migatory songbird/waterfowl Category 1 Wetland. See Question 1 or  Metric 6. Plant Communities, interspersion	habitat or usa f Qualitative R	ge (10 pts) ating. (-10 pts)
Subtotal Points	6a. Wetland Vegetation Communities Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale
	0 Aquatic bed 1 Emergent	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	0 Shrub 0 Forest 0 Mudflats	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
	0 Open water Other (list)	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
	6b. Horizontal (plan view) interspersion  Select only one	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	High (5)  Moderately high (4)	Narrative	Description of Vegetation Quality
	Moderate (3) Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
	Low (1)  X None (0)  6c. Coverage of invasive plants.	moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
	Refer to Table 1 ORAM long form for list.  Add or deduct points for coverage  Extensive >75 % cover (-5)  Moderate 25-75% cover (-3)	high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp
	Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality
	x Absent (1)	0	Absent <0.1 ha (0.2471 acres)
		1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or more
	Score all present using 0 to 3 scale  1 Vegetated hummocks/tussocks		ography Cover Scale
	O Coarse woody debris >15 cm (6")	0	Absent
	0 Standing dead > 25 cm (10") dbh 1 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality
		2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
		3	Present in moderate or greater amounts and of highest quality



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 036

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 1

Facing North



# Wetland 036

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 1

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 036

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 1

Facing South



# Wetland 036

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 1

Facing West





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 036

Date:

June 3, 2020

**Description:** 

PEM wetland

Category 1

Soil Pit



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Lin	e Rebuild Proje	ect City/Cou	inty: Perry C	ounty Sampling Date: 06/03/2020				
Applicant/Owner: AEP				State: OH Sampling Point: w-bl-20200603-03.				
Investigator(s): SM, BL		Section, 7	Township, Rai	nge: S 28 T 17N R 15W				
Landform (hillside, terrace, etc.): Terrace			Local relief (c	oncave, convex, none): concave				
Slope (%): 0 Lat: 39.84305			82.18913	Datum: WGS 84				
Soil Map Unit Name: GwD - Guernsey-Westmoreland	silt loams. 15			NWI classification: N/A				
Are climatic / hydrologic conditions on the site typical for		-	Yes x	No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology s		•		Circumstances" present? Yes x No				
<del></del>								
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
SOMMANT OF TINDINGS - Attach site in	ap snown		g point io	cations, transects, important reatures, etc.				
Hydrophytic Vegetation Present? Yes X No			Sampled A					
		withi	n a Wetland?	Yes X No				
Wetland Hydrology Present? Yes X No	<u> </u>							
Remarks:		h - DDD -fint		OAA within a second or DOW Doot distant				
Sampling point in (w-bl-20200603-03a) for PEM Wetla present but not significant.	and 037, on t	ne RDB of Int	ermittent stre	am 041 within powerline ROW. Past disturbances are				
VEGETATION – Use scientific names of pla								
<u>Tree Stratum</u> (Plot size: 30' )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:				
1. Alnus glutinosa	2	No	FACW	Number of Dominant Species That				
2.				Are OBL, FACW, or FAC: 5 (A)				
3.				Total Number of Dominant Species				
4.				Across All Strata: 5 (B)				
5.				Percent of Dominant Species That				
	2	=Total Cover		Are OBL, FACW, or FAC:100.0%(A/B)				
Sapling/Shrub Stratum (Plot size: 15' )								
1. Salix nigra	10	Yes	OBL	Prevalence Index worksheet:				
2. Salix interior	5	Yes	FACW	Total % Cover of: Multiply by:				
3.				OBL species 40 x 1 = 40				
4				FACW species 72 x 2 = 144				
5	45	=Total Cover		FAC species 0 x 3 = 0 FACU species 10 x 4 = 40				
Herb Stratum (Plot size: 5' )	15	- Total Cover		FACU species 10 x 4 = 40 UPL species 0 x 5 = 0				
1. Phalaris arundinacea	30	Yes	FACW	Column Totals: 122 (A) 224 (B)				
Impatiens pallida	15	Yes	FACW	Prevalence Index = B/A = 1.84				
3. Agrostis gigantea	15	Yes	FACW					
4. Typha latifolia	10	No	OBL	Hydrophytic Vegetation Indicators:				
5. Poa compressa	10	No	FACU	X 1 - Rapid Test for Hydrophytic Vegetation				
6. Carex crinita	5	No	OBL	X 2 - Dominance Test is >50%				
7. Valerianella umbilicata	5	No	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>				
8. Carex lurida	5	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting				
9. Scirpus cyperinus	5	No	OBL	data in Remarks or on a separate sheet)				
10. Alisma subcordatum	5	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
	105	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must				
Woody Vine Stratum (Plot size: 30')				be present, unless disturbed or problematic.				
1.				Hydrophytic				
2		=Total Cover		Vegetation Present? Yes X No				
		- i Ulai CUVEI		Present? Yes X No No No				
Remarks: (Include photo numbers here or on a separ Hydrophytic vegetatin indicator present as rapid test, of	,	ecies are OBL	and FACW.					

Wetland 037

SOIL Sampling Point: <u>pl-20200603-(</u>

Profile Des	cription: (Describe	to the dept	th needed to doc	ument th	ne indica	tor or c	onfirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 4/2	90	10YR 4/6	10	С	PL	Loamy/Clayey	sandy loam
6-16	10YR 4/1	80	10YR 4/6	5	C	PL	Loamy/Clayey	sandy clay loam
			10YR 5/4	15		M		
	concentration, D=Dep	letion, RM=	Reduced Matrix, I	MS=Masl	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.
	Indicators:		Sandy Cla	wad Mat	riv (CA)			rs for Problematic Hydric Soils <sup>3</sup> :
Histosol	pipedon (A2)		Sandy Gle Sandy Re	-	nx (54)			st Prairie Redox (A16)
	istic (A3)		Stripped M		:)			Manganese Masses (F12) Parent Material (F21)
	en Sulfide (A4)		Dark Surfa	•	")			Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu		eral (F1)			er (Explain in Remarks)
	uck (A10)		Loamy Gle	-				(Explain in Nomano)
	d Below Dark Surface	(A11)	X Depleted I	-				
	ark Surface (A12)	( )	Redox Da	-	-		<sup>3</sup> Indicato	rs of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted [	Dark Surf	face (F7)			and hydrology must be present,
5 cm Mu	ucky Peat or Peat (S3	)	? Redox De	pressions	s (F8)			ss disturbed or problematic.
Restrictive	Layer (if observed):							
Type:	<b>,</b> (,.							
Depth (i	nches):						Hydric Soil Presen	t? Yes X No
Remarks:								
	rm is revised from Mid	dwest Regi	onal Supplement \	/ersion 2	.0 to incl	ude the	NRCS Field Indicator	s of Hydric Soils in the United States,
Version 8.2,	2018. (https://www.n	rcs.usda.go	ov/Internet/FSE_D	OCUME	NTS/nrcs	142p2_	_053171.pdf)	•
Hydric soil i	ndicator present as lo	w chroma/h	nigh value matrix v	vith requi	red prom	inent re	edox concentrations in	pore linings.
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
	cators (minimum of o	ne is requir	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)
	Water (A1)	•	X Water-Sta		ves (B9)			ace Soil Cracks (B6)
X High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		X Drair	nage Patterns (B10)
X Saturati	on (A3)		True Aqua	itic Plants	s (B14)		Dry-	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide C	Odor (C1)		Cray	fish Burrows (C8)
Sedime	nt Deposits (B2)		X Oxidized F	Rhizosph	eres on L	iving R	oots (C3) Satu	ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			led Soil	` ' —	morphic Position (D2)
	posits (B5)		Thin Muck		-		X FAC	-Neutral Test (D5)
	on Visible on Aerial Ir	• • •	· — ·		` '			
	y Vegetated Concave	Surface (B	(Exp	olain in R	emarks)			
Field Obse								
	ter Present? Ye			Depth (ir	· -	0		
Water Table		s <u>X</u>		Depth (in	· · · ·		Madan di Danin da	B
Saturation F		s_X_	No	Depth (ir	ncnes):	6	Wetland Hydrolo	gy Present? Yes X No
<b>—</b> '	pillary fringe)	gauga ma	nitoring well corio	l photos	provious	inonoo	tions) if available:	
Describe Re	ecorded Data (stream	gauge, mo	ilitoring well, aeria	ıı priotos,	, previous	ınspec	uons), ii avallable:	
Remarks:								
	nary and secondary h	ydrology in	dicators present. F	Primary s	ources o	f hydrol	ogy are overbank flow	r from intermittent stream and
concentration	on of precipitation and	surface ru	noff in geomorphic	position	. Wetlan	d abuts	intermittent Stream 04	11 that flows north to intermittent Stream
042 that flow	vs west to Turkey Rui	n that flows	north to Jonathan	Creek th	nat flows	west to	Muskingum River, a 7	ΓNW.

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line	Rebuild Projec	ct City/Cour	nty: Perry C	ounty	Sampling Date:	06/03/2020			
Applicant/Owner: AEP		<u> </u>		State: OH	Sampling Point:	upl-bl-20200603-03ab			
Investigator(s): SM, BL		Section, T	ownship, Raı	nge: S 28 T 17N R 15	W				
Landform (hillside, terrace, etc.): Terrace		լ	_ocal relief (c	concave, convex, none):	flat				
Slope (%): 2 Lat: 39.84332			82.18925		Datum: WGS 84				
Soil Map Unit Name: GwD Guernsey-Westmoreland silt	loams, 15 to			NWI classi	ification: N/A				
Are climatic / hydrologic conditions on the site typical for		-	Yes x		plain in Remarks.)				
Are Vegetation , Soil , or Hydrology sig		•		Circumstances" present?					
Are Vegetation, Soil, or Hydrology na				plain any answers in Re					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? Yes No	X	Is the	Sampled Ar	rea					
	X		a Wetland?		No X				
	Х								
Remarks:									
Sampling point out(Upland 036) forWetland 038, about wetland criteria met	10' west of v	wetland bound	dary. Recent	tree clearing activity ev	ident. Not a wetland	point, no			
<b>VEGETATION</b> – Use scientific names of plan	Absolute	Dominant	Indicator	г					
	% Cover	Species?	Status	Dominance Test wo	rksheet:				
1.				Number of Dominant	Species That				
2.				Are OBL, FACW, or F	•	3 (A)			
3.				Total Number of Dom	•				
4				Across All Strata:	-	6 (B)			
5		T : 100000		Percent of Dominant	•	~^/ /A/D)			
Sapling/Shrub Stratum (Plot size: 15' )		Total Cover		Are OBL, FACW, or F	FAC: 50.	.0% (A/B)			
Sapling/Shrub Stratum (Plot size: 15' )  1. Rosa multiflora	15	Vac	FACU	Prevalence Index w	- Wahaati				
Rosa muitinora     Elaeagnus umbellata	10	Yes Yes	UPL	Total % Cover o		hv.			
3. Rubus allegheniensis	10	Yes	FACU	_		0			
Smilax rotundifolia	3	No	FAC	·		<u>50</u>			
5. Rhus typhina	2	No	UPL	· —		89			
	40 =	Total Cover			25 x 4 = 10	00			
Herb Stratum (Plot size: 5' )				·	12 x 5 = 6	60			
Agrimonia parviflora	30	Yes	FACW	Column Totals: 13	30 (A) 40	09 (B)			
2. Poa pratensis	20	Yes	FAC	Prevalence Index	= B/A = <u>3.15</u>				
3. Potentilla norvegica	15	Yes	FAC						
4. Carex blanda	10	No No	FAC	Hydrophytic Vegeta					
5. Symphyotrichum prenanthoides	10	No No	FAC		r Hydrophytic Vegeta	ition			
6. <u>Carex amphibola</u> 7.	<u>5</u> 5	No No	<u>FAC</u>	2 - Dominance To 3 - Prevalence In					
7. 8.	<u> </u>	No No			idex is ≤3.0° I Adaptations¹ (Provid	do supporting			
	3	No		·	ks or on a separate s				
10.					rophytic Vegetation <sup>1</sup> (	•			
	103 =	Total Cover		<sup>1</sup> Indicators of hydric s	· · ·				
Woody Vine Stratum (Plot size: 30')				be present, unless dis					
1				Hydrophytic					
2.				Vegetation					
	=	Total Cover		Present? Yes	No X	- 			
Remarks: (Include photo numbers here or on a separate									
No hydrophytic vegetation indicators present, dominand	ce test > 50%	6, dominant s	species are F	ACW, FAC, FACU and	UPL, prevalence inde	ex > 3.0			

US Army Corps of Engineers

Upland 036

SOIL Sampling Point: <u>pl-20200603-(</u>

Profile Desc	cription: (Describe	to the dep	th needed to doc	ument tl	ne indica	tor or o	confirm the absence o	f indicators.)
Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-7	10YR 4/3	100					Loamy/Clayey	sandy loam
7-14	10YR 5/4	100					Loamy/Clayey	sandy clay loam
			_					
								-
1		. —			. —		2	
	oncentration, D=Dep	letion, RM=	Reduced Matrix, N	иS=Mas	ked Sand	Grains		PL=Pore Lining, M=Matrix.
Hydric Soil Histosol			Sandy Cla	vod Mot	riv (C1)			s for Problematic Hydric Soils <sup>3</sup> : Prairie Redox (A16)
	(A1) pipedon (A2)		Sandy Gle Sandy Red	-				Manganese Masses (F12)
Black His			Stripped M					Parent Material (F21)
	n Sulfide (A4)		Dark Surfa	,	))			Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	, ,	eral (F1)			(Explain in Remarks)
2 cm Mu			Loamy Gle	-				(2) praint in termaine,
	Below Dark Surface	e (A11)	Depleted N	-				
	rk Surface (A12)	, ,	Redox Dar		-		<sup>3</sup> Indicators	s of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted [	Dark Sur	face (F7)			nd hydrology must be present,
5 cm Mu	cky Peat or Peat (S3	3)	Redox Dep	pression	s (F8)		unless	s disturbed or problematic.
Restrictive	Layer (if observed):		<del></del>					
Type:	,							
Depth (ir	nches):						Hydric Soil Present	? Yes No_X
Remarks:						J		
This data for	m is revised from Mi	dwest Regi	onal Supplement \	ersion 2	2.0 to incl	ude the	NRCS Field Indicators	of Hydric Soils in the United States,
	2018. (https://www.r	rcs.usda.g	ov/Internet/FSE_D	OCUME	NTS/nrcs	142p2_	_053171.pdf)	
No hydric so	il indicators present							
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of o	ne is requi	ed; check all that a	apply)			Secondar	y Indicators (minimum of two required)
Surface	Water (A1)		Water-Stai	ined Lea	ves (B9)		Surfac	ce Soil Cracks (B6)
High Wa	ter Table (A2)		Aquatic Fa	una (B1	3)		Draina	age Patterns (B10)
Saturatio	, ,		True Aqua		` ,			eason Water Table (C2)
	arks (B1)		Hydrogen					sh Burrows (C8)
	t Deposits (B2)		Oxidized F	•		•	` '	ation Visible on Aerial Imagery (C9)
	oosits (B3)		Presence		,	,		ed or Stressed Plants (D1)
	t or Crust (B4)		Recent Iro			iea Soii		norphic Position (D2) Neutral Test (D5)
	osits (B5) on Visible on Aerial I	magery (R7	Thin Muck () Gauge or \				FAC-I	vedital Test (D3)
	Vegetated Concave				, ,			
Field Obser		, Garrago (E	Outer (Exp	Jan III I	terriarito)			
Surface Wat		95	No X	Depth (i	nches).	0		
Water Table				Depth (i	· -			
Saturation P				Depth (i	′ –		Wetland Hydrolog	y Present? Yes No X
(includes car				, ,	/_		, ,	· · · · · · · · · · · · · · · · · · ·
	corded Data (stream	gauge, mo	nitoring well, aeria	l photos	, previous	inspec	ctions), if available:	
	·		<u> </u>	-		·	· 	
Remarks:								
No hydrolog	y indicators present							

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 037

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Date: June 3, 2020

	lie-North Newark 138 KV Transmission L	ine Rebuild Project	Date: June 3, 2020
Wetland: w	<i>y</i> -bl-20200603-03a		Rater: BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max Select one size class and assign score.  >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) 10 to <25 acres (4 to <10.1ha) (-3 to <10 acres (1.2 to <4ha) (3 pt) 0.3 to <3 acres (0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12ha) x <0.1 acres (0.04ha) (0 pts)	a) (5 pts) 4 pts) ots) (2pts)	
12 12 Subtotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  x WIDE. Buffers average 50m (16  MEDIUM. Buffers average 25m  NARROW. Buffers average 10r  VERY NARROW. Buffers average  2b. Intensity of surrounding land use (select of the surrounding land use)  X LOW. Old field (>10 years), shriid MODERATELY HIGH. Residen HIGH. Urban, industrial, open p	e, do not double check) 64ft) or more around wetlan 1 to <50m (82 to <164ft) aro 1 to <25m (32ft to <82ft) ar 1 age <10m (<32ft) around we 1 age <10m (saft) around we 1 are or double check & avera 1 are forest, prairie, savannah, 1 ubland, young second grow 1 tial, fenced pasture, park, co	d perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0)  lige) wildlife area, etc. (7) th forest. (5) onservation tillage, new fallow field. (3)
24 12 Subtotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  x Precipitation (1)  x Seasonal/Intermittent surface water (lake or Perennial surface water (lake or Pe	ater (3) stream) (5)  3d.	Connectivity. Score all that apply.  100 year floodplain (1) Between stream/lake and other human use (1) x Part of wetland/upland (e.g. forest), complex (1) x Part of riparian or upland corridor (1)  Duration inundation/saturation. (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) x Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch  point source (nonstormwater) dike  filling/grading tille  road bed/RR track weir  dredging stormwater input other- list
33 9 Subtotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or dou  None or none apparent (4)  x Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  x Fair (3)  Poor to fair (2)  Poor (1)	ble check and average.	Habitat alteration. Score one or double check and average.  None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)  Ces observed  shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

DRAM v. 5.0 Field Form Quantita			T= .			
Site: Crooksville-	North Newark	138 kV Transmission Line Rebui	Date:	June 3, 2020		
Wetland: w-bl	-20200603-03	a	Rater:	BL, SM		
			1	,		
33 subtotal first pa	300					
33 subtotal first pa	ige					
22	Matria F. Co.	asial Matlanda (may 40 mts.)				
33 0	•	ecial Wetlands. (max 10 pts.)				
Subtotal Points	Check all that ap	ply and score as indicated				
		Bog (10 pts)				
		Fen (10 pts)				
		Old Growth Forest (10 pts)				
		Mature forested wetland (5 pts)				
		Lake Erie coastal/tributary wetland-unre	stricted hydrol	ogy (10 pts)		
		Lake Erie coastal/tributary wetland-rest	ricted hydrolog	y (5 pts)		
		Lake Plain Sand Prairies (Oak Opening	s) (10 pts)			
		Relict Wet Prairies (10 pts)				
		Known occurrence state/federal threate	ned or endang	ered species (10)		
		Significant migatory songbird/waterfowl	_			
		Category 1 Wetland. See Question 1 o				
	<u> </u>	Janegery : Tremainar des Queenen : e		g. (10 p.s)		
34 1	Matric 6 Dia	ant Communities, interspersior	microton	ography (may 20 nts )		
		•	i, iiiiciotop	ography. (max 20 pts.)		
Subtotal Points		getation Communities	Vocatatio	n Community Coyer Coole		
	Score all present	t using 0 to 3 scale	vegetatio	n Community Cover Scale		
		Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area		
	1	Emergent				
	0	Shrub		Present and either comprises small part of wetland's vegetation and is		
		Forest	1	of moderate quality, or comprises a significant part but is of low quality		
		Mudflats				
		Open water		Present and either comprises significant part of wetland's vegetation		
		Other (list)	2	and is of moderate quality or comprises a small part and is of high		
		_		quality		
	6b. Horizontal (p	olan view) interspersion	2	Present and comprises significant part, or more, of wetland's vegetation		
	Select only one		3	and is of high quality		
		High (5)				
		Moderately high (4)	Narrative	Description of Vegetation Quality		
		Moderate (3)		Low spp diversity and/or predominance of nonnative or disturbance		
		Moderately low (2)	low	tolerant native species		
	x	Low (1)		Nietive own and desirant source and of the venetation of the soul		
		None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,		
		Trone (0)	moderate	and species diversity moderate to moderately high, but generally w/o		
	6c. Coverage of	invasiva planta		presence of rare threatened or endangered spp		
		ORAM long form for list.		- ::		
		oints for coverage		A predominance of native species, with nonnative spp and/or		
		,	high	disturbance tolerant native spp absent or virtually absent, and high spp		
		Extensive >75 % cover (-5)		diversity and often, but not always, the presence of rare, threatened, or endangered spp		
	X	Moderate 25-75% cover (-3)		ondangorou opp		
		Sparse 5-25% cover (-1)				
		Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality		
		Absent (1)	0	Absent <0.1 ha (0.2471 acres)		
			1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)		
			2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)		
	6d. Microtopogra	<u>aphy</u>	3	High 4 ha (9.88 acres) or more		
		t using 0 to 3 scale	_			
	0	Vegetated hummocks/tussocks	Microtopo	ography Cover Scale		
	0	Coarse woody debris >15 cm (6")	0	Absent		
	0	Standing dead > 25 cm (10") dbh				
	2	Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality		
		] 'a baara		Present in moderate amounts, but not of highest quality or in small		
			2	amounts of highest quality		
				, , ,		
			3	Present in moderate or greater amounts and of highest quality		
			1			



**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 037

Date:

June 3, 2020

**Description:** 

PSS wetland

Category 2

Facing North



# Wetland 037

Date:

June 3, 2020

**Description:** 

PSS wetland

Category 2

Facing East





**Client Name:** 

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 037

Date:

June 3, 2020

**Description:** 

PSS wetland

Category 2

Facing South



# Wetland 037

Date:

June 3, 2020

**Description:** 

PSS wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

60616110

# Wetland 037

Date:

June 3, 2020

**Description:** 

PSS wetland

Category 2

Soil Pit



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Lin	e Rebuild Proje	ct City/Cou	nty: Perry Co	ounty	Sampling Date	: 06/03/2020
Applicant/Owner: AEP				State: OH	Sampling Point	t: w-bl-20200603-03b
Investigator(s): SM, BL		Section, T	ownship, Rar	nge: S 28 T 17N R 15\	N	
Landform (hillside, terrace, etc.): Terrace			Local relief (c	oncave, convex, none):	concave	
Slope (%): 2 Lat: 39.84334		Long: -	82.18924	•	Datum: WGS 84	
Soil Map Unit Name: GwD - Guernsey-Westmoreland	silt loams, 15	to 25 percent	t slopes		fication: N/A	
Are climatic / hydrologic conditions on the site typical for	or this time of	vear?	Yes x	No (If no, exp	olain in Remarks.	)
Are Vegetation, Soil, or Hydrologys	significantly d	-		Circumstances" present?		•
Are Vegetation , Soil X , or Hydrology r				plain any answers in Rei		
SUMMARY OF FINDINGS – Attach site ma				-	-	atures, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled Ar	'ea		
			n a Wetland?		No	
Wetland Hydrology Present? Yes X No					<u> </u>	
Remarks:		•				
Sampling point in (w-bl-20200603-03b) to PSS Wetlar problematic soils due to deposition by active stream fle					ream of Wetland	037. Naturally
· · · ·		extends to no	orin outside st	ludy area.		
VEGETATION – Use scientific names of pla		Daminant	lu dia atau			
Tree Stratum (Plot size: 30' )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	rksheet:	
1				Number of Dominant	Species That	
2.				Are OBL, FACW, or F	AC:	3 (A)
3				Total Number of Dom	inant Species	
4.				Across All Strata:	_	5 (B)
5		Total Cayor		Percent of Dominant S	•	60.00/ (A/D)
Sapling/Shrub Stratum (Plot size: 15' )		Total Cover		Are OBL, FACW, or F	AC	60.0% (A/B)
1. Salix interior	30	Yes	FACW	Prevalence Index wo	rksheet:	
2. Salix nigra	10	Yes	OBL	Total % Cover of		oly by:
3. Rubus allegheniensis	10	Yes	FACU	OBL species 1	0 x 1 =	10
4. Alnus glutinosa	5	No	FACW	FACW species 9		190
5. Elaeagnus umbellata	5	No	UPL	FAC species 5		15
Hart Otratura (Blataina 51	60	Total Cover		FACU species 3		120
Herb Stratum   (Plot size:)	30	Yes	FACW	UPL species 5 Column Totals: 14		25 360 (B)
2. Poa compressa	20	Yes	FACU	Column Totals: 14  Prevalence Index	``	360 (B) 48
3. Packera aurea	15	No	FACW	T TOVAIOTIOS TITUOX	<u> </u>	
4. Sambucus canadensis	10	No	FAC	Hydrophytic Vegetat	ion Indicators:	
5. Symphyotrichum prenanthoides	5	No	FAC	1 - Rapid Test for	Hydrophytic Veg	etation
6. Valerianella umbilicata	5	No	FACW	X 2 - Dominance Te	est is >50%	
7. <u>Dichanthelium clandestinum</u>	5	No	FACW	X 3 - Prevalence Inc		
8. Impatiens capensis	5	No	FACW	4 - Morphological		
9.					s or on a separat	
10	95 =	Total Cover		Problematic Hydro		` ' '
Woody Vine Stratum (Plot size: 30' )		- Total Covel		<sup>1</sup> Indicators of hydric so be present, unless dis		
1.				•	tarboa or problem	nauo.
2.				Hydrophytic Vegetation		
	=	Total Cover		Present? Yes	X No	
Remarks: (Include photo numbers here or on a separ	ate sheet.)					
Hydrophytic vegetation indicator present as dominance	e test > 50%	, dominant sp	ecies are OB	L, FACW and FACU		

Wetland 038

SOIL Sampling Point: <u>pl-20200603-(</u>

Profile Des	cription: (Describe	to the dept	h needed to doc	ument th	ne indica	tor or c	confirm the absen	ice of indicators.)		
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-8	10YR 4/2	95	10YR 4/4	5	С	PL	Loamy/Clayey	silty to sandy clay loam		
8-15	10YR 4/1	98	10YR 4/3	2	С	PL	Loamy/Clayey	silty to sandy clay loam		
15-22	10YR 5/2	90	10YR 4/4	10	С	М	Loamy/Clayey	sandy clay loam		
			_				-			
<sup>1</sup> Type: C=C	oncentration, D=Dep	etion RM=	Reduced Matrix M	AS=Mas	ked Sand	l Grains	<sup>2</sup> l oca	tion: PL=Pore Lining, M=Matrix.		
Hydric Soil		Ction, rtivi-	reduced Matrix, I	VIO-IVIAS	ica Garic	Oranis		ators for Problematic Hydric Soils <sup>3</sup> :		
Histosol			Sandy Gle	yed Mati	rix (S4)			Coast Prairie Redox (A16)		
	oipedon (A2)		Sandy Red	-	, ,			on-Manganese Masses (F12)		
	stic (A3)		Stripped M		5)			Red Parent Material (F21)		
Hydroge	en Sulfide (A4)		Dark Surfa	ice (S7)				ery Shallow Dark Surface (F22)		
Stratified	d Layers (A5)		Loamy Mu	cky Mine	eral (F1)		<u> </u>	Other (Explain in Remarks)		
2 cm Mu	ıck (A10)		Loamy Gle	eyed Mat	rix (F2)					
	d Below Dark Surface	(A11)	X Depleted I	∕latrix (F	3)		_			
	ark Surface (A12)		Redox Da		` '			ators of hydrophytic vegetation and		
	Mucky Mineral (S1)		Depleted [		` '			vetland hydrology must be present,		
5 cm Mu	ıcky Peat or Peat (S3	)	Redox De	oression	s (F8)		u	nless disturbed or problematic.		
	Layer (if observed):									
Type:			<u> </u>							
Depth (i	nches):						Hydric Soil Pres	sent?		
Remarks:										
	rm is revised from Mic 2018. (https://www.n							ators of Hydric Soils in the United States,		
	ndicator present as lo							s in pore linings		
.,								<b>F3</b>		
HYDROLO	ncv									
	drology Indicators:						0	undamento di catama (mainimano afterna manufica di		
	cators (minimum of o	ne is requir			,,,,,, (DO)			ndary Indicators (minimum of two required)		
	Water (A1) ater Table (A2)		Water-Stal				Surface Soil Cracks (B6)  X Drainage Patterns (B10)			
Saturation	` ,		True Aqua					Dry-Season Water Table (C2)		
	larks (B1)		Hydrogen					Crayfish Burrows (C8)		
	nt Deposits (B2)		X Oxidized F					saturation Visible on Aerial Imagery (C9)		
X Drift De			Presence	•		U	` '	stunted or Stressed Plants (D1)		
	at or Crust (B4)		Recent Iro					Geomorphic Position (D2)		
Iron Dep	oosits (B5)		Thin Muck	Surface	(C7)		XF	AC-Neutral Test (D5)		
Inundati	on Visible on Aerial Ir	nagery (B7	) Gauge or '	Well Data	a (D9)					
Sparsely	Vegetated Concave	Surface (B	8) Other (Exp	lain in R	emarks)					
Field Obser	vations:									
Surface Wat	ter Present? Ye	s			nches):_					
Water Table	Present? Ye	s			nches): _					
Saturation F		s	No <u>X</u>	Depth (ii	nches): _		Wetland Hydr	ology Present? Yes X No		
<b>—</b> '	pillary fringe)						1			
Describe Re	ecorded Data (stream	gauge, mo	nitoring well, aeria	ı photos,	previous	sinspec	tions), if available:			
Remarks:										
	nary and secondarv h	ydrology in	dicators present. F	Primary s	ources o	f hydrol	ogy are overbank	flow from intermittent stream and		
	,	, ,,	•	•		•	0,	n 041 that flows north to intermittent Stream		
042 that flov	vs west to Turkey Rur	that flows	north to Jonathan	Creek th	nat flows	west to	Muskingum River,	, a TNW.		

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 038

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project Date: June 3, 2020

	e-North Newark 138 kV Transmission L	ine rebuild r roject	Date: June 3, 2020
Vetland: w-	bl-20200603-03b		Rater: BL, SM
0 0 ototal Points	Metric 1. Wetland Area (size). (max Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha  10 to <25 acres (4 to <10.1ha) (4  3 to <10 acres (1.2 to <4ha) (3 p  0.3 to <3 acres (0.12 to <1.2ha)  0.1 to <0.3 acres (0.04 to <0.12h  x <0.1 acres (0.04ha) (0 pts)	a) (5 pts) 4 pts) ots) (2pts)	
12 12 btotal Points	Metric 2. Upland buffers and surro  2a. Calculate average buffer width (select one  x WIDE. Buffers average 50m (16  MEDIUM. Buffers average 25m  NARROW. Buffers average 10r  VERY NARROW. Buffers average	e, do not double check) 64ft) or more around wetlan to <50m (82 to <164ft) aro n to <25m (32ft to <82ft) ar age <10m (<32ft) around we	nd perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0)
	2b. Intensity of surrounding land use (select of VERY LOW. 2nd growth or olde X LOW. Old field (>10 years), shru MODERATELY HIGH. Residen: HIGH. Urban, industrial, open p	er forest, prairie, savannah, ubland, young second grow tial, fenced pasture, park, c	wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallow field. (3)
24 12 btotal Points	Metric 3. Hydrology. (max 30 pts)  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  x Precipitation (1)  x Seasonal/Intermittent surface water (lake or	ater (3)	Connectivity. Score all that apply.  100 year floodplain (1)  Between stream/lake and other human use (1)  x Part of wetland/upland (e.g. forest), complex (1)  x Part of riparian or upland corridor (1)
	3c. Maximum water depth. Select only 1.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  x <0.4m (<15.7in) (1)	3d.	Duration inundation/saturation.  (select one or double check & average)  Semi- to permanently inundated/saturated (4)  Regularly inundated/saturated (3)  x Seasonally inundated (2)
	3e. Modifications to natural hydrologic regime.  (select one or double check & average)  None or none apparent (12)  Recovered (7)  x Recovering (3)  Recent or no recovery (1)		Seasonally saturated in upper 30cm (12in) (1)  Check all disturbances observed ditch  point source (nonstormwater) dike  filling/grading tile  noad bed/RR track weir  dredging stormwater input other- list
33 9 btotal Points	Metric 4. Habitat Alteration and De  4a. Substrate disturbance. Score one or dout.  None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select one.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  x Fair (3)	ble check and average.	Habitat alteration. Score one or double check and average.  None or none apparent (9)  Recovered (6)  X Recovering (3)  Recent or no recovery (1)

Site: Crooksville-North Newark 138 kV Transmission Line Rebuil	Date:	June 3, 2020
Wetland: w-bl-20200603-03b	Rater:	BL, SM
<b>VVELIATIO.</b> W-DI-20200603-03D	Nater.	DL, SIVI
33 subtotal first page		
33 0 Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points Check all that apply and score as indicated		
Bog (10 pts)		
Fen (10 pts)		
Old Growth Forest (10 pts)  Mature forested wetland (5 pts)		
Lake Erie coastal/tributary wetland-unres	stricted hydrol	logy (10 pts)
Lake Erie coastal/tributary wetland-restri	•	
Lake Plain Sand Prairies (Oak Openings		( - F - )
Relict Wet Prairies (10 pts)	, ( - 1 )	
Known occurrence state/federal threater	ned or endang	gered species (10)
Significant migatory songbird/waterfowl l	habitat or usa	ge (10 pts)
Category 1 Wetland. See Question 1 of	Qualitative R	ating. (-10 pts)
33 0 Metric 6. Plant Communities, interspersion	, microtop	ography. (max 20 pts.)
Subtotal Points <u>6a. Wetland Vegetation Communities</u>		
Score all present using 0 to 3 scale	vegetatio	n Community Cover Scale
Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
0 Emergent 1 Shrub		
Forest	1	Present and either comprises small part of wetland's vegetation and is
Mudflats		of moderate quality, or comprises a significant part but is of low quality
Open water		Present and either comprises significant part of wetland's vegetation
Other (list)	2	and is of moderate quality or comprises a small part and is of high
<u>—</u>		quality
6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
Select only one		and is of high quality
High (5)	Manuathia	Description of Variation Quality
Moderately high (4)	Narrative	Description of Vegetation Quality
Moderate (3)  Moderately low (2)	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
Low (1)		
x None (0)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present,
	moderate	and species diversity moderate to moderately high, but generally w/o
6c. Coverage of invasive plants.		presence of rare threatened or endangered spp
Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp and/or
Add or deduct points for coverage	high	disturbance tolerant native spp absent or virtually absent, and high spp
Extensive >75 % cover (-5)		diversity and often, but not always, the presence of rare, threatened, or endangered spp
X Moderate 25-75% cover (-3)		chadingered 3pp
Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)	Mudflat a	nd Open Water Class Quality
Absent (1)	0	Absent <0.1 ha (0.2471 acres)
Absolit (1)	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
	2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
6d. Microtopography	3	High 4 ha (9.88 acres) or more
Score all present using 0 to 3 scale		,
0 Vegetated hummocks/tussocks	Microtopo	ography Cover Scale
0 Coarse woody debris >15 cm (6")	0	Absent
0 Standing dead > 25 cm (10") dbh	1	Present very small amounts or if more common of marginal quality
2 Amphibian breeding pools		Present in moderate amounts, but not of highest quality or in small
	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

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Summary: Notice Letter of Notification Part 6 electronically filed by Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc.