

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





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 DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newa	rk 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP		State: 0	H Sampling Point: w-bl-20200602-02
Investigator(s): BL, SKM		Section, Township, Range: S	S 2 T 16N R 15W
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex,	none): concave Slope: 3.0 % / 71.6 °
Subregion (LRR or MLRA): LRR N	La	 rt.: 39.81888 Lo	ng.: -82.1547
Soil Map Unit Name: AfC - Alford si			NWI classification: N/A
Are climatic/hydrologic conditions of	n the site typical for this time o	f vear? Yes No (If no	o, explain in Remarks.)
Are Vegetation \square , Soil \square		,	Il Circumstances" present? Yes No
Are Vegetation , Soil .	, or Hydrology natural		explain any answers in Remarks.)
Summary of Findings - At	tach site map showing	g 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?	16 0 16 0
Remarks:			
goes to east to floodplain of large Hydrology		200602-01 that drains to east to s	ubsurface drainage (tile or buriend culvert) that
Wetland Hydrology Indicators:			
Primary Indicators (minimum of or 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes	True Aquatic Pl Hydrogen Sulfic V Oxidized Rhizos Presence of Re Recent Iron Re Thin Muck Surf Other (Explain y (B7) No Depth (inches	lants (B14) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) face (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)
Saturation Present? (includes capillary fringe) Yes	No Depth (inches	Wetland Hyd	rology Present? Yes No
Describe Recorded Data (stream ga	auge, monitoring well, aerial ph	otos, previous inspections), if ava	ilable:
Remarks:			
	agricultural pond p-bl-2020060	2-01, drains to pond that drains to	tration of precipitation and surface runoff into be east to wetland w-bl-20200602-01 that drains east flarge creek.

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

			ominant		Sampling Point: w-bl-20200602-02		
Tree Stratum (Plot size: 30' r)	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status			
1. Salix interior	5	✓	100.0%	FACW	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: 6 (B)		
4			0.0%		Species / in our data.		
5			0.0%		Percent of dominant Species		
6.			0.0%		That Are OBL, FACW, or FAC: 83.3% (A/B)		
7			0.0%		Prevalence Index worksheet:		
3	0		0.0%		Total % Cover of: Multiply by:		
	5 :	= To	tal Cove	r	OBL species 29 x 1 = 29		
Sapling-Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 64 x 2 = 128		
Rosa multiflora	5	✓	71.4%	FACU	FAC species $0 \times 3 = 0$		
Salix nigra	1	Ш	14.3%	OBL			
Fraxinus pennsylvanica	1		14.3%	FACW			
1	0		0.0%		UPL species $0 \times 5 = 0$		
5			0.0%		Column Totals: <u>98</u> (A) <u>177</u> (B)		
5.			0.0%		Prevalence Index = $B/A = 1.806$		
7.			0.0%		Hydrophytic Vegetation Indicators:		
3			0.0%		Rapid Test for Hydrophytic Vegetation		
). _.			0.0%				
0			0.0%				
		= To	tal Cove	r	✓ Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)			0.0%		Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)		
1			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)		
2							
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:		
5			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		
lerb Stratum (Plot size: <u>5' r</u>)	=	= To	otal Cove	r	of height.		
Phalaris arundinacea	30	✓	34.9%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
Juncus effusus	10	✓	11.6%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,		
Leersia virginica	10	v	11.6%	FACW	regardless of size, and all other plants less than 3.28 ft tall.		
1 Najas minor	10	✓	11.6%	OBL	Woody vines - Consists of all woody vines greater than 3.28 ft		
Carex vulpinoidea	5		5.8%	OBL	in height.		
) Onoclea sensibilis	5		5.8%	FACW	Fire Veretation Charles		
7. Lemna minor	5		5.8%	OBL	Five Vegetation Strata:		
3. 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		
) Agrostis gigantea	3	$\overline{\Box}$	3.5%	FACW	diameter at breast height (DBH).		
). Typha latifolia	3	\Box	3.5%	OBL	Sapling stratum – Consists of woody plants, excluding woody		
		\Box	0.0%	ODL	vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
1 2		$\overline{}$	0.0%		Shrub stratum – Consists of woody plants, excluding woody		
			otal Cove		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		
2	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m in height.		
3.			0.0%		Woody vines – Consists of all woody vines, regardless of		
1.			0.0%		height.		
	0	\Box	0.0%				
5					Hydrophytic		
6		 = T/	otal Cove		Vegetation Present? Yes No		

Soil Sampling Point: w-bl-20200602-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			dox Features						
(inches) 0-4	Color (moist) 10YR 4/2	100	Color (moist)		Tvpe ¹	Loc ²	Texture Sandy Loam	Remarks	—	
4.16			10VD 4/4	10	С	DI.	·			
4-16	10Y 4/1	90	10YR 4/4	10		PL	Silty Clay Loam			
								,		
								<u>'</u>		
	$\overline{}$							<u>, </u>		
1 T C Co.m.	turking D. Domlotio	n DM Dadu	and Matrix CC Covers	d au Caabad C	and Cusin	- 21	ian. Di Dava linina M M			
		n. KM=Kedu	ced Matrix, CS=Covere	ed or Coated S	and Grain	s ² Locat	ion: PL=Pore Lining. M=M			
Hydric Soil I			Devil Conferre	C7)			Indicators for Probl	ematic Hydric Soils ³ :		
Histosol (Dark Surface (,	/MLDA 1	47 140)	2 cm Muck (A10)	(MLRA 147)		
Black Hist	pedon (A2)		Polyvalue Below				Coast Prairie Red	ox (A16)		
	Sulfide (A4)		✓ Loamy Gleyed		A 147, 140	5)	(MLRA 147,148)			
	Layers (A5)		✓ Depleted Matri				Piedmont Floodp	lain Soils (F19)		
	k (A10) (LRR N)		Redox Dark Su				(MLRA 136, 147) Very Shallow Dark Surface (TF12)			
	Below Dark Surface (A	11)	Depleted Dark	. ,						
I — ·	k Surface (A12)	11)	Redox Depress				Uther (Explain in Remarks)			
l —	ick Mineral (S1) (LRR N	J.	Iron-Manganes	se Masses (F12	2) (LRR N,					
MLRA 147		-,	MLRA 136)							
Sandy Gle	eyed Matrix (S4)		Umbric Surface				³ Indicators of hydrophytic vegetation and			
Sandy Re			Piedmont Floo	dplain Soils (F	19) (MLRA	148)		drology must be present,		
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21) (M	ILRA 127,	147)	unless d	sturbed or problematic.		
Restrictive L	ayer (if observed):									
Туре:								·		
Depth (inc	hes):						Hydric Soil Present?	Yes No		
Remarks:										
	dicator present as g		x in loamy soils star	ting less tha	n or equ	al to 12"	depth, also having redo	ex concentrations in pore lin	iings	

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

Project/Site: Crooksville-North New	ark 138 kV Trans	mission Line	City/County: Perry	Sa	mpling Date: 02-Jun-20		
Applicant/Owner: AEP			State: 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, n	one): convex	Slope: _10.0 % / _84.3 °		
Subregion (LRR or MLRA): LRR		Lat.:	39.8189 Lon	 g∴ -82.15466	Datum: NAD83		
Soil Map Unit Name: AfC - Alford				NWI classificat			
Are climatic/hydrologic conditions	on the site typi	cal for this time of ye	ar? Yes No (If no,	explain in Remarks.)		
Are Vegetation \Box , Soil \Box	, or Hydrolog	gy 🗌 significantl	y disturbed? Are "Normal	Circumstances" pres	sent? Yes No		
Are Vegetation, Soil	, or Hydrolog	gy 🗌 naturally pr	roblematic? (If needed, e	explain any answers	in Remarks.)		
Summary of Findings - A	ttach site	map showing sa	ampling point location	s, transects, in	nportant features, etc.		
Hydrophytic Vegetation Present?	Yes O I	No 💿					
Hydric Soil Present?	Yes 🔾 I	No 💿	Is the Sampled Area	Yes O No •			
Wetland Hydrology Present?	Yes 🔾 I	No 💿	within a Wetland?	165 0 110 0			
Remarks:							
Hydrology							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of	one required: c	heck all that annly)			minimum of two required)		
Surface Water (A1)	ine required, el	True Aquatic Plants	(B14)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide O		Drainage Patterns (B10)			
Saturation (A3)		oss Trim Lines (B16)					
Water Marks (B1)		Presence of Reduce	res along Living Roots (C3) ed Iron (C4)	Dry Season Water	*		
Sediment Deposits (B2)			ion in Tilled Soils (C6)	Crayfish Burrows (* *		
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 Stresse	d Plants (D1)		
Iron Deposits (B5)				Geomorphic Position			
Inundation Visible on Aerial Image	ery (B7)			Shallow Aquitard (,		
Water-Stained Leaves (B9)				Microtopographic I			
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 capillary frings) Yes	○ No ●	Depth (inches):	Wetland Hydr	ology Present?	Yes O No 💿		
(includes capillary fringe) Describe Recorded Data (stream of the control of the			nrevious inspections) if availa	ahle:			
Describe Recorded Data (stream)	jaage, monton	ing weil, derial photos	s, previous inspections), if avail	abic.			
Remarks:							
No hydrology indicators present.							
, , ,							

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

		Dominant	Sampling Point: upl-bl-20200602-02
Tree Stratum (Plot size: _30' r)	Absolute % Cover		
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
2	0	0.0%	
3	0	0.0%	Total Number of Dominant Species Across All Strata: 3 (B)
4	0	0.0%	
5		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 33.3% (A/B)
7		0.0%	Prevalence Index worksheet:
	0	0.0%	Total % Cover of: Multiply by:
8		= Total Cover	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	_)	- rotal cover	
1. Rosa multiflora	2	✓ 100.0% FACU	FACW species $25 \times 2 = 50$
2		0.0%	FAC species $5 \times 3 = 15$
3	0	0.0%	FACU species $62 \times 4 = 248$
4		0.0%	UPL species $0 \times 5 = 0$
5.		0.0%	Column Totals: 92 (A) 313 (B)
6.		0.0%	Prevalence Index = B/A = 3.402
		0.0%	
7		0.0%	Hydrophytic Vegetation Indicators:
8			Rapid Test for Hydrophytic Vegetation
9		0.0%	Dominance Test is > 50%
0			Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	=	= Total Cover	Morphological Adaptations ¹ (Provide supporting
1	0	0.0%	data in Remarks or on a separate sheet)
2.	0	0.0%	Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0	0.0%	¹ 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		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' r)	=	= Total Cover	of height. 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	20	✓ 22.2% FACW	Herb stratum - Consists of all herbaceous (non-woody) plants,
3. Festuca rubra	15	16.7% FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Cirsium arvense	15	16.7% FACU	Woody vines – Consists of all woody vines greater than 3.28 ft
5 Elymus virginicus	5	5.6% FACW	in height.
6. Rumex crispus	5	5.6% FAC	Fina Vanatation Church
7		0.0%	Five Vegetation Strata:
	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
8	_ —	0.0%	diameter at breast height (DBH).
9			Sapling stratum – Consists of woody plants, excluding woody
0		0.0%	vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody
2	0	0.0%	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r)	90 =	= Total 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.
		0.0%	
5			Hydrophytic
	0	0.0%	Vegetation
6	0	= Total Cover	Present? Yes No •

Soil

Upland 019
Sampling Point: upl-bl-20200602-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)														
Depth														
(inches)	Color	(moist)	%	Color	(moist)	%	Tvpe ¹	Loc2	Texture	Remarks				
0-7	10YR	4/3	100						Sandy Loam					
7-16	10YR	5/1	80	10YR	4/2	20	D	М	Sandy Loam	•				
		-							-					
1 Tymou C—Cone	contration	D_Doplotic	n DM_Dod	used Matrix		and or Coate	ad Cand Crai	no 21 oco	tion: PL=Pore Lining. M=M	atrice				
			ni. Kivi=Reu	uceu Maurx,	CS=Cover	ed or Coale	eu Sanu Grai	IIS -LOCA						
Hydric Soil I		ŀ			l. C f	(67)			Indicators for Probl	ematic Hydric Soils ³ :				
Histosol (A	•				k Surface		(CO) (MI DA	1 47 1 40)	2 cm Muck (A10)	(MLRA 147)				
	pedon (A2)						(S8) (MLRA		Coast Prairie Red	ox (A16)				
Black Histi		1)					MLRA 147, 1	48)	(MLRA 147,148)					
	Sulfide (A4	-				Matrix (F2)		Piedmont Floodplain Soils (F19)					
	Layers (A5)				leted Matr				(MLRA 136, 147)					
	cm Muck (A10) (LRR N)						☐ Very Shallow Dark Surface (TF12)							
	Below Dark Surface (A11) Depleted Dark Surface (F7)							Uther (Explain in	Remarks)					
l —	k Surface (A	,			Redox Depressions (F8) ron-Manganese Masses (F12) (LRR N,									
MLRA 147	ck Mineral ((S1) (LRR I	Ν,	MLR	RA 136)	SC 111055C5	(1 12) (LKK 1	٧,						
	yed Matrix	(\$4)		Um	bric Surfac	e (F13) (M	LRA 136, 12	2)						
Sandy Red		(31)					s (F19) (MLR		³ Indicators of hydrophytic vegetation and					
	Matrix (S6)) (MLRA 127		wetland hydrology must be present, unless disturbed or problematic.					
	()				- Concine	aterial (121) (11210112)	, = ., ,	u555 u.					
Restrictive La	ayer (if ob	served):												
Type:										0 0				
Depth (inch	hes):								Hydric Soil Present?	Yes ○ No •				
Remarks:														
No hydric soil	indicators	s present.												
´														

ORAM v. 5.0 Field Form Quantitative Rating Wetland 020

Site: Crooks	ville-North Newark 138 kV Transmission Line	Rebuild Project	Date: June 2, 2020
Wetland:	w-bl-20200602-02		Rater: BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max 6) Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (4 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) x <0.1 acres (0.04ha) (0 pts)	5 pts) (s) ts)	
2 2 Subtotal Points	Metric 2. Upland buffers and surroun 2a. Calculate average buffer width (select one, de WIDE. Buffers average 50m (164ff MEDIUM. Buffers average 25m to NARROW. Buffers average 10m to X VERY NARROW. Buffers average 2b. Intensity of surrounding land use (select one) VERY LOW. 2nd growth or older for LOW. Old field (>10 years), shrublator X MODERATELY HIGH. Residential, X HIGH. Urban, industrial, open past	o not double check)) or more around wetlar <50m (82 to <164ft) aro o <25m (32ft to <82ft) a <10m (<32ft) around we or double check & avera orest, prairie, savannah, and, young second grow fenced pasture, park, c	and perimeter (7) bund wetland perimeter (4) buround wetland perimeter (1) etland perimeter (0) age) wildlife area, etc. (7) with forest. (5) conservation 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 X Perennial surface water (lake or str.) 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)	(3) eam) (5) 3d.	Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1) Duration inundation/saturation. (select one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) 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	Good (5) Moderately good (4) x Fair (3) Poor to fair (2) Poor (1)	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

DRAM v. 5.0 Field Form Quantitativ			ID (
	orth Newark	138 kV Transmission Line Rebuil	Date:	June 2, 2020
Wetland: w-bl-2	20200602-02		Rater:	BL, SM
33 subtotal first page	e			
33 0	Metric 5. Sp	ecial Wetlands. (max 10 pts.)		
	-	ply and score as indicated		
oubtotal Folito	SHOOK AII tHAT AP	Bog (10 pts)		
		Fen (10 pts)		
		Old Growth Forest (10 pts)		
		Mature forested wetland (5 pts)		
		Lake Erie coastal/tributary wetland-unre	stricted bydrole	ogy (10 ptp)
		Lake Erie coastal/tributary wetland-restr		
		· ·	, ,	/ (3 pis)
		Lake Plain Sand Prairies (Oak Opening	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	iting. (-10 pts)
25 0	Matria C. Dia	nt Communities Interesponden		agrander (may 20 mtg.)
		int Communities, interspersion	, microtope	ography. (max 20 pts.)
-		retation Communities	V	. 0
8		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
<u>6</u>	6b. Horizontal (p	lan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
S	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
	x	Moderately low (2)	1000	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
<u>6</u>	Sc. 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
A	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
	x	Moderate 25-75% cover (-3)		endangered spp
		Sparse 5-25% cover (-1)	•	
		Nearly Absent <5% cover (0)	Mudflat ar	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)
6	6d. Microtopogra	aphy	3	High 4 ha (9.88 acres) or more
		using 0 to 3 scale	-	
	1	Vegetated hummocks/tussocks	Microtopo	graphy 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
			_	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





PHOTOGRAPHIC RECORD

WETLANDS

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-Nor	th Newark 1	.38 kV Trar	nsmission Line	City/County:	Muskingum		Sa	mpling Da	ate: 02-Jun-20
Applicant/Owne	er: AEP				_	State: OH	+	Sampling	Point: 1	w-bl-20200602-03
Investigator(s):	BL, SKM				Section, Tow	nship, Range: S	3	35 T 17N		R 15W
Landform (hillsl	ope, terrace,	etc.): T	errace		Local relief (co	ncave, convex, i	none)): concave	Slope	5.0 % / 78.7
Subregion (LRR	or MLRA):	LRR N		Lat.:	39.82059	Loi	ng.:	-82.1567	_	Datum: NAD83
- ,	•		reland-Gu	uernsey silt loams, 25		_		NWI classificat	ion: N/A	_
Are climatic/hyd	drologic cond	itions on th	ne site typ	pical for this time of y	ear? Yes •	No O (If no	, exp	lain in Remarks.)	•	
Are Vegetation	, Soil	□ ,	or Hydrolo	ogy 🗌 significant	tly disturbed?	Are "Norma	l Circ	cumstances" pres	ent? Y	ſes ● No ○
Are Vegetation	, Soil	□ ,	or Hydrolo	ogy 🗌 naturally į	problematic?	(If needed,	expla	ain any answers i	in Remark	s.)
Summary o	of Finding	s - Atta	ch site	map showing s	sampling po	oint location	ns, t	transects, in	nportan	nt features, etc.
Hydrophytic Ve	egetation Pre		Yes 💿	No O						
Hydric Soil Pre	sent?		Yes 💿	No O		Sampled Area	Yes	s ● No ○		
Wetland Hydro	ology Present	?	Yes 💿	No O	withir	a Wetland?		100		
Remarks:					<u>, </u>					
evident. Wetla				is located on terrace ny.	Of intermittent	Strediii S-Di-202	0000	S-01 non inains	With grou	inawatei seepaye
Hydrology										
Wetland Hydro	ology Indicato	ors:					Sec	condary Indicators (minimum of	f two required)
		ım of one r	required;	check all that apply)				Surface Soil Cracks	s (B6)	
Surface Wat	. ,			True Aquatic Plant	ts (B14)		Sparsely Vegetated Concave Surface (B8)			
✓ High Water	. ,			Hydrogen Sulfide	. ,		✓			
Saturation (A3) Oxidized Rhizospheres along Living Roots (C3) Moss Trim Lines (B16)										
Water Mark	. ,			Presence of Reduc	ced Iron (C4)			Dry Season Water	Table (C2)	
Sediment D				Recent Iron Reduc	ction in Tilled Soils	(C6)	Ц	Crayfish Burrows (
Drift deposit				Thin Muck Surface	e (C7)		Ц	Saturation Visible of		• , , ,
Algal Mat or				Other (Explain in F	Remarks)			Stunted or Stresse	•	1)
Iron Deposi	,	,_	_				✓	Geomorphic Position		
	Visible on Aeria	5 , (37)				Shallow Aquitard (D3)			
	ed Leaves (B9)						Microtopographic Relief (D4)			
Aquatic Fau							✓	FAC-neutral Test (D5)	
Field Observat Surface Water Pr		Yes •	No O	Depth (inches):	1					
Water Table Pres		Yes •	No O	Depth (inches):						
Saturation Prese		Yes •	No O	,		Wetland Hyd	rolog	y Present?	Yes 💿	No O
(includes capillar	ry fringe)			Depth (inches):	0					
Describe Recor	rded Data (sti	ream gaug	e, monito	oring well, aerial photo	os, previous insp	pections), it avai	labie	:		
Remarks:										
	- and cocon	dans bydro	lagy indic	-tara procent Drimar	er source of byd	lagy groundwa	+010	essaga ac obcor	and and o	warbank flow from
intermittent st				ators present. Primar	y source or riyur	fology groundwa	ilei s	seepage as obsci	Ved and o	verbank now nom

			ominant		Sampling Point: <u>w-bl-20200602-03</u>
Tree Stratum (Plot size: <u>30' r</u>)	Absolute % Cover	Re	ecies? el.Strat. over	Indicator Status	
 1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2	0		0.0%		Total Number of Desiring
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
			0.0%		
			0.0%		Percent of dominant Species That Are OBL FACW or FAC: 75.0% (A/B)
			0.0%		That Are OBL, FACW, or FAC: 75.0% (A/B)
			0.0%		Prevalence Index worksheet:
	0		0.0%		Total % Cover of: Multiply by:
		= To	tal Cove		OBL species 20 x 1 = 20
apling-Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 28 x 2 = 56
Ulmus americana		\square	75.0%	FACW	FAC species $10 \times 3 = 30$
Fraxinus americana	1	\sqsubseteq	25.0%	FACU	46 64
	0	\sqcup	0.0%		
	0	Ш	0.0%		×
	0	Ш	0.0%		Column Totals:
			0.0%		Prevalence Index = B/A =2.468
			0.0%		Hydrophytic Vegetation Indicators:
			0.0%		Rapid Test for Hydrophytic Vegetation
			0.0%		✓ Dominance Test is > 50%
			0.0%		✓ Prevalence Index is ≤3.0 ¹
		= Tc	tal Cove		
nrub Stratum (Plot size:)	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
		\Box	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
		\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must
-		\Box	0.0%		be present, unless disturbed or problematic.
		\Box			Definition of Vegetation Strata:
		Н	0.0%		Four Vegetation Strata:
		Н	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 is
		Ш,	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardles
erb Stratum (Plot size: <u>5' r</u>)	:	= Tc	tal Cove	•	of height. Sapling/shrub stratum – Consists of woody plants, excluding
Carex lurida	20	✓	26.7%	OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Agrostis gigantea	10	✓	13.3%	FACW	Herb stratum - Consists of all herbaceous (non-woody) plant
Poa compressa	15	✓	20.0%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
Lysimachia nummularia	10	✓	13.3%	FACW	Woody vines – Consists of all woody vines greater than 3.28 in height.
Eupatorium perfoliatum	5		6.7%	FACW	in neight.
Valerianella umbilicata	5		6.7%	FAC	Five Vegetation Strata:
Carex gracilescens	5		6.7%	UPL	
Symphyotrichum prenanthoides	5		6.7%	FAC	Tree - Woody plants, excluding woody vines, approximately 2 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
	0		0.0%		diameter at breast height (DBH).
	0		0.0%		Sapling stratum - Consists of woody plants, excluding woody
	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less that 3 in. (7.6 cm) DBH.
	0	$\overline{\Box}$	0.0%		Shrub stratum – Consists of woody plants, excluding woody
		= To	tal Cove		vines, approximately 3 to 20 ft (1 to 6 m) in height.
oody Vine Stratum (Plot size: 15' r)	0		0.0%		Herb stratum – Consists of all herbaceous (non-woody) plant including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 in the control of the
	0		0.0%		in height.
			0.0%		Woody vines – Consists of all woody vines, regardless of
	0		0.0%		height.
	0		0.0%		
		\Box	0.0%		Hydrophytic Vegetation
		 = Te	otal Cove	r	Present? Yes No
	•				

Soil Sampling Point: W-bl-20200602-03

Profile Descr	ription: (Describe to	the depth	needed to	document	t the indic	ator or co	nfirm the a	bsence of indicators	s.)		
Depth	Matrix				dox Featu	1					
(inches)	Color (moist)	%		(moist)	%	_Tvpe_*	Loc2	Texture	gleyed ma	narks trix	
0-4	10y 4/1	95	10YR	4/3	_ 5	С	PL_	Silt Loam	y.eyeaa		
4-14	10Y 3/1	90	10YR	3/3	10	C	PL	Silty Clay Loam	<u>.</u>		
									`		
									 		
	$\overline{}$								· · · · · · · · · · · · · · · · · · ·		
											
¹ Type: C=Con	centration. D=Depleti	ion. RM=Redu	uced Matrix,	CS=Covere	ed or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. N	M=Matrix		
Hydric Soil	Indicators:							Indicators for P	roblematic Hydri	c Soils ³ :	
Histosol ((A1)		Dar	k Surface ((S7)				A10) (MLRA 147)		
Histic Epi	pedon (A2)		Poly	value Belo	w Surface ((S8) (MLRA	147,148)				
Black Hist	` ,					1LRA 147, 1	48)	☐ Coast Prairie (MLRA 147,1	Redox (A16) .48)		
	Sulfide (A4) Layers (A5)		✓ Loamy Gleyed Matrix (F2) ✓ Depleted Matrix (F3) ✓ Depleted Matrix (F3) ✓ Depleted Matrix (F3) ✓ Depleted Matrix (F3))			
2 cm Muc	k (A10) (LRR N)		Red	ox Dark Su	ırface (F6)			Very Shallow Dark Surface (TF12)			
Depleted	Below Dark Surface (A11)	Dep	leted Dark	Surface (F	7)		Other (Explain in Remarks)			
☐ Thick Dar	k Surface (A12)		Red	ox Depress	sions (F8)						
Sandy Mu MLRA 14	Iron MLR	-Manganes A 136)	se Masses ((F12) (LRR I	Ν,						
Sandy Gle	eyed Matrix (S4)		Uml	oric Surfac	e (F13) (MI	LRA 136, 12	2)	³ Indicators of hydrophytic vegetation and			
Sandy Re	edox (S5)	Piec	lmont Floo	dplain Soils	(F19) (MLF	RA 148)		rs of hydrophytic v d hydrology must l			
Stripped	Matrix (S6)		Red	Parent Ma	aterial (F21)) (MLRA 127	7, 147)	unle	ess disturbed or pro	bblematic.	
Restrictive L	ayer (if observed):										
Depth (inc	hes).							Hydric Soil Preser	nt? Yes 💿	No O	
Remarks:											
	dicator present as o oma/low value mati		ix in loamy	soils sta	rting less	than or eq	ual to 12"	depth, also having	redox concentra	tions in pore linings	

Upland 020 **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: Of	Sampling Point: upl-bl-20200602-03		
Investigator(s): BL, SKM		Section, Township, Range: S	35 T 17N R 15W		
Landform (hillslope, terrace, et	c.): Hillside	Local relief (concave, convex,	none): convex Slope: 20.0 % / 87.1 °		
Subregion (LRR or MLRA):	.RR N	Lat.: 39.82055 Los	ng.: -82.15666		
_		ns, 25 to 40 percent slopes, eroded	NWI classification: N/A		
Are climatic/hydrologic condition	ons on the site typical for this tim	ne of year? Yes $ullet$ No $ullet$ (If no	, explain in Remarks.)		
Are Vegetation $\ \ \ \ \ \ \ $, Soil $\ \ \ \ \ $, or Hydrology sign	ificantly disturbed? Are "Norma	l Circumstances" present? Yes ● No ○		
Are Vegetation, Soil	, or Hydrology 🗌 natu	rally problematic? (If needed,	explain any answers in Remarks.)		
Summary of Findings		ing sampling point location	ns, transects, important features, etc.		
Hydrophytic Vegetation Prese					
Hydric Soil Present?	Yes No	Is the Sampled Area	Yes ○ No ●		
Wetland Hydrology Present?	Yes O No 💿	within a Wetland?			
	land 020), about 5 east of bound	dary. Not a wetland point, hydrophytic	c vegetation and hydrology criteria not met.		
Hydrology					
Wetland Hydrology Indicators	:		Secondary Indicators (minimum of two required)		
	of one required; check all that a		Surface Soil Cracks (B6)		
Surface Water (A1)		ic Plants (B14)	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)	Hydrogen S	Drainage Patterns (B10)			
Saturation (A3) Water Marks (B1)		nizospheres along Living Roots (C3)	Moss Trim Lines (B16)		
Sediment Deposits (B2)		f Reduced Iron (C4) n Reduction in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)		
Drift deposits (B3)		Surface (C7)	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		lain in Remarks)	Stunted or Stressed Plants (D1)		
Iron Deposits (B5)	, ,	<u></u>	Geomorphic Position (D2)		
Inundation Visible on Aerial I	magery (B7)		Shallow Aquitard (D3)		
Water-Stained Leaves (B9)			Microtopographic Relief (D4)		
Aquatic Fauna (B13)			FAC-neutral Test (D5)		
Field Observations: Surface Water Present? Y	'es O No O Depth (in	ches): 0			
	res No Depth (in				
G: B .:		Wetland Hyd	rology Present? Yes O No 💿		
(includes capillary fringe)	· `	· -			
Describe Recorded Data (strea	am gauge, monitoring well, aerial	photos, previous inspections), if avai	lable:		
Remarks:					
No hydrology indicators prese	ent				
The fiverenegy marcacers prese					

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

			minant		Sampling Point: upl-bl-20200602-03
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	0		0.0%		
3.	0		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4.			0.0%		Species Across Air Strate.
5.			0.0%		Percent of dominant Species
		\Box	0.0%		That Are OBL, FACW, or FAC: 33.3% (A/B)
6		П-	0.0%		Prevalence Index worksheet:
7		Н-			Total % Cover of: Multiply by:
8			0.0%		
Sapling-Sapling/Shrub Stratum (Plot size: 15' r		= 10	tal Cover		OBL species $0 \times 1 = 0$
4. Surface of the	5	✓	100.0%	FACU	FACW species $10 \times 2 = 20$
			0.0%		FAC species $35 \times 3 = 105$
2		Н-	0.0%		FACU species 38 x 4 = 152
3.		Н-			UPL species $\frac{10}{10}$ x 5 = $\frac{50}{10}$
4		Н-	0.0%		
5		Н-	0.0%		Column Totals: 93 (A) 327 (B)
6	0	Ц.	0.0%		Prevalence Index = B/A = 3.516
7	0	Ш.	0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9.			0.0%		Dominance Test is > 50%
10			0.0%		
		= To	tal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)					Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
1		Н-	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
2		H-	0.0%		
3	0	Ц-	0.0%		Indicators of hydric soil and wetland hydrology must
4	0	Ш.	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.
	0	= Tot	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. Valerianella umbilicata	30	.	34.1%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Schedonorus arundinaceus	15	✓.	17.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Solidago altissima	10	Н-	11.4%	FACU	1 -
4. Daucus carota	10	Ц.	11.4%	UPL	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5 Impatiens pallida	10	Щ	11.4%	FACW	
6. Barbarea vulgaris	5		5.7%	FACU	Five Vegetation Strata:
7. Symphyotrichum pilosum	5		5.7%	FAC	Tree - Woody plants, excluding woody vines, approximately 20
8 Erigeron philadelphicus	3		3.4%	FACU	If (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
		\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	Н-	0.0%		Shrub stratum – Consists of woody plants, excluding woody
12					vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r)	88	= 10	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	Ш.	0.0%		in height.
3			0.0%		Woody vines – Consists of all woody vines, regardless of
4.			0.0%		height.
5.	0		0.0%		l
6	0		0.0%		Hydrophytic Vegetation
6	0	= To	tal Cove		Present? Yes No •
		_ 10	55461		<u> </u>
Remarks: (Include photo numbers here or on a separate shee	et.)				
No hydrophytic vegetation indicators present, dominant species are F	AC and FAC	U.			

Upland 020

Soil Sampling Point: upl-bl-20200602-03

Donth	Matrix		Da	edox Feati	ures			
Depth inches)	ui .					Loc2	Texture	Remarks
0-6	10YR 4/3	90	10YR 5/1	10	D	М	Sandy Loam	
6-15	10Y 4/1	80	10YR 4/3	20	С	М	Sandy Clay Loam	gleyed matrix
	· · · · · · · · · · · · · · · · · · ·							- ,
								· ·
								
_ :								
								<u>.</u>
pe: C=Conce	entration. D=Depletion	n. RM=Redu	ced Matrix, CS=Cover	ed or Coate	ed Sand Grai	ns ² Loca	tion: PL=Pore Lining. M	=Matrix
dric Soil In							Indicators for Pr	oblematic Hydric Soils ³ :
Histosol (A1	•		Dark Surface	. ,			2 cm Muck (A	A10) (MLRA 147)
Histic Epipe Black Histic			Polyvalue Belo Thin Dark Surf				Coast Prairie (MLRA 147,14	
Hydrogen S Stratified La			Loamy Gleyed Depleted Matr)			odplain Soils (F19)
	(A10) (LRR N)		Redox Dark Si				_ ` .	,
	elow Dark Surface (A	.11)	Depleted Dark		7)			Dark Surface (TF12)
•	Surface (A12)	111)	Redox Depres		- /		Other (Explain	n in Remarks)
	k Mineral (S1) (LRR N	١,	Iron-Mangane MLRA 136)	. ,	(F12) (LRR N	١,		
	ed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	2)		
Sandy Gleye Sandy Redo			Piedmont Floo				³ Indicator	s of hydrophytic vegetation and
Stripped Ma			Red Parent Ma				wetland unles	I hydrology must be present, ss disturbed or problematic.
	yer (if observed):							
Type:	>-						Hydric Soil Present	t? Yes • No O
Depth (inche	es):						,	
	cator present as g spreading of spoils		x in sandy soils sta	rting less	than or eq	ual to 6" o	depth. Possible relict	indicator from nearby stream

ORAM v. 5.0 Field Form Quantitative Rating Wetland 021

Site: Crooks	ville-North Newark 138 kV Transmission L	ine Rebuild Project	Project Date: June 2, 2020			
	w-bl-20200602-03	-	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 p 0.3 to <3 acres (0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12l 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 (1) MEDIUM. Buffers average 25m NARROW. Buffers average 10i VERY NARROW. Buffers average 2b. Intensity of surrounding land use (select of the select of	e, do not double check) 64ft) or more around wetland 1 to <50m (82 to <164ft) around 1 to <25m (32ft to <82ft) around 1 age <10m (<32ft) around wetland 1 age <10m (<32ft) aroun	d perimeter (7) und wetland perinound wetland perimeter (ge) wildlife area, etc. th forest. (5) onservation tillag	rimeter (1) 0) (7) e, new fallow field. (3)		
27 15 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 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)	ater (3) stream) (5) 3d. b)	Duration inundat (select one or d Semi- to Regularly Seasonal X Seasonal Check all distudite	permanently inundated/saturated (4) inundated/saturated (3) ily inundated (2) ily saturated in upper 30cm (12in) (1) urbances observed		
36 9 Subtotal Points	Metric 4. Habitat Alteration and Definition 4a. Substrate disturbance. Score one or dout None or none apparent (4) X 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) Poor to fair (2) Poor (1)	ible check and average.	Habitat alteration None or r Recovere X Recoverii Recent o	n. Score one or double check and average. none apparent (9) ed (6) ng (3) r no recovery (1)		

Site: Crooksville-	-North Newark 138 kV Transmission Line Rebu	⊪Date:	June 2, 2020
Wetland: w-b	01-20200602-03	Rater:	BL, SM
			,
36 subtotal first pa	age		
36 0	Metric 5. Special Wetlands. (max 10 pts.)		
Subtotal Points	Check all that apply and score as indicated		
ouptotal Follow	Bog (10 pts)		
	Fen (10 pts)		
	Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		
	Lake Erie coastal/tributary wetland-unr	-	
	Lake Erie coastal/tributary wetland-res		y (5 pts)
	Lake Plain Sand Prairies (Oak Opening Relict Wet Prairies (10 pts)	gs) (10 pts)	
	Known occurrence state/federal threate	ened or endand	ered species (10)
	Significant migatory songbird/waterfow	-	
	Category 1 Wetland. See Question 1 of		
		_	
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	Vocatatio	n Community Cover Scale
	0 Aquatic bed		
	2 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		
	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)	Mannathra	Description of Vocatation Quality
	Moderately high (4) Moderate (3)	Narrative	Description of Vegetation Quality
	x 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
	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
	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)
	6d. Microtopography	3	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres) High 4 ha (9.88 acres) or more
	Score all present using 0 to 3 scale		I right 4 ha (5.00 doles) of more
	1 Vegetated hummocks/tussocks	Microtope	ography Cover Scale
	0 Coarse woody debris >15 cm (6")	0	Absent
	0 Standing dead > 25 cm (10") dbhAmphibian 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:

Jilonit Hanic.

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:

AEP

Site Location:

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Project No. 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 DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newa	ark 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20
Applicant/Owner: AEP		State: 0	H 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,	none): concave Slope: 15.0 % / 86.2 °
Subregion (LRR or MLRA): LRR N	Lat.:	38.82142 L o	ong.: -82.15778
Soil Map Unit Name: WuE2 - West	tmoreland-Guernsey silt loams, 25	to 40 percent slopes, eroded	NWI classification:
Are climatic/hydrologic conditions o	on the site typical for this time of y	ear? Yes • No O (If no	o, explain in Remarks.)
Are Vegetation \Box , Soil \Box			al Circumstances" present? Yes No
Are Vegetation, Soil	, or Hydrology naturally p	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - At	ttach site map showing	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?	
Remarks:			
feature downslope to perennial st	ream s-bl-20200601-06.		
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of or			Surface Soil Cracks (B6)
Surface Water (A1)	☐ True Aquatic Plant	, ,	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	` ,	Drainage Patterns (B10)
Saturation (A3)		neres along Living Roots (C3)	Moss Trim Lines (B16)
☐ Water Marks (B1)☐ Sediment Deposits (B2)	Presence of Reduc	• •	☐ Dry Season Water Table (C2)
Drift deposits (B3)		ction in Tilled Soils (C6)	☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface	• ,	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	U Other (Explain in I	Remarks)	✓ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imager	rv (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)	., (=-,		Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:			
Surface Water Present? Yes		1	
Water Table Present? Yes	No Depth (inches):		drology Present? Yes No
Saturation Present? (includes capillary fringe) Yes	No O Depth (inches):	Wetland Hyd	drology Present? Yes ● No ○
Describe Recorded Data (stream ga	auge, monitoring well, aerial photo	os, previous inspections), if ava	ilable:
Remarks:			
			pitation and surface runoff in geomorphic position
and abutting farm pond. Drains to	northeast via UDF offsite to peren	inial stream s-bl-2020001-06.	

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

			Sampling Point: w-bl-20200601-05
Absolute % Cover	Rel.Strat.	Indicator Status	
0	0.0%	-	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
0	0.0%		
0	0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
	0.0%		Species / talesss / taless
	0.0%		Percent of dominant Species
	0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
	0.0%		Prevalence Index worksheet:
0	0.0%		Total % Cover of: Multiply by:
0 =	= Total Cove	r	OBL species <u>20</u> x 1 = <u>20</u>
′	0.0%		FACW species $50 \times 2 = 100$
			FAC species $15 \times 3 = 45$
			FACU species $20 \times 4 = 80$
			UPL species $0 \times 5 = 0$
			Column Totals: 105 (A) 245 (B)
			205 (A)
			Prevalence Index = B/A = 2.333
	\neg		Hydrophytic Vegetation Indicators:
	\neg		Rapid Test for Hydrophytic Vegetation
			✓ Dominance Test is > 50%
			✓ Prevalence Index is ≤3.0 ¹
=	= Total Cove	r	☐ Morphological Adaptations ¹ (Provide supporting
0	0.0%		data in Remarks or on a separate sheet)
	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)
	0.0%		¹ Indicators of hydric soil and wetland hydrology must
	0.0%		be present, unless disturbed or problematic.
	0.0%		Definition of Vegetation Strata:
0	0.0%		Four Vegetation Strata:
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 =	= Total Cove	r	of height.
30	✓ 28.6%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
20	19.0%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
15	14.3%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
10		FACW	Woody vines - Consists of all woody vines greater than 3.28 ft
			in height.
5			Five Vegetation Strata:
		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
	\neg		diameter at breast height (DBH).
	\neg		Sapling stratum – Consists of woody plants, excluding woody
			vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
			Shrub stratum – Consists of woody plants, excluding woody
		r	vines, approximately 3 to 20 ft (1 to 6 m) in height.
			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)
	\neg		in height.
			Woody vines – Consists of all woody vines, regardless of height.
			Hydrophytic
0	0.0%		Vegetation
	= Total Cove		Present? Yes • No
	0 Cover 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	% Cover Cover 0 0.0% </td <td>Absolute % Cover Status 0</td>	Absolute % Cover Status 0

Soil

oil Sampling Point: w-bl-20200601-05

Profile Descr	iption: (Describe to	the depth r	eeded to document	the indica	tor or cor	firm the a	bsence of indicators	s.)		
Depth										
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Tvpe	Loc2	Texture		gleyed mat	marks trix
0-3	10Y 4/1	100					Clay Loam		gleyed mat	
3-18	10Y 5/1	90	10YR 5/6	10	C	PL	Clay Loam		greyed ma	
					•					
1		·								
		on. RM=Redu	ced Matrix, CS=Covere	ed or Coated	d Sand Grai	ns ² Locat	tion: PL=Pore Lining. I			
Hydric Soil I							Indicators for P	roble	matic Hydri	ic Soils ³ :
Histosol (Dark Surface (50) (AU DA	4.47.4.40)	2 cm Muck ((A10)	(MLRA 147)	
	pedon (A2)		Polyvalue Belo	-			Coast Prairie	Redo	x (A16)	
Black Hist	Sulfide (A4)		Thin Dark Surf		LKA 147, 1	48)	(MLRA 147,1		, ,	
	Layers (A5)		✓ Loamy Gleyed ✓ Depleted Matri				Piedmont Flo	oodpla	ain Soils (F19))
	k (A10) (LRR N)		Redox Dark Su				(MLRA 136,	,	o (/TE4	42)
	Below Dark Surface (A	(11)	Depleted Dark	` ,	')				Surface (TF1	12)
I — ·	k Surface (A12)	(11)	Redox Depress		,		U Other (Expla	ıin in F	Remarks)	
l —	ick Mineral (S1) (LRR N	N	☐ Iron-Manganes	. ,	F12) (LRR N	١,				
MLRA 147		٧,	MLRA 136)	•	, (,				
Sandy Gle	eyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)				3 - " .			
Sandy Re	dox (S5)		Piedmont Floo	dplain Soils	(F19) (MLR	A 148)	Indicato wetlan	rs of I Id hvd	hydrophytic v Irology must b	regetation and be present.
Stripped N	Matrix (S6)		Red Parent Ma	iterial (F21)	(MLRA 127	', 147)			sturbed or pro	
Postrictive I	ayer (if observed):									
Type:	ayer (ii observed).									
Depth (incl	hes):						Hydric Soil Prese	nt?	Yes 💿	No O
Remarks:										
	dicators present as	alovod mate	iv with roday cance	ntrations	in noro lin	inac				
Hydric Soil illic	dicators present as	gieyeu mau	ix with redux conce	eriu auoris	iii pore iii	iiigs				

Site: Crooksvill	e-North Newark 138 kV Transmission L	Date: June 1, 2020			
Wetland: w-	-bl-20200601-05		Rater:	BL, SM	
1 1 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 to <3 acres (0.12 to <1.2ha) x 0.1 to <0.3 acres (0.04 to <0.12 <0.1 acres (0.04ha) (0 pts)	na) (5 pts) (4 pts) pts)) (2pts)			
9 8 Subtotal Points	Metric 2. Upland buffers and surro 2a. Calculate average buffer width (select one WIDE. Buffers average 50m (1 X MEDIUM. Buffers average 25m NARROW. Buffers average 10 VERY NARROW. Buffers average 2b. Intensity of surrounding land use (select of the select of the s	e, do not double check) 164ft) or more around wetlar in to <50m (82 to <164ft) arc im to <25m (32ft to <82ft) a rage <10m (<32ft) around w cone or double check & aven er forest, prairie, savannah, rubland, young second grov	nd perimeter (7 pound wetland per around wetland vetland perimeter age), wildlife area, e with forest. (5)	erimeter (4) perimeter (1) er (0) tc. (7)	
28.5 19.5 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 w Perennial surface water (lake of seasonal/Intermittent) 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 (select one or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	3b. vater (3) r stream) (5) 3d.	Connectivity. 100 ye Betwee X Part of Part of Duration inunc (select one of Regula X Season X Season Check all disditch dike tile weir	Score all that apply. ar floodplain (1) en stream/lake and other human use (1) fivetland/upland (e.g. forest), complex (1) friparian or upland corridor (1) dation/saturation. fr double check & average) to permanently inundated/saturated (4) arly inundated/saturated (3) nally inundated (2) nally saturated in upper 30cm (12in) (1) sturbances observed	
38.5 10 Subtotal Points	Metric 4. Habitat Alteration and D 4a. Substrate disturbance. Score one or doc X 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)	evelopment. (max 20	Habitat alterai Recov X Recov Recen Conces observe	tion. Score one or double check and average. or none apparent (9) ered (6) ering (3) t or no recovery (1)	

38.5 subtotal this page

Site: Crooksville	-North Newark 138 kV Transmission Line Rebuil	Date:	June 1, 2020
Wetland: We	etland 022	Rater:	BL, SM
38.5 subtotal first p	page		
38.5 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 Openings Relict Wet Prairies (10 pts) Known occurrence state/federal threater Significant migatory songbird/waterfowl (10 category 1 Wetland. See Question 1 of	icted hydrolog s) (10 pts) ned or endang habitat or usa Qualitative R	y (5 pts) Hered species (10) ge (10 pts) ating. (-10 pts)
40.5 2 Subtotal Points	Metric 6. Plant Communities, interspersion 6a. Wetland Vegetation Communities Score all present using 0 to 3 scale	•	ograpny. (max 20 pts.) n Community Cover Scale
	Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	2 Emergent 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
	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
	x 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 1 Vegetated hummocks/tussocks	Microton	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 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





PHOTOGRAPHIC RECORD

WETLANDS

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

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newar	k 138 kV Trar	smission Line	City/County:	Muskingum		Samp	ling Date: 01-Jun-20
Applicant/Owner: AEP				State: 0	Н	Sampling Po	int: w-bl-20200601-04
Investigator(s): BL, SKM			Section, Tow	nship, Range: S	35	T 17N	R 15W
Landform (hillslope, terrace, etc.):	Swale		Local relief (co	ncave, convex,	none):	concave	Slope: _15.0 % / _86.2 °
Subregion (LRR or MLRA): LRR N		Li	at.: 38.82378	Lo	ng.: -	82.160403	Datum: NAD83
Soil Map Unit Name: WuE2 - Westr	noreland-Gu	ernsey silt loams,	25 to 40 percent s	lopes, eroded		NWI classification:	: N/A
Are climatic/hydrologic conditions or	the site typ	ical for this time o	of year? Yes	No O (If no	, expla	in in Remarks.)	
Are Vegetation, Soil	, or Hydrold		cantly disturbed?	Are "Norma	l Circu	mstances" present	? Yes • No O
Are Vegetation, Soil	, or Hydrolo	ogy 🗌 natura	lly problematic?	(If needed,	explai	n any answers in R	emarks.)
Summary of Findings - At	tach site	map showin	g sampling po	oint location	ns, tr	ansects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes 💿	No O					
Hydric Soil Present?	Yes 💿	No O		Sampled Area	Yes (● No ○	
Wetland Hydrology Present?	Yes 💿	No O	withir	a Wetland?			
Remarks:			·				
Sample point in for wetland 023 (vime of survey. Wetland is potential connected and above stream terral	ally isolated,	drains downslope					
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 Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gates)	(B7) No O No O No O	☐ True Aquatic P☐ Hydrogen Sulfi☐ Hydrogen Sulfi☐ Oxidized Rhizo☐ Presence of Re☐ Recent Iron Re☐ Thin Muck Sur☐ Other (Explain ☐ Depth (inche Depth (inche Depth (inche	Plants (B14) ide Odor (C1) pspheres along Living educed Iron (C4) eduction in Tilled Soils face (C7) in Remarks) esp: 1 esp: 10 esp: 0	(C6) Wetland Hyd	S S D M D C S S S S S M M F F M M F F M M	urface Soil Cracks (Be parsely Vegetated Co prainage Patterns (B16) loss Trim Lines (B16) bry Season Water Tab trayfish Burrows (C8) aturation Visible on A tunted or Stressed Plateomorphic Position (I hallow Aquitard (D3) licrotopographic Relie AC-neutral Test (D5)	ncave Surface (B8) Ile (C2) erial Imagery (C9) ants (D1) D2) If (D4)
Remarks: multiple primary hydrology indicato Drains to northeast downslope off-s					pitation	n and surface runof	ff in geomorphic position.

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

			minant		Sampling Point: w-bl-20200601-04
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%		
3	0		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4			0.0%		
5.			0.0%		Percent of dominant Species
6.		\Box	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
			0.0%		Prevalence Index worksheet:
7		Н-	0.0%		Total % Cover of: Multiply by:
8			tal Cover		
Sapling-Sapling/Shrub Stratum (Plot size: 15' r	0	- 10	tai Cover		OBL species $45 \times 1 = 45$
1. Rubus idaeus	2		100.0%	FAC	FACW species $50 \times 2 = 100$
		\Box	0.0%		FAC species $4 \times 3 = 12$
2		П-	0.0%		FACU species $0 \times 4 = 0$
3		П-	0.0%		UPL species $0 \times 5 = 0$
4		H-			Column Totals: 99 (A) 157 (B)
5		H-	0.0%		
6		Н-	0.0%		Prevalence Index = B/A = 1.586
7		Ц.	0.0%		Hydrophytic Vegetation Indicators:
8	0	Ш.	0.0%		Rapid Test for Hydrophytic Vegetation
9		Ш.	0.0%		✓ Dominance Test is > 50%
10			0.0%		✓ Prevalence Index is ≤3.0 ¹
		= To	tal Cover		
Shrub Stratum (Plot size:)			0.0%		Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
1		Н-			Problematic Hydrophytic Vegetation ¹ (Explain)
2		H-	0.0%		
3		Н-	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		Ц.	0.0%		
5	0	Ш,	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.
4	30	✓	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		30.9%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Carex frankii	15	Н-	15.5%	OBL	Woody vines – Consists of all woody vines greater than 3.28 ft
4. Poa palustris	15	Н-	15.5%	FACW	in height.
5. Impatiens pallida		Н-	5.2%	FACW	
6. Valerianella umbilicata	2	Ц.	2.1%	FAC	Five Vegetation Strata:
7	0	Ш.	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
	_	= 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
2.	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
		\Box	0.0%		Woody vines – Consists of all woody vines, regardless of
3			0.0%		height.
4					
5	0	H-	0.0%		Hydrophytic
6	0	Ц.	0.0%		Vegetation Present? Yes No
	0	= To	tal Cove	·	Present? Yes VO
Remarks: (Include photo numbers here or on a separate shee Hydrophytic vegetation indicator present as dominance test > 50%, or	-	ecies	are OBL a	nd FACW	

Soil

Sampling Point: w-bl-20200601-04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth												
(inches)		(moist)	%	Color	(moist)	%	Tvpe	Loc2	Texture	Remarks		
0-3	10YR	4/2	100						Silt Loam	-,		
3-10	10YR	4/1	90	10YR	4/3	10	С	PL	Silty Clay Loam			
10-16	5Y	5/2	60	5Y	5/6	20	С	М	Clay Loam			
		`		10YR	3/2	20	D	М				
		_										
		_										
		_							-			
		-			-					_		
		_								_		
										_,		
¹ Type: C=Cond	centration.	D=Depletion	on. RM=Redu	ced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	ins ²Loca	tion: PL=Pore Lining. M=	Matrix		
Hydric Soil I				,							- C-11-3.	
Histosol (A				Dar	k Surface	(S7)			Indicators for Prob	-	Solis :	
Histic Epip				Poly	value Belo	w Surface	(S8) (MLRA	147,148)	2 cm Muck (A10			
☐ Black Histi	ic (A3)			Thir	Dark Sur	face (S9) (N	MLRA 147, 1	48)	Coast Prairie Re (MLRA 147,148)			
Hydrogen				Loai	my Gleyed	Matrix (F2)		`	, plain Soils (F19)		
Stratified I					leted Matr				(MLRA 136, 147	7)		
2 cm Muck		-				urface (F6)			☐ Very Shallow Da	ark Surface (TF1	2)	
		k Surface (A	A11)		Depleted Dark Surface (F7) Redox Depressions (F8)				Other (Explain in Remarks)			
☐ Thick Dark	,					. ,	/E12\ /I DD I	M				
	☐ Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)					•						
Sandy Gle		(S4)					LRA 136, 12		³ Indicators (of hydronhytic ve	hydrophytic vegetation and	
Sandy Rec							s (F19) (MLF		wetland h	ydrology must b	e present,	
Stripped M	4atrix (S6)			Red	Parent Ma	aterial (F21) (MLRA 127	7, 147)	unless	disturbed or pro	blematic.	
Restrictive La	ayer (if ob	oserved):										
Type:									Hydric Soil Present?	Yes •	No O	
Depth (inch	nes):								Tryanic Son Fresche.	165 0	110 😊	
Remarks:												
Hydric soil ind	dicators p	resent as	depleted m	atrix with	ow chror	ma and lo	w value ha	iving redo	x concentrations in por	e linings.		

Upland 022

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newar	nission Line City/C	County: Muskingum	s	Sampling Date: 01-Jun-20	
Applicant/Owner: AEP			State: Of	⊣ Samplir	ng Point: upl-bl-20200601-05
Investigator(s): BL, SKM		Section	on, Township, Range: S	35 T 17	N R 15W
Landform (hillslope, terrace, etc.):	Hillside	Local re	elief (concave, convex, ı	none): convex	Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N		Lat.: 38.823	363 Loi	ng.: -82.16026	Datum: NAD83
Soil Map Unit Name: WuE2 - Westn	noreland-Gueri			NWI classifica	
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	y naturally problema	atic? (If needed,	explain any answers	s in Remarks.)
Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present?		lo			
Hydric Soil Present?		lo	Is the Sampled Area	Yes O No 💿	
Wetland Hydrology Present?	Yes O No	lo •	within a Wetland?		
Remarks:			<u> </u>		
hydrology criteria not met. Hydrology					
Hydrology					
Wetland Hydrology Indicators:				Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of on	e required; che			Surface Soil Crac	• •
Surface Water (A1)	L	True Aquatic Plants (B14)			ed Concave Surface (B8)
High Water Table (A2) Saturation (A3)	_ 	Hydrogen Sulfide Odor (C1)	•	Drainage Pattern	` '
Water Marks (B1)	[Oxidized Rhizospheres alon		Moss Trim Lines	
				☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)	
Drift deposits (B3)		Thin Muck Surface (C7)	illeu Jolis (CO)	_ ′	e on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Remarks)		Stunted or Stress	• , , ,
Iron Deposits (B5)				Geomorphic Positi	` '
☐ 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		Depth (inches): (<u> </u>		
Water Table Present? Yes	No 💿	Depth (inches):	Wetland Hydrology Present? Yes ○ No ●		
Saturation Present? (includes capillary frings) Yes	No 💿	Depth (inches):			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
	•				_
Remarks:					
No hydrology indicators present.					

				ominant		Sampling Point: upl-bl-20200601-05
Tre	Stratum (Plot size: 30' r)	Absolute % Cover	Re	ecies? el.Strat. over	Indicator Status	Johnnance Fest Worksheet.
1.,		0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
		0		0.0%		
∠.,		0		0.0%		Total Number of Dominant
			$\overline{\Box}$	0.0%		Species Across All Strata: 4 (B)
			\Box			Percent of dominant Species
				0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)
6.,		0	Ш	0.0%		That the obly then, of the
				0.0%		Prevalence Index worksheet:
		0		0.0%		Total % Cover of: Multiply by:
			= To	tal Cove	r	OBL species 0 x 1 = 0
Sap	ling-Sapling/Shrub Stratum (Plot size: 15' r	_				FACW species $0 \times 2 = 0$
1.,	Rubus occidentalis	15	✓	55.6%	UPL	
2	Juglans nigra	10	✓	37.0%	FACU	FAC species $92 \times 3 = 276$
				7.4%	FACU	FACU species $17 \times 4 = 68$
			$\overline{\Box}$	0.0%		UPL species $\underline{20}$ x 5 = $\underline{100}$
						Column Totals: 129 (A) 444 (B)
				0.0%		Column Total St 125
				0.0%		Prevalence Index = B/A = 3.442
			Щ	0.0%		Hydrophytic Vegetation Indicators:
8.,		0	Ш	0.0%		Rapid Test for Hydrophytic Vegetation
				0.0%		Dominance Test is > 50%
				0.0%		<u> </u>
		77 .	= Ta	otal Cove		Prevalence Index is ≤3.0 ¹
	ub Stratum (Plot size:)		,		•	Morphological Adaptations 1 (Provide supporting
1.,		0	Щ	0.0%		data in Remarks or on a separate sheet)
2.,		0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3		0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.		0		0.0%	·	be present, unless disturbed or problematic.
				0.0%		Definition of Vegetation Strata:
			$\overline{\Box}$	0.0%		Four Vegetation Strata:
			\Box			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
Her	b Stratum (Plot size: <u>5' r</u>)	=	= To	otal Cove	r	of height.
1	Valerianella umbilicata	40	✓	39.2%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
	Dichanthelium clandestinum	30	v	29.4%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
		10		9.8%	FAC	regardless of size, and all other plants less than 3.28 ft tall.
	Carex spicata	_	\exists		_	Woody vines – Consists of all woody vines greater than 3.28 ft
4.,	Vernonia gigantea		\Box	9.8%	FAC	in height.
5	Lamium purpureum	5	Н	4.9%	UPL	
6.,	Solidago altissima	5	Ш	4.9%	FACU	Five Vegetation Strata:
7.,	Verbesina alternifolia	2		2.0%	FAC	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
				0.0%		diameter at breast height (DBH).
∂. _□				0.0%		Sapling stratum – Consists of woody plants, excluding woody
U.,						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.
Wo	ody Vine Stratum (Plot size: 15' r)	102=	= To	tal Cove	r	Herb stratum – Consists of all herbaceous (non-woody) plants,
	Say vine strutum	0		0.0%		including herbaceous vines, regardless of size, and woody
						species, except woody vines, less than approximately 3 ft (1 m)
		0		0.0%		in height.
3.,		0	Ц	0.0%		Woody vines – Consists of all woody vines, regardless of
			Ш	0.0%		height.
4.,				0.0%		Hydronbydia
				0.0%		Hydrophytic Vegetation
5.,		()	1 1			
			 _ T	otal Cove	er .	Present? Yes No •

Upland 022

Soil

Sampling Point: upl-bl-20200601-05

Profile Descr	iption: (Describe to	the depth r	eeded to document	the indic	ator or cor	nfirm the a	bsence of indicators.)	
Depth	Matrix			dox Featu	1			
(inches)	Color (moist)		Color (moist)	%	Tvpe	Loc ² _	Texture	Remarks
0-10	10YR 3/3	100					Silt Loam	
10-14	10YR 4/4	80	10YR 4/2	20	D	M	Silt Loam	
				`				
	· · · · · · · · · · · · · · · · · · ·						`	
				-				
							· ·	
¹ Type: C=Con	centration. D=Depletion	on. RM=Redu	ced Matrix, CS=Covere	ed or Coate	ed Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=Matr	ix
Hydric Soil I	Indicators:						Indicators for Problem	natic Hydric Soils ³ :
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10) (N	-
Histic Epi	pedon (A2)		Polyvalue Belo					
Black Hist	tic (A3)		Thin Dark Surf	ace (S9) (M	ILRA 147, 1	48)	Coast Prairie Redox (MLRA 147,148)	(A16)
_	Sulfide (A4)		Loamy Gleyed	Matrix (F2))		Piedmont Floodplair	n Soils (F19)
Stratified	Layers (A5)		Depleted Matri				(MLRA 136, 147)	(==)
2 cm Muc	k (A10) (LRR N)		Redox Dark Su				☐ Very Shallow Dark S	Surface (TF12)
Depleted	Below Dark Surface (A	\11)	Depleted Dark	-	7)		Other (Explain in Re	emarks)
Thick Dar	k Surface (A12)		Redox Depress	. ,				
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR I	N,	Iron-Manganes MLRA 136)	se Masses ([F12) (LRR I	۸,		
	eyed Matrix (S4)		Umbric Surface	e (F13) (ML	RA 136, 12	2)		
Sandy Re			Piedmont Floo				³ Indicators of hy	drophytic vegetation and
	Matrix (S6)		Red Parent Ma					ology must be present, urbed or problematic.
Suipped i	Hatrix (30)		Red Falent Ma	iteriai (i 21)) (MLKA 127	, 17/)	unicss distr	arbed or problemade.
Restrictive L	ayer (if observed):							
Type:								0 0
Depth (inc	hes):						Hydric Soil Present?	Yes O No •
Remarks:								
No hydric soi	l indicators present							
·								

Site: Crooksvill	le-North Newark 138 kV Transmission L	ine Rebuild Project	Date: June 1, 2020	
Wetland: w	-bl-20200601-04		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) (4) 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) <p>x <0.1 acres (0.04ha) (0 pts)</p>	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 10r VERY LOW. 2nd growth or olde X LOW. Old field (>10 years), shrr 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) al 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, c	and perimeter (7) ound wetland perimeter (4) around wetland perimeter (1) vetland perimeter (0) rage) In, wildlife area, etc. (7) wth 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 water (lake or Perennial surface water (lake or Pe	3b. ater (3) stream) (5) 3d.	D. 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 Defa. Substrate disturbance. Score one or dou 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 20 ble check and average.	O pts.) Habitat alteration. Score one or double check and averation. 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	age.

40 subtotal this page

DRAM v. 5.0 Field Form Quantita			<u> </u>	
	North Newark	138 kV Transmission Line Rebui	Date:	June 1, 2020
Wetland: Wet	land 023		Rater:	BL, SM
40 subtotal first pa	ige			
· ·	3			
40 0	Metric 5. Sp.	ecial Wetlands. (max 10 pts.)		
Subtotal Points		ply and score as indicated		
Subtotal Points	Crieck all triat ap			
		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-restr	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	habitat or usaç	ge (10 pts)
		Category 1 Wetland. See Question 1 of	f Qualitative Ra	ating. (-10 pts)
38 -2	Metric 6. Pla	ant Communities, interspersion	, 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	Al
	1	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
	<u> </u>	Caror (not)	_	quality
	6h Horizontal (n	olan view) interspersion		Present and comprises significant part, or more, of wetland's vegetation
	Select only one	nan view, intereperator	3	and is of high quality
	Colour only one	High (5)		3 1 7
		Moderately high (4)	Narrative	Description of Vegetation Quality
		Moderate (3)	Ttu:Tut:To	1
		i ' '	low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
		Moderately low (2) 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
	6c. Coverage of			processes of fairs threatened of shadingsred opp
		ORAM long form for list. ints for coverage		A predominance of native species, with nonnative spp and/or
		1	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
	Х	Moderate 25-75% cover (-3)		chadingered 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. Microtopogra	<u>aphy</u>	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
	0	Amphibian breeding pools		n resent very small amounts of it more common of marginal quality
		-	0	Present in moderate amounts, but not of highest quality or in small
			2	amounts of highest quality
			_	Describing and describe an amount of the control of
			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 DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newar	k 138 kV Transmission Line	City/County: Muskingum	Sampling Date: 01-Jun-20
Applicant/Owner: AEP		State: OH	Sampling Point: w-bl-20200601-03
Investigator(s): BL, SKM		Section, Township, Range: S	35 T 17N R 15W
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, n	one): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N	Lat.:	39.82863 Lo n	g.: -82.16598
Soil Map Unit Name: CsD - Coshoct	on silt loam, 15 to 25 percent slc	ppes	NWI classification: N/A
Are climatic/hydrologic conditions on	n the site typical for this time of v	rear? Yes • No O (If no.	explain in Remarks.)
Are Vegetation, Soil			Circumstances" present? Yes No
Are Vegetation , Soil	, or Hydrology naturally p		explain any answers in Remarks.)
Summary of Findings - Att	tach site map showing	sampling point location	s, 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?	
Wetland fully delineated, drains dir			long edge of Pond 09 (p-bl-20200601-01).
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 Saturation Present? (includes capillary fringe) Describe Recorded Data (stream ga	True Aquatic Plant Hydrogen Sulfide V Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Other (Explain in I	Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction 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)
Remarks: Multiple primary hydrology indicator and abutting farm pond. Drains to s			tation and surface runoff in geomorphic position

			C	!2		Sampling Point: w-bl-20200601-03
Tree Stratum (Plot size: 3	0' r)	Absolute % Cover	Re	ecies? d.Strat. ver	Indicator Status	Sommande Fest Worksheeti
1		0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2.		0		0.0%		
3		0		0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
				0.0%		Species Across Air Strata.
				0.0%	•	Percent of dominant Species
				0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)
				0.0%		Prevalence Index worksheet:
3				0.0%		Total % Cover of: Multiply by:
		0 :	 = То	tal Cove	r	OBL species 30 x 1 = 30
Sapling-Sapling/Shrub Strat	ım (Plot size: 15' r) —				FACW species $26 \times 2 = 52$
Rubus occidentalis		10	✓.	52.6%	UPL	
Rosa multiflora		5	✓.	26.3%	FACU	
Ulmus americana		3		15.8%	FACW	FACU species $\frac{15}{10}$ x 4 = $\frac{60}{10}$
Fraxinus pennsylvanica		-		5.3%	FACW	UPL species $\frac{10}{}$ x 5 = $\frac{50}{}$
5.				0.0%		Column Totals: 121 (A) 312 (B)
				0.0%		Prevalence Index = B/A = 2.579
				0.0%	•	
				0.0%		Hydrophytic Vegetation Indicators:
				0.0%	•	Rapid Test for Hydrophytic Vegetation
			\Box	0.0%		✓ Dominance Test is > 50%
			 = To	tal Cove	· · · · · ·	У Prevalence Index is ≤3.0 ¹
hrub Stratum (Plot size:					•	Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
l			Η.	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
<u>2</u>			片.	0.0%		
			닏.	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		0	\sqsubseteq	0.0%		
5		0	Ш.	0.0%		Definition of Vegetation Strata:
8		0	Ш.	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), regardles
lerb Stratum (Plot size: 5' i		0 =	= To	tal Cove	r	of height.
1 Scirpus atrovirens		30	✓	29.4%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Valerianella umbilicata		15		14.7%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants
3. Dichanthelium clandestinum		15		14.7%	FAC	regardless of size, and all other plants less than 3.28 ft tall.
		10	Ħ.	9.8%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
Scirpus cyperinus Elymus virginicus		10	$\overline{\Box}$	9.8%	FACW	in height.
11		10	\Box	9.8%	FACU	
Poa compressa			Π.	4.9%	FAC	Five Vegetation Strata:
7_ <u>Euthamia graminifolia</u>			Η.	4.9%	FAC	Tree - Woody plants, excluding woody vines, approximately 20
Juncus tenuis			Η.			ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Onoclea sensibilis		2	片.	2.0%	FACW	Sapling stratum – Consists of woody plants, excluding woody
)		0	Η.	0.0%		vines, approximately 20 ft (6 m) or more in height and less tha
1		0	片.	0.0%		3 in. (7.6 cm) DBH. Shrub stratum – Consists of woody plants, excluding woody
2		0	Ш.	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Voody Vine Stratum (Plot size		102 =	= To ┌─	otal Cove	r	Herb stratum – Consists of all herbaceous (non-woody) plants including herbaceous vines, regardless of size, and woody
1			1	0.0%		species, except woody vines, less than approximately 3 ft (1 m
			<u>H</u> .	0.0%		in height.
			Η.	0.0%		Woody vines – Consists of all woody vines, regardless of height.
		0	Ц.	0.0%		
5		0	Ш.	0.0%		Hydrophytic
3		0		0.0%		Vegetation V
		0	= To	otal Cove	r	Present? Yes No O

Soil Sampling Point: w-bl-20200601-03

Depth	Matrix			Re	dox Featu	ires				
(inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc ²	Texture	Rem	arks
0-3	5Y 3/3	100						Silt Loam		
3-13	5Y 4/2	95	5Y	4/6	5	С	PL	Silt Loam		
13-17	5Y 4/1	98	5Y	4/4	2	С	PL	Silty Clay Loam		
		on. RM=Redu	iced Matrix,	CS=Cover	ed or Coate	d Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=Ma	atrix	
Hydric Soil I								Indicators for Proble	ematic Hydric	Soils ³ :
☐ Histosol (A	*			k Surface ((20) (11) 21		2 cm Muck (A10)	(MLRA 147)	
_	pedon (A2)					S8) (MLRA		Coast Prairie Red	ox (A16)	
Black Histi	Sulfide (A4)					ILRA 147, 14	1 8)	(MLRA 147,148)	. ,	
	Layers (A5)			ny Gleyed leted Matri	Matrix (F2)			Piedmont Floodpl	ain Soils (F19)	
	k (A10) (LRR N)		_ :		ırface (F6)			(MLRA 136, 147)	. Company (TE1)	
_	Below Dark Surface (۸11)			Surface (F)	7)		☐ Very Shallow Dar	•	2)
_ '	k Surface (A12)	AII)		ox Depres		,		Uther (Explain in Remarks)		
	ck Mineral (S1) (LRR	N.				F12) (LRR N	Ι,			
MLRA 147		,		A 136)						
Sandy Gle	yed Matrix (S4)		Uml	oric Surfac	e (F13) (ML	.RA 136, 122	2)	3 To diagrams of	مرير ماند بمامر ميرامر بما	
Sandy Rec	dox (S5)		Pied	lmont Floo	dplain Soils	(F19) (MLR	A 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Stripped M	latrix (S6)		Red	Parent Ma	aterial (F21)	(MLRA 127	, 147)	unless di	sturbed or prob	olematic.
Restrictive La	aver (if observed):									
	ayer (if observed):									
Туре:								Hydric Soil Present?	Yes	No O
Type: Depth (inch								Hydric Soil Present?	Yes •	No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with l	ow chron	na and lov	v value ha	vina redo			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	ma and lov	w value ha	ving redox	Hydric Soil Present? x concentrations in pore		No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with l	ow chron	ma and lov	v value ha	ving redox			No O
Type: Depth (inch	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redo			No O
Type: Depth (inch	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redo:			No O
Type: Depth (inch	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chron	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O
Type: Depth (inch Remarks:	nes):	depleted m	atrix with I	ow chror	na and lov	v value ha	ving redox			No O

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

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	one): convex Slope: 20.0 % / 87.1 °
Subregion (LRR or MLRA): LRR N	Lat.:	38.82884 Lo n	ng.: -82.166315
Soil Map Unit Name: CsD - Coshoct			NWI classification: N/A
Are climatic/hydrologic conditions on	n the site typical for this time of y	ear? Yes No (If no,	explain in Remarks.)
Are Vegetation \Box , Soil \Box	, or Hydrology significant	tly disturbed? Are "Normal	Circumstances" present? Yes No
Are Vegetation , Soil	, or Hydrology	problematic? (If needed, o	explain any answers in Remarks.)
Summary of Findings - Att		sampling point location	s, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No		
Hydric Soil Present?	Yes O No O	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present?	Yes O No O	within a Wetland?	
Remarks:			
criteria not met.	2020001 03), about 30 feet flort	inwest of wedard boundary. No	t a wetland point as hydric soil and hydrology
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of on	ne required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plant	ts (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	* *	Drainage Patterns (B10)
Saturation (A3)		neres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduc	• •	Dry Season Water Table (C2)
Sediment Deposits (B2)		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 F	Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery	., /D7\		Geomorphic Position (D2)
Water-Stained Leaves (B9)	y (B7)		Shallow Aquitard (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13)			Microtopographic Relief (D4)
Field Observations:			FAC-neutral Test (D5)
Surface Water Present? Yes	No Depth (inches):	0	
Water Table Present? Yes			
	2 op a. (o.).	Wetland Hydr	rology Present? Yes O No •
(includes capillary fringe)			
Describe Recorded Data (stream ga	auge, monitoring well, aerial photo	os, previous inspections), if avail	able:
D1			
Remarks:			
No hydrology indicators present.			

Upland 024

			ominant ecies? -		Sampling Point: upl-bl-20200601-03
Tree Stratum (Plot size: 30' r)	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: 2 (A)
2	0		0.0%		
3.	0		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4.			0.0%		Species / icross / iii Scratch
5.			0.0%		Percent of dominant Species
6.		$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
		$\overline{\Box}$	0.0%		Prevalence Index worksheet:
7		Ξ.	0.0%		Total % Cover of: Multiply by:
8					
Sapling-Sapling/Shrub Stratum (Plot size: 15' r)	= 10	tal Cover	-	OBL species $0 \times 1 = 0$
1 Fraxinus americana	10	✓	76.9%	FACU	FACW species $17 \times 2 = 34$
2. Juglans nigra			15.4%	FACU	FAC species $70 \times 3 = 210$
0. 66	1		7.7%	FACU	FACU species $28 \times 4 = 112$
0.		$\overline{\Box}$	0.0%		UPL species $0 \times 5 = 0$
4		$\overline{\Box}$	0.0%		Column Totals:115 (A)356 (B)
5		П.	0.0%		
6		Η.	0.0%		Prevalence Index = B/A = 3.096
7		Η.			Hydrophytic Vegetation Indicators:
8		Η.	0.0%		Rapid Test for Hydrophytic Vegetation
9		Н.	0.0%		✓ Dominance Test is > 50%
10		Ш.	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	13	= To	tal Cover	•	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0	\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4		\Box	0.0%		be present, unless disturbed or problematic.
		$\overline{\Box}$	0.0%		Definition of Vegetation Strata:
5		H.	0.0%		Four Vegetation Strata:
6		Η.			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	= 10	tal Cover		of height.
1. Dichanthelium clandestinum	40	✓.	39.2%	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. Valerianella umbilicata	30	V	29.4%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Onoclea sensibilis	10		9.8%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Alliaria petiolata	10		9.8%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Festuca rubra	5		4.9%	FACU	in height.
6. Elymus virginicus	5		4.9%	FACW	Five Vegetation Strata:
7. Packera aurea	2		2.0%	FACW	
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	\Box	0.0%		diameter at breast height (DBH).
9	0	\Box	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10		Π.	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11		Η.			Shrub stratum – Consists of woody plants, excluding woody
12	102	 T -	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 15' r)	102	= 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%		Woody vines – Consists of all woody vines, regardless of
4			0.0%		height.
5.	0		0.0%		
6	0	$\overline{\Box}$	0.0%		Hydrophytic Vegetation
6			otal Cove	r	Present? Yes • No
			5016	-	
Remarks: (Include photo numbers here or on a separate she	•	_	_		
Hydrophytic vegetation indicator present as dominance test > 50%,	dominant sp	ecies	are FAC a	and FACU	

Upland 024

Soil

Sampling Point: upl-bl-20200601-03

Depth -	Matrix		Red	ox Features			
(inches)	Color (moist)	%	Color (moist)		Loc ²	Texture	Remarks
0-3	5Y 3/3	100				Silt Loam	
3-19	5Y 4/3	100				Silt Loam	
	· · · · · · · · · · · · · · · · · · ·						
	· · · · · · · · · · · · · · · · · · ·						
Tunos C—Cons	entration D-Depletie	n DM-Dodu	and Matrix CC—Covered	or Costed Cand Crai	nc 21 ocot	ion: PL=Pore Lining. M=M	ntwise.
		iii. RM=Reduc	Led Matrix, CS=Covered	or Coaled Sand Grai	IS -LOCAL		
Hydric Soil In			Dowle Comform (C)	7\		Indicators for Proble	ematic Hydric Soils ³ :
Histosol (A			Dark Surface (S	•	147 140	2 cm Muck (A10)	(MLRA 147)
Histic Epipe			_	Surface (S8) (MLRA		Coast Prairie Red	ox (A16)
Black Histic				e (S9) (MLRA 147, 14	1 8)	(MLRA 147,148)	,
Hydrogen S			Loamy Gleyed M			Piedmont Floodpl	ain Soils (F19)
Stratified La			Depleted Matrix			(MLRA 136, 147)	
	(A10) (LRR N)		Redox Dark Surf Depleted Dark S			Very Shallow Dar	k Surface (TF12)
_ '	elow Dark Surface (A	11)				U Other (Explain in	Remarks)
_	Surface (A12)	_	Redox Depression	Masses (F12) (LRR N			
Sandy Muc MLRA 147,	k Mineral (S1) (LRR N 148)	١,	MLRA 136)	Masses (F12) (LRR I	١,		
	red Matrix (S4)		Umbric Surface	(F13) (MLRA 136, 12	2)		
Sandy Red				olain Soils (F19) (MLR			hydrophytic vegetation and
				erial (F21) (MLRA 127			drology must be present, sturbed or problematic.
Stripped Ma			Red rarent riate	.nai (121) (!·ILIVA 127	, 177)	unicss un	starbed or problematic.
Stripped Ma	acin (50)						
	yer (if observed):						
							0 6
Restrictive La	yer (if observed):					Hydric Soil Present?	Yes ○ No •
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No •
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No •
Restrictive Lag	yer (if observed):				<u> </u>	Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Type: Depth (inche	yer (if observed):				_	Hydric Soil Present?	Yes ○ No •
Restrictive Lag	yer (if observed):				<u> </u>	Hydric Soil Present?	Yes ○ No •
Type: Depth (inche	yer (if observed):				<u>—</u>	Hydric Soil Present?	Yes ○ No •
Type: Depth (inche	yer (if observed):				<u> </u>	Hydric Soil Present?	Yes ○ No •
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No •
Type: Depth (inche	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):				<u> </u>	Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):				<u>—</u>	Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive La	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):				<u> </u>	Hydric Soil Present?	Yes ○ No ●
Restrictive Lag	yer (if observed):					Hydric Soil Present?	Yes ○ No ●

Site: Crooksvi	lle-North Newark 138 kV Transmission Line	Rebuild Project	Date:	June 1, 2020
Wetland: \	Vetland 024		Rater:	BL, SM
0 0 Subtotal Points	Metric 1. Wetland Area (size). (max 6 Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 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) (2pt) 0.1 to <0.3 acres (0.04 to <0.12ha) (x <0.1 acres (0.04ha) (0 pts)	pts))		w-bl-20200601-03
12 12 Subtotal Points	Metric 2. Upland buffers and surround 2a. Calculate average buffer width (select one, do X WIDE. Buffers average 50m (164ft) MEDIUM. Buffers average 25m to < NARROW. Buffers average 10m to VERY NARROW. Buffers average < 2b. Intensity of surrounding land use (select one o VERY LOW. 2nd growth or older for X LOW. Old field (>10 years), shrublat MODERATELY HIGH. Residential, 1 HIGH. Urban, industrial, open pastu	not double check) or more around wetland 50m (82 to <164ft) arou <25m (32ft to <82ft) aro c10m (<32ft) around wet r double check & average est, prairie, savannah, v nd, young second growt enced pasture, park, co	d perimeter (7) ind wetland perin bund wetland per tland perimeter (6 ge) wildlife area, etc. h forest. (5) inservation tillage	rimeter (1) 0) (7) e, 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) Other groundwater (3) Precipitation (1) X Seasonal/Intermittent surface water (lake or streed) 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 Recovering (3) Recent or no recovery (1)	(3) am) (5) 3d. L C d d d t u	Duration inundati (select one or do X Semi- to p Regularly Seasonal Check all distultich ike	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) oon/saturation. ouble check & average) oermanently inundated/saturated (4) inundated/saturated (3) by inundated (2) by saturated in upper 30cm (12in) (1) urbances observed point source (nonstormwater) filling/grading road bed/RR track dredging other- list
42 11 Subtotal Points	x Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	theck and average.	Habitat alteration None or n Recovere x Recoverin Recent or ces observed	

Site: Crooksville-	North Newark 138 kV	Transmission Line Rebui	Date:	June 1, 2020
Wetland: We	tland 024		Rater:	BL, SM
42 subtotal first pa	age			
42 0 Subtotal Points	•	etlands. (max 10 pts.)		
Subtotal Points	Mature f Lake Eri Lake Pla Relict W Known o	pts)	ricted hydrolog s) (10 pts) ned or endang habitat or usa	y (5 pts) Hered species (10) ge (10 pts)
47 5 Subtotal Points	6a. Wetland Vegetation C		•	
	Score all present using 0 to		Vegetatio	n Community Cover Scale
	Aquatic 2 Emerge		0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	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 wa		2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
	6b. Horizontal (plan view) Select only one	<u>interspersion</u>	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	High (5) Moderat	ely high (4)	Narrative	Description of Vegetation Quality
	Moderat Moderat	e (3) ely 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 in the control of th		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
	——	•	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
		5-25% cover (-1) \bsent <5% cover (0)	Mudflat a	nd Open Water Class Quality
	x Absent (0	Absent <0.1 ha (0.2471 acres)
		7	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 1 Vegetate	o 3 scale ed hummocks/tussocks	Microton	ography Cover Scale
		woody debris >15 cm (6")	0	Absent
	0 Standin	g dead > 25 cm (10") dbh an breeding pools	1	Present very small amounts or if more common of marginal quality
		V F	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





PHOTOGRAPHIC RECORD

WETLANDS

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 DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North News	ark 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, Tow	nship, Range: S	35 T 17N	R 15W
Landform (hillslope, terrace, etc.):	Swale	Local relief (co	ncave, convex, non	e): concave Sic	ope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR		Lat.: 38.82963	Long.:	: -82.167702	Datum: NAD83
Soil Map Unit Name: WuD2 - Wes				NWI classification:	
Are climatic/hydrologic conditions o	on the site typical for this t	ime of year? Yes 💿	No 🔾 (If no, ex	(plain in Remarks.)	_
Are Vegetation \Box , Soil \Box	, or Hydrology 🔲 sig	gnificantly disturbed?	Are "Normal Ci	rcumstances" present?	Yes ● No O
Are Vegetation . , Soil .	, or Hydrology 🗌 na	aturally problematic?	(If needed, exp	olain any answers in Rema	arks.)
Summary of Findings - A		wing sampling po	oint locations,	transects, import	ant features, etc.
Hydrophytic Vegetation Present?	Yes No				
Hydric Soil Present?	Yes No		Sampled Area	es No	
Wetland Hydrology Present?	Yes No	Witnir	a Wetland?		
Remarks:					
Sample point in for wetland 025 (delineated.	(W-Di-20200001-02). Wedie	alla wiaiili Swaic, arams	Southwest unectry	W 5-DI-ZUZUUUUI VA. WY	eudilu is lully
Hydrology					
Wetland Hydrology Indicators:			Se	econdary Indicators (minimur	m of two required)
Primary Indicators (minimum of o	one required; check all that	: apply)		Surface Soil Cracks (B6)	
Surface Water (A1)		uatic Plants (B14)		Sparsely Vegetated Concav	ve Surface (B8)
High Water Table (A2)		n Sulfide Odor (C1)		☐ Drainage Patterns (B10)	
Saturation (A3)		Rhizospheres along Living	Roots (C3)	☐ Moss Trim Lines (B16)	22)
Water Marks (B1)		e of Reduced Iron (C4)		☐ Dry Season Water Table (C	C2)
Sediment Deposits (B2) Drift deposits (B3)		ron Reduction in Tilled Soils	(C6)	☐ Crayfish Burrows (C8)	Imagony (CO)
Algal Mat or Crust (B4)		ck Surface (C7)		Saturation Visible on AerialStunted or Stressed Plants	
Iron Deposits (B5)	Uther (E	xplain in Remarks)	<u> </u>	7	(DI)
☐ Inundation Visible on Aerial Image	erv (B7)			Shallow Aquitard (D3)	
Water-Stained Leaves (B9)	/ (=-/			Microtopographic Relief (D	4)
Aquatic Fauna (B13)			<u> </u>		•,
Field Observations:					
Surface Water Present? Yes	No Depth ((inches): 0			
Water Table Present? Yes	No O Depth ((inches):11			
Saturation Present? (includes capillany frings) Yes	No Depth ((inches): 7	Wetland Hydrolo	ogy Present? Yes •	No O
(includes capillary fringe) Describe Recorded Data (stream g			nections) if available	le·	
Describe Necoraea Data (Stream 9	dage, mornioning wen, acr	iai priocos, previoas insp	occuonaj, ii avanasi		
Remarks:					
Two primary and one secondary h	ydrology indicators presen	t. Primary source of hyd	lrology is concentra	ation of precipitation and	surface runoff in
geomorphic position. Drains to sou	uthwest directly to intermit	tent stream.			

				minant		Sampling Point: w-bl-20200601-02	
Tre	ee Stratum (Plot size: 30' r)	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status		
		0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)	
		0		0.0%			
<u>ر</u> . マ		0	\Box	0.0%		Total Number of Dominant Species Across All Strata: 5 (B)	
			$\overline{\Box}$	0.0%		Species Across All Strata: 5 (B)	
			\Box	0.0%		Percent of dominant Species	
			\Box	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)	
			H	0.0%		Burnel and Tarker and the state	
			Н.			Prevalence Index worksheet:	
3.		0	Ш.	0.0%		Total % Cover of: Multiply by:	
Saı	oling-Sapling/Shrub Stratum (Plot size: 15' r)=	= Tc	tal Cove	•	OBL species 25 x 1 = 25	
	Ulmus americana	2	✓	100.0%	FACW	FACW species $47 \times 2 = 94$	
٠.				0.0%		FAC species $16 \times 3 = 48$	
			\Box	0.0%		FACU species $5 \times 4 = 20$	
			$\overline{\Box}$	0.0%		UPL species $0 \times 5 = 0$	
ŧ. -			\Box	0.0%		Column Totals: 93 (A) 187 (B)	
).				0.0%		Column localst (A)	
			П	0.0%		Prevalence Index = B/A = 2.011	
			П	0.0%		Hydrophytic Vegetation Indicators:	
			Н			Rapid Test for Hydrophytic Vegetation	
			Н	0.0%		✓ Dominance Test is > 50%	
).		0	Ш	0.0%		✓ Prevalence Index is ≤3.0 ¹	
Sh	rub Stratum (Plot size:)	=	= To	tal Cove		☐ Morphological Adaptations ¹ (Provide supporting	
1.		0		0.0%		data in Remarks or on a separate sheet)	
				0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
				0.0%		¹ Indicators of hydric soil and wetland hydrology must	
				0.0%		be present, unless disturbed or problematic.	
				0.0%		Definition of Vegetation Strata:	
3		0		0.0%		Four Vegetation Strata:	
			\Box	0.0%		Tree stratum - Consists of woody plants, excluding vines, 3 in	
	(District Fl.		= Tc	tal Cove		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
	rb Stratum (Plot size: <u>5' r</u>)					Sapling/shrub stratum – Consists of woody plants, excluding	
1.	Poa palustris	40	V	44.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
2.	Persicaria sagittata	10	Y	11.0%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants	
3.	Euthamia graminifolia	10	Y	11.0%	FAC	regardless of size, and all other plants less than 3.28 ft tall.	
4.	Galium asprellum	10	V	11.0%	OBL	Woody vines – Consists of all woody vines greater than 3.28 ft in height.	
5.	Scirpus atrovirens	5	Ш	5.5%	OBL	l l l l l l l l l l l l l l l l l l l	
3.	Rubus allegheniensis	5	Ш	5.5%	FACU	Five Vegetation Strata:	
7.	Juncus effusus	5		5.5%	FACW	Tree - Woody plants, excluding woody vines, approximately 20	
3.	Rumex crispus	3		3.3%	FAC	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in	
)	Dichanthelium clandestinum	3		3.3%	FAC	diameter at breast height (DBH).	
-			\Box	0.0%		Sapling stratum – Consists of woody plants, excluding woody	
ر. 1			$\overline{\Box}$	0.0%		vines, approximately 20 ft (6 m) or more in height and less that 3 in. (7.6 cm) DBH.	
			\exists	0.0%		Shrub stratum – Consists of woody plants, excluding woody	
			- Te	tal Cove		vines, approximately 3 to 20 ft (1 to 6 m) in height.	
	ody Vine Stratum (Plot size: 15' r					Herb stratum – Consists of all herbaceous (non-woody) plants including herbaceous vines, regardless of size, and woody	
		0	\sqsubseteq	0.0%		species, except woody vines, less than approximately 3 ft (1 m	
2.		0	\sqsubseteq	0.0%		in height.	
		0		0.0%		Woody vines – Consists of all woody vines, regardless of	
4.		0		0.0%		height.	
		0		0.0%		Hadanahada	
٠.		0		0.0%		Hydrophytic Vegetation	
3			_			Vegetation Present? Yes • No O	
6.			= T4	otal Cove	r	Present? 105 0 110 0	

Soil Sampling Point: w-bl-20200601-02

Profile Descri	iption: (D	escribe to	the depth I	needed to	locumen	t the indic	ator or co	nfirm the a	absence of indicators.)		
Depth		Matrix				edox Featı	ures				
(inches)		r (moist)		Color	moist)	%	Tvpe	Loc²	Texture	Ren	narks
0-3	10YR	4/3	100						Silt Loam		
3-12	5Y	5/2	80	10YR	4/6	20	C	M	Silty Clay Loam	,	
12-17	5Y	5/2	60	5Y	5/8	30	С	M	Silty Clay Loam	,	
				10YR	5/1	10	D	М			
		1								•	
		_								·	
		· ·									
		_								-	
		_									
¹ Type: C=Cond	centration.	D=Depletio	on. RM=Redu	ced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=M	latrix	
Hydric Soil I		S:							Indicators for Prob	ematic Hydri	c Soils ³ :
Histosol (A					(Surface (` '			2 cm Muck (A10) (MLRA 147)	
	pedon (A2))					(S8) (MLRA		Coast Prairie Rec	lox (A16)	
Black Histi	ic (A3) Sulfide (A	4)					MLRA 147, 1	48)	(MLRA 147,148)	, ,	
	Layers (A5				ny Gieyed leted Matr	Matrix (F2))		Piedmont Floodp (MLRA 136, 147	olain Soils (F19)	
2 cm Mucl						urface (F6)			☐ Very Shallow Da		2)
		k Surface (A	\11)			Surface (F	7)		Other (Explain in		2)
	k Surface (•	,	Red	ox Depres	sions (F8)			Other (Explain ii	i Kemarks)	
Sandy Mu MLRA 147		(S1) (LRR I	N,		-Mangane A 136)	se Masses	(F12) (LRR I	N,			
	eyed Matrix	(S4)		Uml	oric Surfac	e (F13) (M	LRA 136, 12	2)	2		
Sandy Red		. ,		Pied	mont Floo	dplain Soils	s (F19) (MLF	RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Stripped N	Matrix (S6)			Red	Parent Ma	aterial (F21) (MLRA 12	7, 147)			
Restrictive La	ayer (if ol	bserved):									
Type:									Hydric Soil Present?	Yes •	No O
Depth (inch	hes):								Hydric Soil Present?	res 🕓	NO U
Remarks:											
Hydric soil inc	dicators p	resent as	depleted m	atrix with	ow chror	ma and hi	gh value.				

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newa	k 138 kV Trar	nsmission Line	City/County: Muskingum		Samp	ling Date: 01-Jun-20
Applicant/Owner: AEP			State:	ОН	Sampling Po	oint: upl-bl-20200601-02
Investigator(s): BL, SKM			Section, Township, Range	s 35	T 17N	R 15W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (concave, conve	ex, none):	convex	Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N		Lat.:	39.829605	Long.: -82	2 1677	Datum: NAD83
Soil Map Unit Name: WuD2 - West	moreland-Gu			_	WI classification	
			0 0			11/1
Are climatic/hydrologic conditions of			•	, .	n in Remarks.)	yes No
Are Vegetation, Soil	, or Hydrolo	ogy	ly disturbed? Are "Nor	mal Circum	stances" present	i? res e ino e
Are Vegetation	, or Hydrolo	·	•		any answers in R	•
Hydrophytic Vegetation Present?	Yes •	No O	bamping point locat		msects, mip	ortant reatures, etc.
	Yes O	No •			_	
Hydric Soil Present?	Yes O	No •	Is the Sampled Are within a Wetland?	³a Yes ○	No ●	
Wetland Hydrology Present?	Yes ∪	No 🔍				
Hydrology						
Wetland Hydrology Indicators:	o roquirod:	chock all that apply)		$\overline{}$		imum of two required)
Primary Indicators (minimum of or Surface Water (A1)	ie requirea;	True Aquatic Plants	(R14)		face Soil Cracks (Bi	•
High Water Table (A2)		Hydrogen Sulfide (arsely vegetated Co ainage Patterns (B1)	oncave Surface (B8)
Saturation (A3)			eres along Living Roots (C3)		ss Trim Lines (B16)	
Water Marks (B1)		Presence of Reduc			/ Season Water Tab	
Sediment Deposits (B2)			tion in Tilled Soils (C6)		yfish Burrows (C8)	• •
Drift deposits (B3)		Thin Muck Surface	, ,		curation Visible on A	
Algal Mat or Crust (B4)		Other (Explain in R	• ,	Stu	inted or Stressed Pl	ants (D1)
☐ Iron Deposits (B5)			- · · ·,	☐ Ged	omorphic Position (D2)
Inundation Visible on Aerial Imager	y (B7)			Sha	allow Aquitard (D3)	
Water-Stained Leaves (B9)				☐ Mic	crotopographic Relie	ef (D4)
Aquatic Fauna (B13)				FAC	C-neutral Test (D5)	
Field Observations:	@					
Surface Water Present? Yes	_	Depth (inches):	0			
Water Table Present? Yes	No 💿	Depth (inches):				No •
Saturation Present? (includes capillary fringe) Yes	No 💿	Depth (inches):	Wetland I	Hydrology P	resent? Yes	NO S
Describe Recorded Data (stream ga	uge, monito	ring well, aerial photo	s. previous inspections), if a	available:		
Describe recorded Data (stream ge	age, monico	anig wen, dendi prioto	o, previous inspections,, in e	available:		
Remarks:						
No hydrology indicators present.						
No frydrology maleators present.						

Upland 025

		—Species? —		Sampling Point: <u>upi-bi-20200601-02</u>
	Absolute	Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' r)	% Cover	Cover	Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
1				That are OBL, FACW, or FAC:3(A)
2		0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:5(B)
4		0.0%		
5		0.0%		Percent of dominant Species
		0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)
6				
7				Prevalence Index worksheet:
8	0	0.0%		Total % Cover of: Multiply by:
(5)	0 :	= Total Cover		OBL species <u>15</u> x 1 = <u>15</u>
Sapling-Sapling/Shrub Stratum (Plot size: 15' r)	_		FACW species 27 x 2 = 54
1 Elaeagnus umbellata	15	✓ 55.6%	UPL	
2. Rubus occidentalis	10	✓ 37.0%	UPL	FAC species <u>40</u> x 3 = <u>120</u>
O. Uluwa amaricana	2	7.4%	FACW	FACU species $12 \times 4 = 48$
0.1			TACW	UPL species $25 \times 5 = 125$
4				'
5	0	0.0%		Column Totals: 119 (A) 362 (B)
6		0.0%		Prevalence Index = B/A = 3.042
7		0.0%		
		0.0%		Hydrophytic Vegetation Indicators:
8				Rapid Test for Hydrophytic Vegetation
9				✓ Dominance Test is > 50%
10	0	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Total Cover		
		0.00/		Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
1	0			
2	0			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.	0	0.0%		be present, unless disturbed or problematic.
		0.0%		Definition of Vegetation Strata:
5				Four Vegetation Strata:
6				
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	= Total Cover		of height.
		A 22 23		Sapling/shrub stratum – Consists of woody plants, excluding
1 _ Euthamia graminifolia	30	32.6%	FAC	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	✓ 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
5. Verbesina alternifolia	10	10.9%	FAC	in height.
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).
		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10				vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11	0			` ` `
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	= Total Cover		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			in height.
3	0	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	0.0%		height.
5		0.0%		Hydrophytic
6	0	0.0%		Vegetation Present? Yes No
		= Total Cover		Present? Yes No U
Remarks: (Include photo numbers here or on a separate she	ot)			•
	•	ooioo ODL	AC FACIL	and LIDI
Hydrophytic vegetation indicator present as dominance test > 50%,	uominant SP	iccies die UBL, F	AC, FACW	aliu UFL

Upland 025

Soil

Sampling Point:

upl-bl-20200601-02

(:l)	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type Loc2	Texture Remarks
0-3	10YR 3/3	100		Silt Loam
3-17	10YR 4/3	100		Silt Loam
				`
				· · · · · · · · · · · · · · · · · · ·
e: C=Cond	centration. D=Depletion	on. RM=Reduc	ed Matrix, CS=Covered or Coated Sand Grains ² Locat	tion: PL=Pore Lining. M=Matrix
iric Soil I	ndicators:			Indicators for Problematic Hydric Soils ³ :
Histosol (A	A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epip	pedon (A2)		Polyvalue Below Surface (S8) (MLRA 147,148)	
Black Histi	ic (A3)		☐ Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147,148)
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified I	Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck	k (A10) (LRR N)		Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF12)
Depleted I	Below Dark Surface (A	A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark	k Surface (A12)		Redox Depressions (F8)	,
Sandy Mu MLRA 147	ck Mineral (S1) (LRR 7, 148)	N,	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gle	yed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	2
Sandy Red	dox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Stripped M	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
and all the first	ayer (if observed):			
				Hydric Soil Present? Yes No •
Туре:				
Type: Depth (inch	nes):			
Type: Depth (inch marks:				
Type: Depth (inch marks:	nes):indicators present			
Type: Depth (inch marks:				
Type: Depth (inchemarks:				
Type: Depth (inch marks:				

Site: Crooks	ville-North Newark 138 kV Transmission L	ine Rebuild Project	Date: 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 acres (1.2 to <4ha) (3 acres (0.12 to <1.2ha) (0.1 to <0.3 acres (0.04 to <0.12 color) 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 average 10 VERY LOW. 2nd growth or old X LOW. Old field (>10 years), shi	e, do not double check) 64ft) or more around wetlar n to <50m (82 to <164ft) aro lm to <25m (32ft to <82ft) a rage <10m (<32ft) around we lone or double check & avera er forest, prairie, savannah,	nd perimeter (7) and wetland perimeter (7) with the transfer (7) and the transfer (7) and the transfer (7) are transfer (7) and the transfer (7) are transfer (7) and transfer (7) are transfer (erimeter (4) perimeter (1) pr (0)	
	MODERATELY HIGH. Resider HIGH. Urban, industrial, open p	ntial, fenced pasture, park, c	conservation tilla	• • • • • • • • • • • • • • • • • • • •	
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	vater (3) r stream) (5) 3d. 3d.	100 ye. Between X Part of	score all that apply. ar floodplain (1) en stream/lake and other human use (1) wetland/upland (e.g. forest), complex (1) riparian or upland corridor (1) lation/saturation. r double check & average) to permanently inundated/saturated (4) rrly inundated/saturated (3) hally inundated (2) hally saturated in upper 30cm (12in) (1) sturbances 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)	evelopment. (max 20	Habitat alterat	ion. Score one or double check and average. or none apparent (9) ered (6) ering (3)	
	4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) x Poor to fair (2) Poor (1)	Check all disturbar ✓ mowing ☐ grazing ☐ clearcutting ☐ selective cutting ☐ woody debris removal ☐ toxic pollutants	Recent	or no recovery (1)	

Site: Crooksville-	North Newark 138 kV Transmission Line Rebui	Date:	June 1, 2020
	tland 025	Rater:	BL, SM
38 subtotal first pa	age		
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)		(10 · 1)
	Lake Erie coastal/tributary wetland-unre		
	Lake Erie coastal/tributary wetland-restr		y (5 pts)
	Lake Plain Sand Prairies (Oak Opening	s) (10 pts)	
	Relict Wet Prairies (10 pts)	nad ar andana	ared angeles (10)
	Known occurrence state/federal threate Significant migatory songbird/waterfowl	-	
	Category 1 Wetland. See Question 1 o		
	Category I Welland. See Question 1 0	i Qualitative i	aurig. (-10 pts)
40 2	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
	Aquatic bed		
	1 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 of moderate quality, or comprises a significant part but is of low quality
	Mudflats		or moderate quality, or comprises a diginicant part but to 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	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	Select only one High (5)		and is or night quality
	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
	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,
		Inoderate	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)		onaungereu 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. 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 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 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





PHOTOGRAPHIC RECORD

WETLANDS

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

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North New	vark 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	one): concave Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR	N Lat.:	39.830149 Long	3.: -82.168645 Datum: NAD83
	stmoreland-Guernsey silt loams, 15		NWI classification: N/A
Are climatic/hydrologic conditions	on the site typical for this time of y	ear? Yes No (If no,	explain in Remarks.)
Are Vegetation, Soil	, or Hydrology significant	tly disturbed? Are "Normal (Circumstances" present? Yes No
Are Vegetation , Soil	, or Hydrology 🗌 naturally p	problematic? (If needed, e.	xplain any answers in Remarks.)
Summary of Findings - A	ttach site map showing	sampling 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 No	within a Wetland?	
Remarks:		<u>.</u>	
Sample point in for wetland 026 delineated.	(w-bl-20200601-01). Wetland is a	drainage swale, drains to southw	rest directly to s-bl-20200601-03. Wetland is fully
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of o	one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plant	rs (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizosph	eres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduc	ced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduc	ction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface	e (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in F	Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)			Geomorphic Position (D2)
Inundation Visible on Aerial Image	ery (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		6	
Saturation Present? (includes capillary frings) Yes		0 Wetland Hydro	ology Present? Yes No
(includes capillary fringe)	gauge, monitoring well, aerial photo		blo
Describe Recorded Data (stream g	Jauge, monitoring well, aerial priote	os, previous irispections), ir availa	DIE.
Remarks:			
	tors present. Primary source of hyd	rology is concentration of precipit	ation and surface runoff in geomorphic position.
Drains to southwest directly to int			

		Dominant		Sampling Point: w-bl-20200601-01
Tree Stratum (Plot size: 30' r)	Absolute % Cover	-Species? - Rel.Strat. Cover	Indicator Status	Dominance rest worksheet
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: 4 (B)
	0	0.0%		
		0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)
		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
		0.0%		Prevalence Index worksheet:
	0	0.0%		Total % Cover of: Multiply by:
	, _0 =	= Total Cover		OBL species <u>53</u> x 1 = <u>53</u>
apling-Sapling/Shrub Stratum (Plot size: 15' r	/	✓ 100.0%	FAC	FACW species 33 x 2 = 66
Salix X fragilis			FAC	FAC species $15 \times 3 = 45$
		0.0%		FACU species $0 \times 4 = 0$
		0.0%		UPL species $0 \times 5 = 0$
		0.0%		Column Totals: 101 (A) 164 (B)
		0.0%		101 (A) 101 101 101 101 101 101 101 101 101 10
		0.0%		Prevalence Index = B/A = 1.624
-		0.0%		Hydrophytic Vegetation Indicators:
		0.0%		Rapid Test for Hydrophytic Vegetation
				✓ Dominance Test is > 50%
		0.0%		✓ Prevalence Index is ≤3.0 1
hrub Stratum (Plot size:)	=	= Total Cover		Morphological Adaptations ¹ (Provide supporting
	0	0.0%		data in Remarks or on a separate sheet)
	0	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)
	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
		0.0%		be present, unless disturbed or problematic.
		0.0%		Definition of Vegetation Strata:
	0	0.0%		Four Vegetation Strata:
	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in (7.6 cm) or more in diameter at breast height (DBH), regardles
erb Stratum (Plot size: 5' r)	0 =	= Total Cover		of height.
- · · ·	30	✓ 31.3%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding
Columna atmostinana	15	15.6%	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
Poa palustris	15	15.6%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
	10	10.4%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
Eupatorium perfoliatum Euthamia graminifolia	10	10.4%	FAC	in height.
Juncus effusus		5.2%	FACW	
Mimulus ringens		5.2%	OBL	Five Vegetation Strata:
Onoclea sensibilis		3.1%	FACW	Tree - Woody plants, excluding woody vines, approximately 2 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
		3.1%	OBL	diameter at breast height (DBH).
Rumex verticillatus		0.0%	UBL	Sapling stratum – Consists of woody plants, excluding woody
·		0.0%		vines, approximately 20 ft (6 m) or more in height and less tha 3 in. (7.6 cm) DBH.
•		0.0%		Shrub stratum – Consists of woody plants, excluding woody
		= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
/oody Vine Stratum (Plot size: 15' r)				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 n
D				in height.
				Woody vines – Consists of all woody vines, regardless of
· <u> </u>				height.
5				Hydrophytic
S	0	0.0%		Vegetation V
	0	= Total Cove	-	Present? Yes V No

Soil Sampling Point: w-bl-20200601-01

Depth	Matrix			dox Features				
inches)	Color (moist)		Color (moist)	Tvpe_1	Loc2	Texture	Remarks	
0-2	10YR 4/2	100				Silt Loam		
2-11	10Y 4/1	95	10YR 3/4	5 C	PL	Clay Loam		
	· · · · · · · · · · · · · · · · · · ·							
pe: C=Conc	entration. D=Depletio	n. RM=Redu	ced Matrix, CS=Covere	ed or Coated Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=M	atrix	
dric Soil Iı	ndicators:					Indicators for Proble	ematic Hydric Soils ³ :	
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, 1	48)	(MLRA 147,148)	DX (A10)	
	Sulfide (A4)		✓ Loamy Gleyed			Piedmont Floodpl	ain Soils (F19)	
	Layers (A5)		✓ Depleted Matri			(MLRA 136, 147)		
	(A10) (LRR N)		Redox Dark Su	,			k Surface (TF12)	
-	Below Dark Surface (A	11)	Depleted Dark			Other (Explain in Remarks)		
	Surface (A12)		Redox Depress	sions (F8) se Masses (F12) (LRR	NI.			
Sandy Muc MLRA 147	ck Mineral (S1) (LRR N , 148)	١,	MLRA 136)					
1	yed Matrix (S4)		_	e (F13) (MLRA 136, 12		3 Indicators of	hydrophytic vegetation and	
Sandy Red				dplain Soils (F19) (MLF		wetland hy	drology must be present,	
Stripped M	latrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless di	sturbed or problematic.	
strictive La	yer (if observed):							
							0 0	
Туре:						Hydric Soil Present?	Yes No	
Туре:	nes):							
Type: Depth (inch	nes):							
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lir	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	ix with redox conce	entrations in pore lir	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	ix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lir	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inchemarks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inchemarks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			
Type: Depth (inch marks:		gleyed matr	rix with redox conce	entrations in pore lin	nings			

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

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: 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 Lo	ng.: -82.16868
Soil Map Unit Name: WuD2 - Westr	moreland-Guernsey silt loams, 15	to 25 percent	NWI classification: N/A
Are climatic/hydrologic conditions or	n the site typical for this time of y	ear? Yes • No O (If no	, explain in Remarks.)
Are Vegetation \square , Soil \square		_	I Circumstances" present? Yes No
Are Vegetation , Soil	, or Hydrology 🔲 naturally	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - At	tach site map showing	sampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No		
Hydric Soil Present?	Yes O No •	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present?	Yes O No •	within a Wetland?	
criteria not met.	200601-01), located about 10 fee	et west of wetland boundary. No	ot a wetland point as hydric soil and hydrology
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
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 Saturation Present? (includes capillary fringe) Describe Recorded Data (stream ga	True Aquatic Plant Hydrogen Sulfide Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Other (Explain in I	Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) e (C7) Remarks) Wetland Hyd	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
Remarks:			
No hydrology indicators present.			

Upland 026

	Dominant ———Species?				Sampling Point: upl-bl-20200601-01			
Tree Stratum (Plot size: 30' r)	Absolute % Cover	Rel	.Strat.	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%		Total Number of Deminerat			
3			0.0%		Total Number of Dominant Species Across All Strata: 6 (B)			
4			0.0%					
5		\Box	0.0%		Percent of dominant Species			
		$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)			
6		<u> </u>	0.0%		Providence To describe to			
7		H-			Prevalence Index worksheet:			
8		Ш-	0.0%		Total % Cover of: Multiply by:			
Sapling-Sapling/Shrub Stratum (Plot size: 15' r)			tal Cover		OBL species $0 \times 1 = 0$ FACW species $15 \times 2 = 30$			
1 Elaeagnus umbellata	20	V	69.0%	UPL				
2. Rubus occidentalis	5		17.2%	UPL	FAC species $40 \times 3 = 120$			
3. Cornus florida			6.9%	FACU	FACU species $\underline{24}$ x 4 = $\underline{96}$			
4 Juglans nigra	2		6.9%	FACU	UPL species $25 \times 5 = 125$			
	_		0.0%		Column Totals: 104 (A) 371 (B)			
5		<u> </u>	0.0%					
6		H-			Prevalence Index = B/A = 3.567			
7		⊢-	0.0%		Hydrophytic Vegetation Indicators:			
8		Н-	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:)	29	= Tot	tal Cover		Morphological Adaptations ¹ (Provide supporting			
1	0		0.0%		data in Remarks or on a separate sheet)			
		\Box	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)			
2			0.0%		¹ Indicators of hydric soil and wetland hydrology must			
3		П-	0.0%		be present, unless disturbed or problematic.			
4		П-	0.0%		Definition of Vegetation Strata:			
5	0	H-	0.0%		Four Vegetation Strata:			
6		_			Tree stratum – Consists of woody plants, excluding vines, 3 in.			
7	0		0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless			
Herb Stratum (Plot size: <u>5' r</u>)		= 101	tal Cover		of height. Sapling/shrub stratum – Consists of woody plants, excluding			
1. Solidago altissima	20	_	26.7%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
2. Euthamia graminifolia	15	✓	20.0%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft			
3. Dichanthelium clandestinum	10	✓	13.3%	FAC				
4 Vernonia gigantea	10	✓	13.3%	FAC				
5. Elymus virginicus	10	✓	13.3%	FACW	in height.			
6. Agrimonia parviflora	5		6.7%	FACW	Five Vegetation Strata:			
7. Rubus idaeus	5		6.7%	FAC	1			
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).			
		$\overline{\Box}$	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 12	0	П-	0.0%		Shrub stratum – Consists of woody plants, excluding woody			
		 _ Tot	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.			
Woody Vine Stratum (Plot size: 15' r)	0	0.	0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody			
1		П	0.0%		species, except woody vines, less than approximately 3 ft (1 m)			
2		7			in height.			
3		<u> </u>	0.0%		Woody vines – Consists of all woody vines, regardless of height.			
4		7	0.0%					
5		片-	0.0%		Hydrophytic			
6	0	Ц_	0.0%		Vegetation Present? Yes No			
	0	= To	tal Cover		riescill!			
Remarks: (Include photo numbers here or on a separate sheet Hydrophytic vegetation indicator present as dominance test > 50%, or	-	ecies	are FAC, F	FACW, FACI	U and UPL			

Upland 026

Soil

Sampling Point: upl-bl-20200601-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth		Matrix			edox Featu	1						
(inches)		(moist)	100	Color (moist)	%	Tvpe	Loc2	Texture	Remarks			
0-5	10YR	5/3	100					Silt Loam				
5-17	2.5Y	5/3	90	10YR 4/6	10	C	PL	Silty Clay Loam				
		`										
		`		$\overline{}$	_							
		-										
		_										
					_							
		_										
1- 0.0		5 5 1			-							
			on. RM=Redu	ced Matrix, CS=Cover	ed or Coate	ed Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=Ma				
Hydric Soil I		:		Devil C. C	(67)			Indicators for Proble	ematic Hydric Soils ³ :			
Histosol (Dark Surface		(CO) /M/ D t	147 140\	2 cm Muck (A10)	(MLRA 147)			
	oedon (A2)			Polyvalue Belo Thin Dark Sur				Coast Prairie Redo	ox (A16)			
Black Hist	Sulfide (A	4)					40)	(MLRA 147,148)				
	Layers (A5			Loamy Gleyed Depleted Matr)		Piedmont Floodpla	ain Soils (F19)			
2 cm Muc				Redox Dark S				(MLRA 136, 147)	Confere (TE12)			
		Surface (A	(11)	Depleted Dark		7)		☐ Very Shallow Dark				
	k Surface (•	(11)	Redox Depres	-	. ,		Uther (Explain in Remarks)				
l —	,	(S1) (LRR I	N	Iron-Mangane	. ,	(F12) (LRR N	۸,					
MLRA 147		(51) (1.00)	٠,	MLRA 136)								
Sandy Gle	yed Matrix	(S4)		Umbric Surfac	e (F13) (MI	LRA 136, 12	2)	3				
Sandy Re	dox (S5)			Piedmont Floo	odplain Soils	(F19) (MLR	A 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,				
Stripped N	Matrix (S6)			Red Parent M	aterial (F21) (MLRA 127	', 147)		sturbed or problematic.			
Restrictive La	aver (if ol	served).										
Type:	ayer (ii oi	osci ved ji										
Depth (incl	hes):							Hydric Soil Present?	Yes O No 💿			
Remarks:												
No hydric soil	indicator	c procept										
INO HYUHC SOII	illuicatoi	s present	•									

Site: Crooks	ville-North Newark 138 kV Transmission Lin	e Rebuild Project	Date:	June 1, 2020
Wetland:	Wetland 026		Rater:	BL, SM
	Metric 1. Wetland Area (size). (max (select one size class and assign score.	(5 pts) (5 pts) ots)) pts)) (1 pt) Inding land use. (mails of the one of the one of the other	ax 14 pts) d perimeter (7) und wetland perinound wetland pe	BL, SM w-bl-20200601-01 meter (4) rimeter (1)
29 17 Subtotal Points	VERY NARROW. Buffers average 2b. Intensity of surrounding land use (select one VERY LOW. 2nd growth or older f x LOW. Old field (>10 years), shrub MODERATELY HIGH. Residentia HIGH. Urban, industrial, open pas 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 water Perennial surface water (lake or strictly 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 regime. (select one or double check & average) x None or none apparent (12)	e <10m (<32ft) around we or double check & avera forest, prairie, savannah, land, young second grow I, fenced pasture, park, cu ture, row cropping, mining 3b. er (3) ream) (5) 3d.	etland perimeter (inge) wildlife area, etc. th forest. (5) conservation tillage g, construction. (7) Connectivity. Sc 100 year Between X Part of we X Part of rip Duration inundati (select one or do Regularly Seasonal X Seasonal Check all distuditch	(7) a, new fallow field. (3) 1) ore all that apply. floodplain (1) stream/lake and other human use (1) etland/upland (e.g. forest), complex (1) earian or upland corridor (1) ion/saturation. puble check & average) permanently inundated/saturated (4) inundated/saturated (3) ly inundated (2) ly saturated in upper 30cm (12in) (1) urbances observed point source (nonstormwater)
	Recovered (7) Recovering (3) Recent or no recovery (1)			☐ filling/grading ☐ road bed/RR track ☐ dredging ☐ other- list
39 10	Metric 4. Habitat Alteration and Dev	elopment. (max 20	pts.)	
Subtotal Points	4a. Substrate disturbance. Score one or double X None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select one.		None or r Recoverer x Recoverir	• •
	Moderately good (4) x Fair (3) Poor to fair (2) Poor (1)	Check all disturband mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	s h s c	shrub/sapling removal nerbaceous/aquatic bed removal sedimentation dredging farming nutrient emrichment

Site: Crooksville-North	Newark 138 kV Transmission Line Rebuil	Date:	June 1, 2020
Wetland: Wetland 0		Rater:	BL, SM
vvetianu. vvetiana t	JZU	ixater.	DL, JIVI
39 subtotal first page			
39 0 Metr	ric 5. Special Wetlands. (max 10 pts.)		
	k 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		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)
42 3 Metr	ic 6. Plant Communities, interspersion	. microton	ography, (max 20 pts.)
	Vetland Vegetation Communities	,	
	all present using 0 to 3 scale	Vegetatio	n Community Cover Scale
	Aquatic bed	0	
	2 Emergent	U	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	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		. , ,g part sat to or for 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
·	lorizontal (plan view) interspersion t only one	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	High (5) Moderately high (4)	Narrativo	Description of Vegetation Quality
	Moderately high (4) Moderate (3)		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,
		moderate	and species diversity moderate to moderately high, but generally w/o
	overage of invasive plants.		presence of rare threatened or endangered spp
	to Table 1 ORAM long form for list.	 	A predominance of native species, with nonnative spp and/or
Add o	r 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)		ga epp
	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)
<u>6d.</u> M	<u>licrotopography</u>	3	High 4 ha (9.88 acres) or more
	all 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:

AEP

Site Location:

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Project No. 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:

AEP

Site Location:

Project No.

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





PHOTOGRAPHIC RECORD

WETLANDS

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

Soil Pit



Wetland 027a

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North New	ark 138 kV Trar	nsmission Line	City/County: Perry		Samp	oling Date: 03-Jun-20
Applicant/Owner: AEP			State:	ОН	Sampling Po	oint: 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, conve	x, none):	convex	Slope:10.0
Subregion (LRR or MLRA): LRR		Lat.:	39.83403	Long.: -8		Datum: NAD83
Soil Map Unit Name: GwC - Guerr				_	NWI classification	
Are climatic/hydrologic conditions	on the site tyr	nical for this time of ve	ear? Yes • No O (If	no. explai	in in Remarks.)	·
Are Vegetation \Box , Soil \Box	, or Hydrold			, -	mstances" presen	t? Yes • No O
Are Vegetation, Soil	, or Hydrolo	ogy 🗌 naturally p	problematic? (If neede	d, explair	n any answers in I	Remarks.)
Summary of Findings - A	ttach site	map showing s	sampling point locat	ons, tr	ansects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes 💿	No O				
Hydric Soil Present?	Yes	No O	Is the Sampled Are	a Yes	● No ○	
Wetland Hydrology Present?	Yes	No O	within a Wetland?		- 110	
Remarks:						
Sampling point in for Wetland 02 located in residential yard. Wetla						
Hydrology						
Wetland Hydrology Indicators:				Secon	ndary Indicators (mir	nimum of two required)
Primary Indicators (minimum of o	one required;	check all that apply)		_ Su	urface Soil Cracks (B	36)
Surface Water (A1)		True Aquatic Plant	s (B14)	∐ Sp	parsely Vegetated Co	oncave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide (` '		rainage Patterns (B1	
Saturation (A3)			eres along Living Roots (C3)		oss Trim Lines (B16	•
Water Marks (B1)		Presence of Reduc	* *		ry Season Water Tal	• •
Sediment Deposits (B2)			tion in Tilled Soils (C6)		rayfish Burrows (C8)	
Drift deposits (B3)		Thin Muck Surface	(C7)		aturation Visible on A	
Algal Mat or Crust (B4)		Other (Explain in R	Remarks)		tunted or Stressed P	* *
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Image	···· (D7)				eomorphic Position (
✓ Water-Stained Leaves (B9)	:I y (D/)				hallow Aquitard (D3)	
Aquatic Fauna (B13)					licrotopographic Reli AC-neutral Test (D5)	• •
Field Observations:				<u> </u>	AC-fleutral Test (D3)	
Surface Water Present? Yes	No	Depth (inches):	3			
Water Table Present? Yes	No	Depth (inches):	8			
Saturation Present? (includes capillary frings) Yes	● No ○	Depth (inches):	Wetland H	ydrology	Present? Yes	s • No O
(includes capillary fringe) Describe Recorded Data (stream of			os, previous inspections), if a	vailable:		
Remarks:						
Multiple primary and secondary h						recipitation. Wetland drains
to southeast and to southwest by	upland draina	ige features towards i	intermittent stream 034, pot	entially isc	olated.	

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

		Dominant		Sampling Point: w-bl-20200603-01a
ree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	-Species? Rel.Strat. Cover	Indicator Status	Dominance Fest Worksheet.
	0	0.0%	_ `	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
	0	0.0%		
8.	0	0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
		0.0%		Species victors vin salatai
· · · · · · · · · · · · · · · · · · ·		0.0%		Percent of dominant Species
). 		0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)
		0.0%		Prevalence Index worksheet:
3.	0	0.0%		Total % Cover of: Multiply by:
	0 =	= Total Cove	er	OBL species <u>15</u> x 1 = <u>15</u>
apling-Sapling/Shrub Stratum (Plot size: 15' radius	_,			FACW species 58 x 2 = 116
Rubus occidentalis		62.5%		FAC species
Ulmus americana		37.5%	FACW	FACU species 17 x 4 = 68
3				
l.,	0			Jore species X 5 -
5	0	0.0%		Column Totals: 100 (A) 239 (B)
)	0			Prevalence Index = B/A = 2.390
7	0	0.0%_		Hydrophytic Vegetation Indicators:
3	0	0.0%		Rapid Test for Hydrophytic Vegetation
)	0			✓ Dominance Test is > 50%
)	0	0.0%		Prevalence Index is ≤3.0 ¹
hrub Stratum (Plot size: 0)	8=	= Total Cove	er	Morphological Adaptations ¹ (Provide supporting
	0	0.0%		data in Remarks or on a separate sheet)
		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
		0.0%		Definition of Vegetation Strata:
). 	0	0.0%		Four Vegetation Strata:
	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
	0 =	= Total Cove		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
(Plot size: <u>5' radius</u>)		✓ 54.3%	EACW/	Sapling/shrub stratum – Consists of woody plants, excluding
Phalaris arundinacea			FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Poa compressa	15	16.3%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
Scirpus atrovirens		10.9%	OBL	Woody vines – Consists of all woody vines greater than 3.28 ft
Onoclea sensibilis	5	5.4%	FACW	in height.
Dichanthelium clandestinum	5	5.4%	FAC OBL	h h
Eleocharis obtusa				Five Vegetation Strata:
Asclepias syriaca		2.2%	FACU	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
)	0	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
·		0.0%		Shrub stratum – Consists of woody plants, excluding woody
).	0			vines, approximately 3 to 20 ft (1 to 6 m) in height.
Voody Vine Stratum (Plot size: 15' radius)	92 =	= Total Cove	er	Herb stratum – Consists of all herbaceous (non-woody) plants,
	0	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
)	0	0.0%	·	in height.
3	0	0.0%		Woody vines – Consists of all woody vines, regardless of
l	0	0.0%		height.
5.	0	0.0%		Hydronhytic
	0	0.0%		Hydrophytic Vegetation
)				
). 	0 :	= Total Cove	er	Present? Yes • No

Wetland 027a

Soil

Sampling Point: W-b

w-h	1-2	n 2	იი	60	13-1	11 a

(!I \		Matrix				edox Featu					
(inches)		(moist)		Color	(moist)	%	Tvpe 1	Loc ²	Texture	Rer	marks
0-1	10YR	3/3	100						Silt Loam	prominent	redov
1-9	5Y	7/2	90	10YR	5/6	10	C	PL	Sandy Clay Loam	concentra	tions
9-17	5Y	6/2	70	5Y	6/4	20	С	М	Sandy Clay Loam	redox con pore lini	centrations in ngs also
				5Y	4/1	10	RM	М			
		`								`	
										-;	
										_	
		•								`	
			on. RM=Redu	iced Matrix,	CS=Cover	ed or Coate	ed Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=	Matrix	
	Indicators:				l. C C	(67)			Indicators for Prol	olematic Hydri	ic Soils ³ :
Histosol (*				k Surface ((CO) (MI DA	47 140)	2 cm Muck (A1	0) (MLRA 147)	
Histic Epip Black Hist	pedon (A2)						(S8) (MLRA : 1LRA 147, 14		Coast Prairie Re		
	ic (A3) i Sulfide (A4)	١				ace (S9) (M Matrix (F2)		ю)	(MLRA 147,148	•	
	Layers (A5)	,			my Gieyed Ileted Matr		1		Piedmont Flood)
	k (A10) (LRF	R N)				ırface (F6)			(MLRA 136, 14)		12)
	Below Dark		111)	Postated Posts Confere (FZ)				12)			
	k Surface (A		·/		ox Depres	-	•		Uther (Explain in Remarks)		
	ıck Mineral (-	N,	Iror	ı-Mangane	, ,	(F12) (LRR N	,			
MLRA 147		01) (1	,	MLF	RA 136)						
Sandy Gle	eyed Matrix ((S4)		Umbric Surface (F13) (MLRA 136, 122)			³ Indicators of hydrophytic vegetation and				
				Pied	lmont Floo	dplain Soils	(F19) (MLR	A 148)		ydrology must l	
•	. ,						(MIDA 107	147)	unloce		hlomatic
•	dox (S5) Matrix (S6)			Rec	Parent Ma	aterial (F21)) (MLRA 127	, 17/)	uness	disturbed or pro	DDIEITIALIC.
Stripped I	Matrix (S6)	served):		Rec	Parent Ma	aterial (F21)) (MLKA 127	, 147)	urness	disturbed or pro	эріеттацс.
Stripped I	. ,	served):		Rec	Parent Ma	aterial (F21)) (MLRA 127	, 14/)	uriless	·	
Stripped I	Matrix (S6) ayer (if obs	served):		Rec	Parent Ma	aterial (F21)) (MLRA 127		Hydric Soil Present?		No O
Stripped I trictive L Type: Depth (inc	Matrix (S6) ayer (if obs	served):		Rec	Parent Ma	aterial (F21)) (MLRA 127			·	
Type: Depth (inc	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I trictive L Type: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I trictive L Type: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I crictive L ype: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I rictive L rype: pepth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I rictive L rype: pepth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I rictive L rype: pepth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I crictive L ype: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I trictive L Type: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I trictive L Type: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I trictive L Type: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I trictive L Type: Depth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	
Stripped I rictive L rype: pepth (incomarks:	Matrix (S6) ayer (if obs		lepleted ma						Hydric Soil Present?	·	

Wetland 027b

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Newa	ark 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	34 T 17N R 15W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex, ı	none): convex Slope: 10.0 % / 84.3 °
Subregion (LRR or MLRA): LRR N	Lat.:	39.83409 Lo i	ng.: -82.17623
Soil Map Unit Name: GwC - Guerns			NWI classification: N/A
Are climatic/hydrologic conditions o	n the site typical for this time of y	$_{ m ear}$? Yes $leftilde{left}$ No $leftilde{igcap}$ (If no	, explain in Remarks.)
Are Vegetation \square , Soil \square	, or Hydrology significant	ly disturbed? Are "Normal	l Circumstances" present? Yes No
Are Vegetation . , Soil .	, or Hydrology 🔲 naturally p	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - At	tach site map showing s	sampling point location	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?	
Remarks:		,	
is potentially isolated; drains to so			l is a hillside seep area near edge of ROW. Wetland
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of or	ne required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plant	s (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)	Hydrogen Sulfide (• •	✓ Drainage Patterns (B10)
Saturation (A3)		eres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduc	• •	Dry Season Water Table (C2)
Sediment Deposits (B2)		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)☐ Iron Deposits (B5)	Other (Explain in F	Remarks)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imager	n. (R7)		Geomorphic Position (D2) Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)	y (D7)		Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:			TAC neadar resc (55)
Surface Water Present? Yes	No Depth (inches):	0	
Water Table Present? Yes	No O Depth (inches):	10	
Saturation Present? (includes capillant frings) Yes	, , ,	Wetland Hyd	rology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream ga		os previous inspections), if avai	lahle:
Describe recorded sam (s. ca g.	auge, monitoring from acres pro-	of provided inspections,,	iddic.
Remarks:			
	drology indicators present. Priman	sources of hydrology are grou	ndwater seepage and precipitation. Wetland drains
to southwest off-site, no obvious d			

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

			minant		Sampling Point: w-bl-20200603-01b
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re	ecies? I.Strat. ver	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1 Acer rubrum	60	v _	92.3%	FAC	That are OBL, FACW, or FAC: 4 (A)
2. Prunus serotina	5		7.7%	FACU	
3	0		0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
1.			0.0%		
5.			0.0%		Percent of dominant Species
5			0.0%		That Are OBL, FACW, or FAC: 80.0% (A/B)
7			0.0%		Prevalence Index worksheet:
3	0		0.0%		Total % Cover of: Multiply by:
	65 :	= To	tal Cove	r	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius					FACW species 80 x 2 = 160
Acer rubrum	30	-	46.2%	FAC	FAC species 95 x 3 = 285
Magnolia acuminata	15	_	23.1%	FACU	FACU species $30 \times 4 = 120$
Fraxinus pennsylvanica		Ц.	15.4%	FACW	
Liriodendron tulipifera		Ц.	15.4%	FACU	
5		Ц.	0.0%		Column Totals: <u>205</u> (A) <u>565</u> (B)
5		片.	0.0%		Prevalence Index = B/A = 2.756
7		Ц.	0.0%		Hydrophytic Vegetation Indicators:
3	0	Ц.	0.0%		Rapid Test for Hydrophytic Vegetation
9		Ц,	0.0%		✓ Dominance Test is > 50%
D	0	Π,	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 0)		= To	tal Cove	r	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3		\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must
1		$\overline{\Box}$	0.0%		be present, unless disturbed or problematic.
		\Box	0.0%		Definition of Vegetation Strata:
5		<u> </u>	0.0%		Four Vegetation Strata:
5		H			Tree stratum – Consists of woody plants, excluding vines, 3 in
7			0.0% tal Cove		(7.6 cm) or more in diameter at breast height (DBH), regardless
lerb Stratum (Plot size: <u>5' radius</u>)	:		tai Covei	Γ	of height. Sapling/shrub stratum – Consists of woody plants, excluding
1 _ Woodwardia areolata		_	100.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2	0	Ц.	0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants
3	0	Ц.	0.0%		regardless of size, and all other plants less than 3.28 ft tall.
1	0	닏-	0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0	Ц.	0.0%		
3	0	Ц.	0.0%		Five Vegetation Strata:
7	0	Ц.	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
9	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
1	0		0.0%		3 in. (7.6 cm) DBH.
2.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
Noody Vine Stratum (Plot size: 15' radius)	70 :	= To	tal Cove	r	vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb stratum – Consists of all herbaceous (non-woody) plants.
1 Smilax rotundifolia	5	✓	100.0%	FAC	including herbaceous vines, regardless of size, and woody
• •					species, except woody vines, less than approximately 3 ft (1 m in height.
2		H-	0.0%		
3		H-	0.0%		Woody vines – Consists of all woody vines, regardless of height.
4		H-	0.0%		
5	0	<u> </u>	0.0%		Hydrophytic
5	0	Ц,	0.0%		Vegetation Present? Yes No
	5		tal Cove		

Wetland 027b

Soil Sampling Point: w-bl-20200603-01b

Depth	Matrix			dox Features			
inches)	Color (moist)		Color (moist)	Tvpe_1	Loc2	Texture	Remarks
0-4	10YR 4/2	100				Silt Loam	
4-17	2.5Y 6/2	90	10YR 4/4	10 C	PL	Sandy Clay Loam	
	`						
				1			
			$\overline{}$		-		
pe: C=Conc	entration. D=Depletion	n. RM=Redu	ced Matrix, CS=Covere	ed or Coated Sand Gra	ains ² Locat	tion: PL=Pore Lining. M=Ma	itrix
dric Soil I						Indicators for Proble	matic Hydric Soils ³ :
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,	148)	(MLRA 147,148)	// (/ LO)
	Sulfide (A4)		Loamy Gleyed			Piedmont Floodpla	ain Soils (F19)
	Layers (A5)		Depleted Matri:			(MLRA 136, 147)	
-	(A10) (LRR N)		Redox Dark Su	` ,		☐ Very Shallow Dark	
	Below Dark Surface (A	.11)	Depleted Dark Redox Depress			Other (Explain in	Remarks)
-	Surface (A12)			ions (ro) ie Masses (F12) (LRR	N		
Sandy Mud MLRA 147	ck Mineral (S1) (LRR N , 148)	١,	MLRA 136)				
-	yed Matrix (S4)			e (F13) (MLRA 136, 1		³ Indicators of	hydrophytic vegetation and
Sandy Rec				dplain Soils (F19) (ML		wetland hyd	rology must be present,
Stripped M	latrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless dis	sturbed or problematic.
strictive La	yer (if observed):						
Туре:							0 0
Depth (inch	nes):					Hydric Soil Present?	Yes No
marks:							
lric soil ind	icator present as de	epleted mat	rix with prominent	redox concentratio	ns in sandy	soil soil	

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

Project/Site: Crooksville-Nort	h Newark 138 kV Tran	smission Line	City/County: Perry	Sampling Date: 03-Jun-20
Applicant/Owner: AEP			State: 0	
Investigator(s): BL, SKM			Section, Township, Range: S	34 T 17N R 15W
Landform (hillslope, terrace, e	etc.): Hillside		Local relief (concave, convex,	none): convex Slope: 15.0 % / 86.2 °
Subregion (LRR or MLRA):	LRR N	Lat.:	39.83411 Lo	ng.: -82.17589
Soil Map Unit Name: GwC -	Guernsey-Westmore			NWI classification: N/A
Are climatic/hydrologic condi	tions on the site typ	ical for this time of year	ar? Yes • No O (If no	, explain in Remarks.)
Are Vegetation \Box , Soil	, or Hydrolo	gy 🗌 significantl	y disturbed? Are "Norma	l Circumstances" present? Yes No
Are Vegetation, Soil	, or Hydrolo	gy 🗌 naturally pr	roblematic? (If needed,	explain any answers in Remarks.)
Summary of Findings	s - Attach site	map showing sa	ampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Pres		No •		
Hydric Soil Present?		No •	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present?	Yes O	No •	within a Wetland?	
Remarks:			<u> </u>	
Not a wetland point, does r	not meet hydric soil	or hydrology criteria		
Hydrology				
Wetland Hydrology Indicator				Secondary Indicators (minimum of two required)
Primary Indicators (minimum	m of one required;			Surface Soil Cracks (B6)
Surface Water (A1)		True Aquatic Plants	,	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide O	* *	Drainage Patterns (B10)
Saturation (A3) Water Marks (B1)			res along Living Roots (C3)	Moss Trim Lines (B16)
Sediment Deposits (B2)		Presence of Reduce	ion in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)
Drift deposits (B3)		Thin Muck Surface (* *	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			•	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Other (Explain in Re	emarks)	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 O No O	Depth (inches):	0	
Water Table Present?	Yes O No •	Depth (inches):		rology Present? Yes O No 💿
Saturation Present? (includes capillary fringe)	Yes O No •	Depth (inches):	Wetland Hyd	rology Present? Yes O No •
	eam gauge, monito	ring well, aerial photos	s, previous inspections), if avai	ilable:
Remarks:				
No hydrology indicators pres	sent			

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

Upland 027

			ominant oecies? -		Sampling Point: upl-bl-20200603-01ab
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:
1 Liriodendron tulipifera	30	✓	54.5%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2. Robinia pseudoacacia	20	✓	36.4%	FACU	
3. Prunus serotina	5		9.1%	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: 37.5% (A/B)
6.			0.0%		That Are OBL, FACW, or FAC: 37.5% (A/B)
7			0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius		= To	otal Cover		OBL species 0 x 1 = 0
4 Liste denduce tellinifera	. 7	✓	31.3%	FACU	FACW species $78 \times 2 = 156$
1. Liriodendron tulipifera	15	✓	31.3%	UPL	FAC species $3 \times 3 = 9$
2. Rubus occidentalis	10		20.8%	FACU	FACU species $85 \times 4 = 340$
3. Robinia pseudoacacia			10.4%	FACU	UPL species $\frac{15}{}$ x 5 = $\frac{75}{}$
4. Juglans nigra	2	\Box	6.3%	FACW	Column Totals:181 (A)580 (B)
5. Ulmus americana		П	0.0%	TACV	
6		П	0.0%		Prevalence Index = B/A = 3.204
7			0.0%		Hydrophytic Vegetation Indicators:
8		Н	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: 0	40	= 10	otal Cover	•	Morphological Adaptations 1 (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)
3	0		0.0%		Indicators of hydric soil and wetland hydrology must
4		Ш	0.0%		be present, unless disturbed or problematic.
5	0	Ш	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)		= To	otal Cover		of height.
1 Phalaris arundinacea	30	✓	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	v	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		3.9%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Acer rubrum	3		3.9%	FAC	in height.
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
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' radius)	76	= 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. Vitis riparia	2	П	100.0%	FACW	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		П	0.0%		Woody vines – Consists of all woody vines, regardless of
3		Н	0.0%		height.
4			0.0%		
5			0.0%		Hydrophytic
6		니 _ •	otal Cove		Vegetation Present? Yes No No
		- 1	otai Cove		
Remarks: (Include photo numbers here or on a separate she	•				
No hydrophytic vegetation indicators present, dominant species are	FACW, FACU	and	UPL		

Upland 027

Soil

Sampling Point: upl-bl-20200603-01ab

Depth	Matrix		Red	ox Features			
(inches)	Color (moist)	%	Color (moist)	% Type 1	Loc2	Texture	Remarks
0-2	10YR 4/2	100				Sandy Loam	
2-7	2.5Y 4/4	100				Sandy Clay Loam	
7-12	2.5Y 6/6	100				Sandy Clay Loam	
							·
							v-
							
Type: C=Con	ncentration D=Denletio	n RM=Redi	ıced Matrix CS=Covered	d or Coated Sand Grai	ins ² l ocat	tion: PL=Pore Lining. M=M	atrix
Hydric Soil 1		JII. KIT-KCCC	icea Flacin, es—covered	d or coated band ord	iii Locai		
Histosol (Dark Surface (S	7)		Indicators for Proble	ematic Hydric Soils ³ :
= `	pedon (A2)			Surface (S8) (MLRA	147 148)	2 cm Muck (A10)	(MLRA 147)
Black Hist				ce (S9) (MLRA 147, 1		Coast Prairie Red	ox (A16)
	n Sulfide (A4)		Loamy Gleyed N		10)	(MLRA 147,148)	
_	Layers (A5)		Depleted Matrix			Piedmont Floodp	
	ck (A10) (LRR N)		Redox Dark Sur			(MLRA 136, 147)	
_		44)	Depleted Dark S	` '		☐ Very Shallow Dar	
	Below Dark Surface (A	(11)	Redox Depressi			Other (Explain in	Remarks)
	rk Surface (A12)	NI.		e Masses (F12) (LRR I	J		
MLRA 14	uck Mineral (S1) (LRR I 7, 148)	ν,	MLRA 136)	. Masses (1 12) (LIKK)	٧,		
	eyed Matrix (S4)		Umbric Surface	(F13) (MLRA 136, 12	2)		
Sandy Re			Piedmont Flood	plain Soils (F19) (MLF	A 148)		hydrophytic vegetation and
	Matrix (S6)			erial (F21) (MLRA 127			drology must be present, isturbed or problematic.
	(,			0.10. (1.21) (1.12.01.21)	, ,		
Restrictive L	.ayer (if observed):						
Type:							0 0
Depth (inc	ches):					Hydric Soil Present?	Yes O No 💿
Remarks:						·	
No hvdric soi	il indicators present						
.,	,						

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 027

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

Date: June 3, 2020

	ile-North Newark 138 kV Transmission L	ine Rebuild Project	Date: June 3, 2020
Wetland: v	v-bl-20200603-01ab		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 acres) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) x 0.1 to <0.3 acres (0.04 to <0.12to <0.12to <0.14 acres) <0.1 acres (0.04ha) (0 pts)	a) (5 pts) 4 pts) ots) (2pts)	
6 5 Subtotal Points	Metric 2. Upland buffers and surro 2a. Calculate average buffer width (select one WIDE. Buffers average 50m (16 MEDIUM. Buffers average 25m x NARROW. Buffers average 10r VERY NARROW. Buffers average 2b. Intensity of surrounding land use (select one VERY LOW. 2nd growth or olded x LOW. Old field (>10 years), shrift x MODERATELY HIGH. Residen HIGH. Urban, industrial, open p	e, do not double check) 64ft) or more around wetland to <50m (82 to <164ft) around m to <25m (32ft to <82ft) around age <10m (<32ft) around wet me or double check & avera er forest, prairie, savannah, vubland, young second grow tial, fenced pasture, park, co	d perimeter (7) und wetland perimeter (4) ound wetland perimeter (1) ttland perimeter (0) ge) wildlife area, etc. (7) th forest. (5) onservation tillage, new fallow field. (3)
22 16 Subtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) X Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (lake or perennial surface water (lake or perennial surface water (lake or source) 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.	ile road bed/RR track
31 9 Subtotal 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) Good (5) x Moderately good (4) 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) x Recent or no recovery (1)

DRAM v. 5.0 Field Form Quantita				
Site: Crooksville-	North Newark 1	38 kV Transmission Line Rebuil	Date:	June 3, 2020
Wetland: w-bl	I-20200603-01a	b	Rater:	BL, SM
				,
31 subtotal first pa	200			
Subtotal IIISt pa	ige			
24 0	Matria E Cna	sial Watlanda (may 10 nts)		
31 0	•	cial Wetlands. (max 10 pts.)		
Subtotal Points		ly 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	icted hydrolog	y (5 pts)
		Lake Plain Sand Prairies (Oak Openings	s) (10 pts)	
		Relict Wet Prairies (10 pts)		
		Known occurrence state/federal threater	ned or endang	ered species (10)
		Significant migatory songbird/waterfowl	habitat or usaç	ge (10 pts)
		Category 1 Wetland. See Question 1 of	Qualitative Ra	ating. (-10 pts)
32 1	Metric 6. Plan	nt Communities, interspersion	. microtop	ography, (max 20 pts.)
Subtotal Points		tation Communities		
	Score all present u		Vegetatio	n Community Cover Scale
		Aquatic bed		
		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
	-		'	of moderate quality, or comprises a significant part but is of low quality
	<u> </u>	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
				· ·
		an view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation
	Select only one			and is of high quality
		High (5)	N 1	Described as a Color of the Color
		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
	х	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 in	nvasive plants.		presence of rare threatened or endangered spp
		RAM long form for list.		A predominance of native species, with nonnative spp and/or
	Add or deduct poir	nts 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
	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)
		,	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. Microtopograp	nhv.	3	High 4 ha (9.88 acres) or more
	Score all present u			i ng. i na (cico acico) el melo
	· —	Vegetated hummocks/tussocks	Microtono	ography Cover Scale
	—	Coarse woody debris >15 cm (6")	0	Absent
		Standing dead > 25 cm (10") dbh	0	Proporti
		• ,	1	Present very small amounts or if more common of marginal quality
	0	Amphibian breeding pools		Description and anterior and the best of the second
			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
			1	



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





PHOTOGRAPHIC RECORD

WETLANDS

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





Site Location:

AEP

Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Project No. 60616110

Wetland 027b

Client Name:

Date:

June 3, 2020

Description:

PFO wetland

Category 2

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Crooksville-North Ne	ewark 138 kV Transmission Line	City/County: Perry	Sampling Date: 02-Jun-20
Applicant/Owner: AEP		State: Of	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): LRF	R N L		ng.: -82.1771
Soil Map Unit Name: GwC - Gue	-		NWI classification: N/A
Are climatic/hydrologic condition	ns on the site typical for this time	of year? Yes $ullet$ No $ullet$ (If no	, explain in Remarks.)
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology 🗌 signifi	cantly disturbed? Are "Norma	l Circumstances" present? Yes No
Are Vegetation . , Soil 🗸	, or Hydrology 🗌 natura	ally problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings -	Attach site map showin	ng sampling point location	ns, 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?	
Remarks:		<u>'</u>	
		e of old strip mine area. Spoil plies extends to south towards wetland	and coal fines present (naturally problematic soils). 029.
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum o	of one required; check all that app	oly)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic	Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		fide Odor (C1)	✓ Drainage Patterns (B10)
Saturation (A3)		ospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)		leduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)		teduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3) Algal Mat or Crust (B4)	☐ Thin Muck Su	• •	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Other (Explain	n in Remarks)	
Inundation Visible on Aerial Ima	agan/ (R7)		✓ Geomorphic Position (D2) ☐ Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)	agery (b/)		Snallow Aquitara (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:			TAC ficular rest (23)
	s O No O Depth (inch	es):	
Water Table Present? Yes	s ● No ○ Depth (inch	es): 12	
Saturation Present?	Bepth (inch	Wetland Hyd	rology Present? Yes No
(includes capillally fringe)			labla
Describe Recorded Data (stream	n gauge, monitoring weil, aeriai p	hotos, previous inspections), if avai	iable:
Remarks:			
	hydrology indicators present Dri	many source of bydrology groundwa	ater seepage as observed and concentration of
precipitation and surface runoff		illdly source or flydrology groundwic	atel seepage as observed and concentration of

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

				ominant		Sampling Point: w-bl-20200602-11
Tree	Stratum (Plot size: 30' r	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	
1.4	Acer saccharinum	5	✓	100.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)
2		0		0.0%		
				0.0%		Total Number of Dominant Species Across All Strata: 7 (B)
				0.0%		
				0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
				0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
				0.0%		Prevalence Index worksheet:
		0		0.0%		Total % Cover of: Multiply by:
		5 :	= To	otal Cove		OBL species
	ing-Sapling/Shrub Stratum (Plot size: 15' r	_)		24.00/	E4.014/	FACW species $50 \times 2 = 100$
	Acer saccharinum		✓	34.9%	FACW	FAC species 43 x 3 = 129
	Acer rubrum		✓	23.3%	FAC	FACU species $0 \times 4 = 0$
3. 🛚	indera benzoin		✓	23.3%	FAC	
	Jimus rubra			11.6%	FAC	1
	Populus deltoides			7.0%	FAC	Column Totals: 93 (A) 229 (B)
			Ц	0.0%		Prevalence Index = B/A = 2.462
7		0	Ц	0.0%	,	Hydrophytic Vegetation Indicators:
8		0	Ш	0.0%		Rapid Test for Hydrophytic Vegetation
				0.0%		✓ Dominance Test is > 50%
				0.0%		Prevalence Index is ≤3.0 ¹
	ıb Stratum_ (Plot size:)		= To	otal Cove	•	Morphological Adaptations ¹ (Provide supporting
	, located ,	0		0.0%		data in Remarks or on a separate sheet)
2		0	$\overline{\Box}$	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)
∠.=		0	$\overline{\Box}$	0.0%		¹ Indicators of hydric soil and wetland hydrology must
			\Box	0.0%		be present, unless disturbed or problematic.
			\Box	0.0%		Definition of Vegetation Strata:
ວ ຣ			П	0.0%		Four Vegetation Strata:
						Tree stratum – Consists of woody plants, excluding vines, 3 in.
		0		0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herl	Stratum (Plot size: <u>5' r</u>)	:	_	otal Covel		Sapling/shrub stratum – Consists of woody plants, excluding
1	Noodwardia areolata	30	✓	75.0%	FACW	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		0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5		0	Ц	0.0%		
6		0	Ш	0.0%		Five Vegetation Strata:
7		0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
		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
		0		0.0%		3 in. (7.6 cm) DBH.
		0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woo	dy Vine Stratum (Plot size: 15' r)	40 :	= To	otal Cove		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)
		0	Ц	0.0%	,	in height.
3		0		0.0%		Woody vines – Consists of all woody vines, regardless of
				0.0%		height.
4		0		0.0%		Hydrophytic
						Hydrophytic
5		0		0.0%		Vegetation
5			 = T	0.0% otal Cove	r	Vegetation Present? Yes ● No ○

Soil Sampling Point: w-bl-20200602-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			dox Features	1				
(inches) 0-1	Color (moist) 10YR 4/2	100	Color (moist)		Loc ²	Texture Silt Loam	Remarks		
			10)/D 4/4	10 0			distinct redox		
1-16	10YR 5/1	90	10YR 4/4	10 C	PL	Sandy Clay Loam	concentrations		
				, , , , , , , , , , , , , , , , , , , ,			<u>.</u>		
							·		
					_		·		
									
							.		
							 		
¹ Type: C=Con	centration. D=Depletic	on. RM=Redu	ced Matrix, CS=Covere	ed or Coated Sand	Grains ² Loca	tion: PL=Pore Lining. M	=Matrix		
Hydric Soil I							oblematic Hydric Soils ³ :		
Histosol (A1)		Dark Surface (S7)			-		
Histic Epip	pedon (A2)		Polyvalue Belo	w Surface (S8) (MI	RA 147,148)	2 cm Muck (A10) (MLRA 147)			
Black Hist	ic (A3)		Thin Dark Surf	ace (S9) (MLRA 14	7, 148)	Coast Prairie F (MLRA 147,14			
_	Sulfide (A4)		Loamy Gleyed	Matrix (F2)		_ ` '	odplain Soils (F19)		
	Layers (A5)		Depleted Matri			(MLRA 136, 1			
	k (A10) (LRR N)		Redox Dark Su	. ,		☐ Very Shallow	Dark Surface (TF12)		
	Below Dark Surface (A	(11)	Depleted Dark			Other (Explain	n in Remarks)		
	k Surface (A12)		Redox Depress	. ,	DD N				
□□ Sandy Mu MLRA 147	ıck Mineral (S1) (LRR N 7, 148)	Ν,	MLRA 136)	se Masses (F12) (L	KK IV,				
	eyed Matrix (S4)		Umbric Surface	e (F13) (MLRA 136	, 122)	2			
✓ Sandy Re	✓ Sandy Redox (S5)			dplain Soils (F19) (MLRA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
Stripped N	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA	127, 147)		s disturbed or problematic.		
Restrictive L	ayer (if observed):								
Type:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
Depth (incl	hes):					Hydric Soil Present	? Yes • No O		
Remarks:									
Hydric soil inc	dicator present as d	lepleted ma	trix in sandy soils st	arting less than	or equal to 6	" depth with distinct i	redox concentrations as pore		
	are naturally proble				·	•	·		

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

Project/Site: Crooksville-North Newar	k 138 kV Transmis	ssion Line City/C	ounty: Perry		Samp	ling Date: 02-Jun-20
Applicant/Owner: AEP			State: Ol	Н	Sampling Po	oint: upl-bl-20200602-09
Investigator(s): BL, SKM		Section	on, Township, Range: S	3	4 T 17N	R 15W
Landform (hillslope, terrace, etc.):	Hillside	Local re	elief (concave, convex,	none)): convex	Slope: _10.0 % / _84.3 °
Subregion (LRR or MLRA): LRR N		 Lat.: 39,835	504 Lo i	na.:	-82.17744	Datum: NAD83
Soil Map Unit Name: GwD - Guerns	ey-Westmorelan			.	NWI classification	
Are climatic/hydrologic conditions o	ı the site typical	for this time of year?	es ● No ○ (If no	o, exp	lain in Remarks.)	
Are Vegetation \Box , Soil \Box	, or Hydrology	significantly distur	bed? Are "Norma	l Circ	umstances" present	_? Yes • No O
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	expla	ain any answers in R	emarks.)
Summary of Findings - At	tach site ma	ap showing sampli	ing point location	ns, t	transects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes O No	•				
Hydric Soil Present?	Yes O No	•	Is the Sampled Area	Voc	○ No ●	
Wetland Hydrology Present?	Yes O No	•	within a Wetland?	103		
Remarks:						
Point out (Upland 028) to wetland wetland criteria met.	028 and wetland	d 029, about 5' east of w	etland 028 and 30' nor	thwes	st of wetland 029. N	lot a wetland point, no
Hydrology						
Wetland Hydrology Indicators:				Sec	ondary Indicators (mini	imum of two required)
Primary Indicators (minimum of on	e required; chec	k all that apply)			Surface Soil Cracks (B6	5)
Surface Water (A1)		True Aquatic Plants (B14)			Sparsely Vegetated Co	ncave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odor (C1))		Drainage Patterns (B10	0)
Saturation (A3)		Oxidized Rhizospheres along	g Living Roots (C3)		Moss Trim Lines (B16)	
Water Marks (B1)		Presence of Reduced Iron (C4)		Dry Season Water Tab	le (C2)
Sediment Deposits (B2)	L	Recent Iron Reduction in Ti	lled Soils (C6)		Crayfish Burrows (C8)	
☐ Drift deposits (B3)		Thin Muck Surface (C7)			Saturation Visible on A	• , , ,
☐ Algal Mat or Crust (B4)		Other (Explain in Remarks)			Stunted or Stressed Pla	• •
☐ Iron Deposits (B5)	(7-7)				Geomorphic Position (I	D2)
Inundation Visible on Aerial Imager	/ (B7)				Shallow Aquitard (D3)	
Water-Stained Leaves (B9)					Microtopographic Relie	ef (D4)
Aquatic Fauna (B13)					FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes	No •	Depth (inches):)			
Water Table Present? Yes	No 💿	Depth (inches):				
Saturation Present?	_	Depth (inches):	Wetland Hyd	lrolog	y Present? Yes	○ No •
(includes capillary fringe) Describe Recorded Data (stream ga			ous inspections), if avai	ilable	<u> </u>	
Remarks:						
No hydrology indicators present.						

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

Shrub Stratum (Plot size:)		Rel.	Juliu	FACU FAC FACU FAC FAC FAC FAC	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Description of Dominant Species Across All Strata: Percent of dominant Species That Are OBL, FACW, or FAC: Description of Dominant Species
2.		Tota	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FACU FAC FAC FACU	That are OBL, FACW, or FAC: 2
3.			0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 39.5% 26.3% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	Species Across All Strata: 5 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B) Prevalence Index worksheet:
3.			0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 39.5% 26.3% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	Species Across All Strata: 5 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B) Prevalence Index worksheet:
4			0.0% 0.0% 0.0% 0.0% al Cover 39.5% 26.3% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	Percent of dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B) Prevalence Index worksheet:
5.			0.0% 0.0% 0.0% 39.5% 26.3% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	That Are OBL, FACW, or FAC: 40.0% (A/B) Prevalence Index worksheet:
6			0.0% 0.0% al Cover 39.5% 26.3% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	Prevalence Index worksheet:
7.			0.0% 0.0% al Cover 39.5% 26.3% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 25 x 2 = 50 FAC species 28 x 3 = 84 FACU species 60 x 4 = 240 UPL species 0 x 5 = 0 Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: □ Rapid Test for Hydrophytic Vegetation
8. 0 Sapling-Sapling/Shrub Stratum (Plot size: 15' r) 1. Prunus serotina 15 2. Acer rubrum 10 3. Ulmus rubra 5 4. Rosa multiflora 5 5. Liquidambar styraciflua 3 6. 0 7. 0 8. 0 9. 0 0. 0 Shrub Stratum (Plot size:)			0.0% al Cover 39.5% 26.3% 13.2% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 25 x 2 = 50 FAC species 28 x 3 = 84 FACU species 60 x 4 = 240 UPL species 0 x 5 = 0 Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: □ Rapid Test for Hydrophytic Vegetation
Sapling-Sapling/Shrub Stratum (Plot size: 15' r) 1. Prunus serotina 15 2. Acer rubrum 10 3. Ulmus rubra 5 4. Rosa multiflora 5 5. Liquidambar styraciflua 3 6. 0 7. 0 8. 0 9. 0 0 0 0 0 0 Shrub Stratum (Plot size:)			39.5% 26.3% 13.2% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	OBL species 0 x 1 = 0 FACW species 25 x 2 = 50 FAC species 28 x 3 = 84 FACU species 60 x 4 = 240 UPL species 0 x 5 = 0 Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
Sapling-Sapling/Shrub Stratum Plot size: 15' r			39.5% 26.3% 13.2% 13.2% 7.9% 0.0% 0.0% 0.0%	FACU FAC FACU	FACW species 25 x 2 = 50 FAC species 28 x 3 = 84 FACU species 60 x 4 = 240 UPL species 0 x 5 = 0 Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
1. Prunus serotina 15 2. Acer rubrum 10 3. Ulmus rubra 5 4. Rosa multiflora 5 5. Liquidambar styraciflua 3 6. 0 7. 0 8. 0 9. 0 10. 0 20. 0 38. 0 9. 0 10. 0 20. 0 38. 0 38. 0 38. 0 38. 0			26.3% 13.2% 13.2% 7.9% 0.0% 0.0% 0.0%	FAC FAC FACU	FAC species $28 \times 3 = 84$ FACU species $60 \times 4 = 240$ UPL species $0 \times 5 = 0$ Column Totals: $113 \times 374 \times 38$ Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
2. Acer rubrum 10 3. Ulmus rubra 5 4. Rosa multiflora 5 5. Liquidambar styraciflua 3 6. 0 7. 0 8. 0 9. 0 10. 0 20. 0 38. 0 9. 0 10. 0 20. 38.			13.2% 13.2% 7.9% 0.0% 0.0% 0.0%	FAC FACU	FACU species 60 x 4 = 240 UPL species 0 x 5 = 0 Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
3. Ulmus rubra 5 4. Rosa multiflora 5 5. Liquidambar styraciflua 3 6. 0 7. 0 8. 0 9. 0 0. 0 Shrub Stratum (Plot size:)			13.2% 7.9% 0.0% 0.0% 0.0%	FACU	UPL species 0 x 5 = 0 Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
4. Rosa multiflora 5 5. Liquidambar styraciflua 3 6			13.2% 7.9% 0.0% 0.0% 0.0%	FACU	Column Totals: 113 (A) 374 (B) Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
5. Liquidambar styraciflua 3 6. 0 7. 0 8. 0 9. 0 10. 0 Shrub Stratum (Plot size:)			7.9% 0.0% 0.0% 0.0%		Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
6. 0 7. 0 8. 0 9. 0 10. 0 Shrub Stratum (Plot size:)		Tota	0.0% 0.0% 0.0% 0.0%	TAC	Prevalence Index = B/A = 3.310 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
7. 0 8. 0 9. 0 10. 0 Shrub Stratum (Plot size:)		Tota	0.0% 0.0% 0.0%	=	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
8. 0 9. 0 10. 0 Shrub Stratum (Plot size:)		Tota	0.0%		Rapid Test for Hydrophytic Vegetation
9	_ = . _ [Tota	0.0%		
0	- = ·	Tota			Dominance Test is > 50%
Shrub Stratum (Plot size:)	_ = ' _ = '	Tota	0.0%		
Shrub Stratum (Plot size:)	_ = .	Tota			Prevalence Index is ≤3.0 ¹
	Г		al Cover		Morphological Adaptations ¹ (Provide supporting
1	1		0.0%		data in Remarks or on a separate sheet)
10		7-	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
2			0.0%		¹ Indicators of hydric soil and wetland hydrology must
0		Ϊ-	0.0%		be present, unless disturbed or problematic.
7-	-	Ϊ-			Definition of Vegetation Strata:
5	-		0.0%		_
6			0.0%		Four Vegetation Strata:
7	_ L		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)	_ = '	Tota	al Cover		of height.
1 Polystichum acrostichoides 30		1	48.4%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
20 Emiliatus bussels	_	_	32.3%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Onoclea sensibilis 5		==	8.1%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Smilax rotundifolia 5			8.1%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5 Panicum virgatum 2			3.2%	FAC	in height.
O, Tanadani Vii garanii		Ϊ-	0.0%	TAC	
0		Ξ-			Five Vegetation Strata:
7	-	Ϊ–	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	-	Ϊ-	0.0%		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	_		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	_ [0.0%		3 in. (7.6 cm) DBH.
120	_ [J_	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) 62	_ = .	Tota	al Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1. Smilax rotundifolia 3		:	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%		in height.
30	_ [0.0%		Woody vines - Consists of all woody vines, regardless of
4. 0			0.0%		height.
		J	0.0%		
5		Ī	0.0%		Hydrophytic Vegetation
6		_ Tot	al Cover		Present? Yes No •
Remarks: (Include photo numbers here or on a separate sheet.)			00461		<u> </u>

Upland 028

Soil

Sampling Point: upl-bl-20200602-09

Profile Descr	iption: (De	escribe to	the depth	needed to document	the indic	ator or con	firm the a	absence of indicators.)		
Depth		Matrix			dox Featu					
(inches)		(moist)		Color (moist)	%	Tvpe '	Loc ²	Texture	Remarks	
0-4	10YR	4/3	100					Sandy Loam	5	
4-16	10YR	6/6	100					Sandy Clay Loam		
		`							,	
		`							`	
		· -							·	
					_					
		`							`	
1										
			n. RM=Redi	uced Matrix, CS=Covere	ed or Coate	d Sand Graii	ns ² Loca	tion: PL=Pore Lining. M=M		
Hydric Soil I		:			C=)			Indicators for Probl	ematic Hydric Soils ³ :	
Histosol (,			Dark Surface (,	CO) (MI DA :	147 140)	2 cm Muck (A10)	(MLRA 147)	
Black Hist	bedon (A2)			Thin Dark Surfa				Coast Prairie Red	ox (A16)	
	Sulfide (A4	1)		Loamy Gleyed			10)	(MLRA 147,148)		
	Layers (A5)			Depleted Matrix		1		Piedmont Floodp (MLRA 136, 147)	lain Soils (F19)	
	k (A10) (LR			Redox Dark Su						
	Below Dark		11)	Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N,				Very Shallow Dark Surface (TF12)		
	k Surface (A	-	111)					Other (Explain in	Remarks)	
	ıck Mineral (٧.							
MLRA 147		(01) (1	-,	MLRA 136)						
Sandy Gle	eyed Matrix	(S4)		Umbric Surface	e (F13) (ML	RA 136, 122	2)	3 7-4	Charles also also as a sealer and	
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,				
Stripped N	Matrix (S6)			Red Parent Ma	terial (F21)) (MLRA 127	, 147)	unless d	isturbed or problematic.	
Restrictive La	aver (if ob	served):								
Type:	.,									
Depth (incl	hes):							Hydric Soil Present?	Yes O No 💿	
Remarks:										
No hydric soil	Lindicator	s nresent								
110 117 4110 5011	i indicator.	o presenti								

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 028

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

Date: June 2, 2020

	ilie-North Newark 138 KV Transmission L	Line Rebuild Project	Date: June 2, 2020
Wetland:	w-bl-20200602-11		Rater: BL, SM
1 1 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 to <10 acres (0.12 to <1.2ha) x 0.1 to <0.3 acres (0.04 to <0.12 <0.1 acres (0.04ha) (0 pts)	na) (5 pts) (4 pts) pts)) (2pts)	
13 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 average 10 VERY LOW. Duffers average 10 VERY LOW. 2nd growth or old X LOW. Old field (>10 years), shi MODERATELY HIGH. Resider HIGH. Urban, industrial, open p	e, do not double check) 64ft) or more around wetlan in to <50m (82 to <164ft) aro im to <25m (32ft to <82ft) ar age <10m (<32ft) around we interest of the check & avera er forest, prairie, savannah, rubland, young second grow intial, fenced pasture, park, co	and perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0) age) wildlife area, etc. (7) with forest. (5) conservation tillage, new fallow field. (3)
27 14 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 state	3b. vater (3) r stream) (5)	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)
	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)		Check all disturbances observed ditch point source (nonstormwater) dike filling/grading
35 8 Subtotal Points	Metric 4. Habitat Alteration and D 4a. Substrate disturbance. Score one or document of the second o	uble 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) Acces observed shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

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Commission of Ohio Docketing Information System on

9/15/2021 7:05:07 PM

in

Case No(s). 21-0852-EL-BLN

Summary: Notice Letter of Notification for the Crooksville- North 138kV Transmission Line Rebuild Project Pages 465-793 Part 2 electronically filed by Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc.