Soil Sampling Point: W-MRK-021919-002 PEM

Profile Desci		the depth				onfirm the	absence of indicators.)		
Depth	Matrix	0/		dox Featu	ires 1	12	Toutere	B	a ulca
(inches) 0-16	Color (moist) 2.5Y 5/2	80	Color (moist) 10YR 5/8	% 20	Tvpe 1	Loc ² M,PL	Texture Silty Clay Loam	Rem 5% oxidize	d rhizospheres
	2.31 3/2						oncy clay Louin		
-									
¹ Type: C=Con	centration D=Denletion	on RM=Redi	iced Matrix CS=Cover	red or Coat	ed Sand Gr	ains 2l oca	ation: PL=Pore Lining. M=	Matrix	
Hydric Soil 1		on. Kin-Kedi	accu Matrix, C5=C0VCI	cu or coat	.cu Sanu Gi	anis Loca			3
Histosol (Dark Surface (S7)			Indicators for Proble	•	c Soils':
l — `	pedon (A2)		Polyvalue Belo	. ,	(S8) (MLRA	147.148)	2 cm Muck (A10)		
Black Hist			☐ Thin Dark Surf				Coast Prairie Red	ox (A16)	
	Sulfide (A4)		Loamy Gleyed			•	(MLRA 147,148)	nin Colle (E10)	
	Layers (A5)		✓ Depleted Matri				Piedmont Floodp (MLRA 136, 147)	aii1 50iiS (F19)	
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	ırface (F6)			Very Shallow Dar	k Surface (TF1	2)
☐ Depleted	Below Dark Surface (A	A11)	Depleted Dark	Surface (F	7)		Other (Explain in		•
☐ Thick Dar	k Surface (A12)		Redox Depress					,	
Sandy Mu MLRA 14	uck Mineral (S1) (LRR 7, 148)	N,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR	N,			
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3		
☐ Sandy Re	dox (S5)		Piedmont Floo	dplain Soil:	s (F19) (ML	RA 148)	³ Indicators of wetland hy	hydrophytic ve drology must b	egetation and e present.
Stripped	Matrix (S6)		Red Parent Ma	iterial (F21) (MLRA 12	7, 147)		sturbed or prol	
Restrictive L	ayer (if observed):								
Туре:									
Depth (inc	:hes):						Hydric Soil Present?	Yes	No O
Remarks:									
Soils are com	pacted by cattle.								
Ī									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project	City/County: Harrison Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmission Company	State: OH Sampling Point: W-MRK-001-002 UPL
Investigator(s): M.R.Kline, R.C.Massa	Section, Township, Range: S 2 T 11N R 4W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): convex Slope: 3.0% / 1.7 °
	NAPO2
Soil Map Unit Name: MnD-Morristown silty clay loam, 8 to 25 pe	·
Are climatic/hydrologic conditions on the site typical for this time	e of year? Yes No (If no, explain in Remarks.)
Are Vegetation \checkmark , Soil \checkmark , or Hydrology \square signif	ficantly disturbed? Are "Normal Circumstances" present? Yes O No
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$ natur	rally problematic? (If needed, explain any answers in Remarks.)
	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Yes ○ No •	Is the Sampled Area Yes ○ No ●
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that ap	
	Plants (B14) Sparsely Vegetated Concave Surface (B8) Ilfide Odor (C1) Drainage Patterns (B10)
	zospheres along Living Roots (C3) Moss Trim Lines (B16)
	Reduced Iron (C4) Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Recent Iron	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Si	urface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Expla	in in Remarks) Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (incl	h
	hes):
Water Table Present? Yes No Depth (incl	hes): Wetland Hydrology Present? Yes O No •
Saturation Present? (includes capillary fringe) Yes No Depth (includes Capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial p	photos, previous inspections), if available:
Remarks:	
No source of hydrology.	
, ,,	

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

Tree Stratum (Plot size:) 1 2	Absolute % Cover	Re	pecies? el.Strat. Indicator over Status	Dominance Test worksheet: Number of Dominant Species
1 2		Co	over Status	Number of Dominant Species
2	0			
2	•		0.0%	That are OBL, FACW, or FAC: 0 (A)
			0.0%	
3			0.0%	Total Number of Dominant
		\Box	0.0%	Species Across All Strata:
4		\Box	0.0%	Percent of dominant Species
5				That Are OBL, FACW, or FAC: 0.0% (A/B)
6			0.0%	
7	0		0.0%	Prevalence Index worksheet:
8	0	Ш	0.0%	Total % Cover of: Multiply by:
	0	= To	otal Cover	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:				FACW species 0 x 2 = 0
1	0			FAC species $0 \times 3 = 0$
2			0.0%	FACU species $50 \times 4 = 200$
3	0	\square	0.0%	2F 12F
4	_	Ш	0.0%	ore species x 3 =
5	0		0.0%	Column Totals:
6	_		0.0%	Prevalence Index = B/A = 4.333
7	0		0.0%	
8			0.0%	Hydrophytic Vegetation Indicators:
9			0.0%	Rapid Test for Hydrophytic Vegetation
			0.0%	Dominance Test is > 50%
0	_		otal Cover	Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10	otai Cover	Morphological Adaptations ¹ (Provide supporting
1		Щ	0.0%	data in Remarks or on a separate sheet)
2	0	\square	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.
5			0.0%	Definition of Vegetation Strata:
6			0.0%	Four Vegetation Strata:
7			0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
		 = To	otal Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' radius</u>)			otal covel	Sapling/shrub stratum – Consists of woody plants, excluding
1. Dactylis glomerata	50	V	66.7% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Daucus carota	25	V	33.3% UPL	Herb stratum – Consists of all herbaceous (non-woody)
3	0		0.0%	plants, regardless of size, and all other plants less than 3.28
4	0		0.0%	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		0.0%	it iii neigiit.
6	0		0.0%	Five Vegetation Strata:
7	0		0.0%	
8			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%	diameter at breast height (DBH).
9		H	0.0%	Sapling stratum – Consists of woody plants, excluding
0				woody 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	Ш	0.0%	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	75	= To	otal Cover	Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%	plants, including herbaceous vines, regardless of size, and
2			0.0%	woody 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
4.	0		0.0%	height.
5			0.0%	Hydrophytic
6		Ш	0.0%	Vegetation Present? Yes No No
	0	= T	otal Cover	riesent!

Soil Sampling Point: W-MRK-001-002 UPL

D	Matrix	-		dox Featur			absence of indicators.)			
Depth (inches)	Color (moist)	%	Color (moist)		Tvpe 1	Loc ²	Texture	Remarks		
0-10	2.5Y 4/3	100	COIOI (IIIOISE)		TVDC	LOC	Silty Clay Loam	Kemarks		
				- —						
				- ——						
	antantian D. Danlatia	- DM D			1.61.6		tion Di Bondinio M	M-1.5.		
	<u></u>	n. RM=Reduc	ced Matrix, CS=Cover	ed or Coate	ed Sand Gra	iins ² Loca	ation: PL=Pore Lining. M=	Matrix		
dric Soil I							Indicators for Probl	ematic Hydric Soils ³ :		
Histosol (A	•		Dark Surface (> (2 cm Muck (A10)	(MLRA 147)		
Histic Epip			Polyvalue Belo				Coast Prairie Red	ox (A16)		
Black Histi	. ,		Thin Dark Surf		LRA 14/, 1	48)	(MLRA 147,148)			
	Sulfide (A4)		Loamy Gleyed				Piedmont Floodp			
Stratified L			Depleted Matri				(MLRA 136, 147)			
	(A10) (LRR N)		Redox Dark Su	` ,	'\		Very Shallow Dar			
	Below Dark Surface (A:	11)	☐ Depleted Dark ☐ Redox Depress)		Other (Explain in Remarks)			
	Surface (A12)				=12) /LDD L	ı				
Sandy Muc MLRA 147,	ck Mineral (S1) (LRR N , 148)	,	Iron-Manganes MLRA 136)							
-	yed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)				³ Indicators of hydrophytic vegetation and			
」Sandy Red			☐ Piedmont Floo				wetland hydrology must be present,			
Stripped M	latrix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	', 147)	unless di	sturbed or problematic.		
	yer (if observed):									
Type:							Hydric Soil Present?	Yes O No 💿		
	es):						riyaric Son Fresent:	165 U W U		
Depth (inch	, .									
emarks:			akad bu aakkla							
emarks:	at 10 inches. Soils	are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
marks:		are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							
emarks:		are compa	cted by cattle.							

Metric 1. Wetland Area (size). Select one size class and assign score. -20 acres (x) 22 (2) (2) (8) (8) (8) (2) (10) (10) (10) (10) (10) (10) (10) (10	Site: AEP Carrollton-Ga	ble	Rater(s): M.R.Kline,	R.C.Massa	Date:	2/19/2019
Select one situ class and assign acono. Select one situ class and assign acono. 25 to <80 acres (20 7th of <20 2hn) (5 pts) 10 to <20 acres (10 1 to <20 2hn) (5 pts) 10 to <20 acres (10 1 to <20 2hn) (5 pts) 10 to <20 acres (10 1 to <20 2hn) (5 pts) 10 to <20 acres (10 1 to <20 2hn) (5 pts) 10 to <20 acres (10 to 1 ch) (2h pts) 10 to <20 acres (10 to 1 ch) (2h pts) 10 to <20 acres (10 to 1 ch) (2h pts) 10 to <20 acres (10 to 1 ch) (2h pts) 10 to <20 acres (10 to 1 ch) (2h pts) 10 to <20 acres (10 to 1 ch) (2h pts) 11 and surfaces MUDIC. Buffers average 50m (15 ft) or more around wetland permeter (7) MUDIC. Buffers average 50m (15 ft) or more around wetland permeter (8) MARROW. Buffers average 50m (15 ft) or more around wetland permeter (1) 12 y Ferr VARROW. Buffers average 10m to <25m (201 to <400 around vetland permeter (4) 13 buffers (10 years), which we company around wetland permeter (1) 25 l. Intensity of surrounding land use. Select one or double check and average. 15 vetro (10 years), which we company around wetland permeter (1) 26 l. Intensity of surrounding land use. Select one or double check and average. 16 vetro (10 years), which we company around wetland permeter (1) 27 love (10 years), which we company around wetland permeter (1) 28 love (10 years), which we company around wetland permeter (1) 29 love (10 years), which we company around wetland permeter (1) 20 love (10 years), which we company around wetland permeter (1) 20 love (10 years), which we company around wetland permeter (1) 20 love (10 years), which we company around we select one or double check and average. 20 love (10 years), which we company around we select one or double check and average. 21 love (10 years), which we company around we company around be permeter (1) 22 love (10 years), which we company around years (1) 23 love (10 years), which we company around years (1) 24 love (10 years), which we company around years (1) 25 love (10 years), which we company around years (1) 26 love (10 years),				Field Id:		
Sol acres (C2-20 ha) (6 pts) 1.04 acres C2-20 ha) (6 pts) 1.04 acres C2-20 ha) (6 pts) 10 to <25 acres (46 rd 0.1ma) (4 pts) 10 to <25 acres (46 rd 0.1ma) (4 pts) 10 to <25 acres (46 rd 0.1ma) (4 pts) 10 to <25 acres (40 ha) (2 pts) 10 to <25 acres (10 h	2 2	Metric 1. Wetla	nd Area (size).	W-MRK-021919-0	002 PEM	
### Part of the process of the proce		>50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to 10 to <25 acres (4 to <1 3 to <10 acres (1.2 to <4 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 t	ots) <20.2ha) (5 pts) 0.1ha) (4 pts) Hha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)	1.04	acres	
WIDE. Buffers average 50m (164ft) or more around wetland perimeter (4) MARROW. Buffers average 50m to <25m (23t to <32ft) around wetland perimeter (4) NARROW. Buffers average 50m to <25m (23t to <32ft) around wetland perimeter (7) Z VERY NARROW. Buffers average 10m to <25m (23t to <32ft) around wetland perimeter (7) Z b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 20t field (~10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, feroed pasture, pank, conservation tillage, new fallow field. (3) HIGH Uthan, industrial, open pasture, row cropping, mining, construction. (1) 7.0 10.0 **Netric 3. Hydrology.** **A Sources of Water. Score all that apply.** **Ithigh if groundwater (5) **Precipitation (1) **Seasonal/Intermittent surface water (3) **Perepitation (1) **Recovering (3) **Recovering	1 3	Metric 2. Uplan	d buffers and surro	unding land use.		
### 3a. Sources of Water. Score all that apply. #### Pigh pH groundwater (5) Cher groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennal surface water (ake or stream) (5) 3d. Maximum water depth. Select one. 3-0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) 3d. Most (15.7 to 17.6) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (4) Recovering (2) X Recent or no recovery (1) Ababitat development. Select only one and assign score. Excellent (7) Very good (6) Codd (6) Codd (6) Recovered (9) Ac. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (9) Ac. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (9) Ac. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (9) Ac. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (9) Ac. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (9) Recovere	×	WIDE. Buffers average: MEDIUM. Buffers avera NARROW. Buffers avera VERY NARROW. Buffet 2b. Intensity of surrou VERY LOW. 2nd growth LOW. Old field (>10 yea MODERATELY HIGH. F	50m (164ft) or more around wetl ge 25m to <50m (82 to <164ft) a age 10m to <25m (32ft to <32ft s average <10m (<32ft) around nding land use. Select one or or older forest, prairie, savanna rs), shrubland, young second gr desidential, fenced pasture, park	and perimeter (7) around wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) double check and average. th, wildlife area, etc. (7) owth forest. (5) , conservation tillage, new fallow fie		
High pH groundwater (3)	7.0 10.0	Metric 3. Hydro	logy.			
### As Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1)	x x x x x x x x x x x x x x x x x x x	High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent su Perennial surface water 3c. Maximum water de >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6 <0.4m (<15.7in) (1) 3e. Modifications to na None or none apparent (Recovered (7) Recovering (3) Recent or no recovery (1)	rface water (3) (lake or stream) (5) pth. Select one. Sin) (2) tural hydrologic regime. Scor 12)	100 year floodplain (1) Between stream/lake and of Part of wetland/upland (e.g. Part of riparian or upland of 3d. Duration inundation/s Semi- to permanently inunch Regularly inundated/saturate Seasonally inundated (2) x Seasonally saturated in up e one or double check and avera Check all disturbances of ditch tile dike weir stormwater input	other human use (1) i. forest), complex (1) orridor (1) saturation. Score one or dbl c dated/saturated (4) ted (3) per 30cm (12in) (1) ge. bserved point source (nonstormwat x filling/grading road bed/RR track dredging	
subtotal this page ORAM v. 5.0 Field Form Quantitative Rating	x x x	None or none apparent (Recovered (3) Recovering (2) Recent or no recovery (* 4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. \$ None or none apparent (Recovered (6) Recovering (3) Recent or no recovery (*	(4) I) Int. Select only one and assign Score one or double check an (9)	d average. Check all disturbances obs x mowing x grazing clearcutting selective cutting woody debris removal	shrub/sapling removal herbaceous/aquatic bed re x sedimentation dredging x farming	moval

wetland 66 | test_Field 3/8/2019

Site: AEP Carrol	Ilton-Ga	able	Rater(s):	M.R.Kline, R.	.C.N	Massa	Date:	2/19/2019
		·			F	Field Id:		
	13				١	W-MRK-021919-002 PEN	1	
	ototal this page				-		-	
0	13	Metric 5. Specia	l Wetlan	de				
		•						
max 10 pts. sub	btotal	Check all that appl	y and scor	e as indicated.				
	-	Bog (10) Fen (10)						
		Old growth forest (10)						
		Mature forested wetland ((5)					
		Lake Erie coastal/tributary			0)			
	<u> </u>	Lake Erie coastal/tributary						
	-	Lake Plain Sand Prairies Relict Wet Praires (10)	(Oak Opening	s) (10)				
	-	Known occurrence state/f	ederal threate	ned or endangered s	specie	es (10)		
		Significant migratory song				()		
		Category 1 Wetland. See	Question 5 Q	ualitative Rating (-10))			
-2	11	Metric 6. Plant o	ommuni	ties, interspe	rsic	on, microtopography.		
max 20pts. sub	btotal	6a. Wetland Vegeta	tion Comn	nunities.	\	Vegetation Community Cove	er Scale	
		Score all present using 0	to 3 scale.	_		Absent or comprises <0.1ha (0.2471 ac		
	L	Aquatic bed				Present and either comprises small par		
	1	Emergent Shrub				regetation and is of moderate quality, o ignificant part but is of low quality	or comprises a	
		Forest		-		Present and either comprises significar	nt part of wetland's 2	
		Mudflats				regetation and is of moderate quality o		
		Open water		_		part and is of high quality		
		Other	.			Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan view Select only one.	v) interspersi	on.	V	egetation and is of high quality		
		High (5)			N	larrative Description of Vegetation	Quality	
		Moderately high(4)				ow spp diversity and/or predominance	of nonnative or low	
	-	Moderate (3)				listurbance tolerant native species	the vegetation med	
	-	Moderately low (2) Low (1)				Native spp are dominant component of Ilthough nonnative and/or disturbance		
	х	None (0)				an also be present, and species diver		
		6c. Coverage of invasive	e plants. Refe	er	n	noderately high, but generallyw/o prese	ence of rare	
		Table 1 ORAM long form				hreatened or endangered spp to		
		or deduct points for cover Extensive >75% cover (-5				A predominance of native species, with and/or disturbance tolerant native spp a		
	x					bsent, and high spp diversity and often		
		Sparse 5-25% cover (-1)	-/			he presence of rare, threatened, or en		
		Nearly absent <5% cover	(0)		_			
		Absent (1)				Mudflat and Open Water Class Quali	ty	
		6d. Microtopography. Score all present using 0	to 3 scale	_		Absent <0.1ha (0.247 acres) .ow 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/tus		-		Moderate 1 to <4ha (2.47 to 9.88 acres	5)	
		Coarse woody debris >15		_		ligh 4ha (9.88 acres) or more	/	
		Standing dead >25cm (10						
		Amphibian breeding pools	3			Microtopography Cover Scale Absent		
				-		Present very small amounts or if more	common	
						of marginal quality		
				_	2 P	Present in moderate amounts, but not		
Category 1				_	q	uality or in small amounts of highest q	uality	
11 G	RAND TO	OTAL(max 100 pts)			3 P	Present in moderate or greater amount	s	
_					а	and of highest quality		

wetland 66 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 66

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 66

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 66

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 66

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 66

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 67a

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV P	roject	City/County: Harrison	Sa	mpling Date: 19-Feb-19	
Applicant/Owner: AEP Ohio Transmission	on Company	State: OH Samplin	g Point: W-N	nt: W-MRK-021919-003 PEM	
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	1 T 11N	R 4W	
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex,	one): concave	Slope: 1.0% / 0.6 °	
Subregion (LRR or MLRA): LRR N	Lat.:	40.391487 Lo	g.: -80.874320	Datum: NAD83	
Soil Map Unit Name: Bhv1B-Bethesda			classification: N/A		
Are climatic/hydrologic conditions on t	the site typical for this time of ve	ear? Yes • No O (If no	explain in Remarks.)	
			Circumstances" pres		
			explain any answers		
, , ,		(=======,		•	
Summary of Findings - Atta		ampling point locatio	ıs, transects, iı	mportant features, etc.	
' ' '	Yes No				
,	Yes No	Is the Sampled Area	Yes No		
Wetland Hydrology Present?	Yes No	within a Wetland?			
Hydrology					
Primary Indicators (minimum of one ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Water Table Present? Yes Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge) Remarks: Source of hydrology is spring seeps a	Hydrogen Sulfide C Oxidized Rhizosphe Presence of Reduce Recent Iron Reduce Thin Muck Surface Other (Explain in R (B7) No Depth (inches): No Depth (inches): No Depth (inches): ge, monitoring well, aerial photo	Odor (C1) eres along Living Roots (C3) ed Iron (C4) tion in Tilled Soils (C6) (C7) temarks)	Drainage Patterns Moss Trim Lines (E Dry Season Water Crayfish Burrows (Saturation Visible of Stunted or Stresse Geomorphic Position Shallow Aquitard (Microtopographic I FAC-neutral Test (Tology Present?	d Concave Surface (B8) (B10) (B16) Table (C2) C8) on Aerial Imagery (C9) d Plants (D1) on (D2) D3) Relief (D4)	

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

		Creation?	Sampling Point: W-MRK-021919-003 PEM		
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Indicator Cover Status	Dominance Test worksheet:		
	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)		
1		0.0%	That are obt., FACW, of FAC.		
3		0.0%	Total Number of Dominant		
4		0.0%	Species Across All Strata:3(B)		
5		0.0%	Percent of dominant Species		
6		0.0%	That Are OBL, FACW, or FAC: 66.7% (A/B)		
7		0.0%	Prevalence Index worksheet:		
8	0	0.0%	Total % Cover of: Multiply by:		
	0 =	= Total Cover	OBL species 0 x 1 = 0		
Sapling-Sapling/Shrub Stratum (Plot size:)		FACW species 50 x 2 = 100		
1	0		FAC species $0 \times 3 = 0$		
2	0		'		
3	0				
4			7 7		
5			Column Totals: 80 (A) 220 (B)		
6			Prevalence Index = $B/A = \underline{2.750}$		
7		0.0%	Hydrophytic Vegetation Indicators:		
8			Rapid Test for Hydrophytic Vegetation		
9			✓ Dominance Test is > 50%		
0	0		V 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%	☐ 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.		
5		0.0%	Definition of Vegetation Strata:		
6		0.0%	Four Vegetation Strata:		
7.		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3		
Herb Stratum (Plot size: 5' radius)	0 =	= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
4	30	✓ 37.5% FACW	Sapling/shrub stratum – Consists of woody plants, excluding		
1. Juncus effusus		✓ 37.5% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2. Dactylis glomerata		✓ 25.0% FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28		
3. Phalaris arundinacea	0	0.0%	ft tall Woody vines – Consists of all woody vines greater than 3.28		
4. Carex sp.		0.0%	ft in height.		
5 6		0.0%			
		0.0%	Five Vegetation Strata:		
7 8		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%	diameter at breast height (DBH).		
9		0.0%	Sapling stratum – Consists of woody plants, excluding		
0		0.0%	woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
1		0.0%	Shrub stratum – Consists of woody plants, excluding woody		
2		= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Woody Vine Stratum (Plot size:)		- Total Covel	Herb stratum – Consists of all herbaceous (non-woody)		
1			plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately		
2		0.0%	3 ft (1 m) in height.		
3		0.0%	Woody vines – Consists of all woody vines, regardless of		
4	0	0.0%	height.		
5	0		Hydrophytic		
	0	0.0%	Vogetation		
6			Present? Yes • No		

Soil Sampling Point: W-MRK-021919-003 PEM

Profile Desci		the depth n				nfirm the	absence of indicators.)	
Depth	Matrix			dox Featu	res 1	1.5.53	Toutere	Downsiles
<u>(inches)</u> 0-16	Color (moist) 10YR 4/2	95	Color (moist) 10YR 5/6	. <u>%</u> 5	Tvpe 1	Loc ²	Texture Silty Clay	Remarks
			101K 3/0				Sifty Clay	
	-							
							,	
1 Type: C=Con	centration D=Denletic	n RM=Redu	ced Matrix CS=Cover	ed or Coat	ed Sand Gr	ains 21 oc	ation: PL=Pore Lining. M=I	Matrix
Hydric Soil 1		Jii. Ki-i-kedu	ccu riadix, cs=cover	cu or coat	.cu Sanu Gi	all is Loca		
Histosol (Dark Surface (S7)			_	ematic Hydric Soils ³ :
l — `	pedon (A2)		Polyvalue Belov	•	(S8) (MLRA	147.148)	2 cm Muck (A10)	(MLRA 147)
Black Hist			Thin Dark Surfa				Coast Prairie Red	ox (A16)
	Sulfide (A4)		Loamy Gleyed			,	(MLRA 147,148)	ain Calle (F10)
Stratified	Layers (A5)		✓ Depleted Matri		-		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dar	k Surface (TF12)
☐ Depleted	Below Dark Surface (A	\11)	Depleted Dark	Surface (F	7)		Other (Explain in	
☐ Thick Dar	k Surface (A12)		Redox Depress				_ 、,	,
Sandy Mu MLRA 14	ıck Mineral (S1) (LRR I 7, 148)	Ν,	Iron-Manganes MLRA 136)	e Masses	(F12) (LRR	N,		
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3- "	
Sandy Re	dox (S5)		☐ Piedmont Floo	dplain Soils	s (F19) (ML	RA 148)	Indicators of wetland hyd	hydrophytic vegetation and drology must be present,
Stripped	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)		sturbed or problematic.
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	hes):						Hydric Soil Present?	Yes No
Remarks:								
Soils are com	pacted by cattle.							

Wetland 67b

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project	City/County: Harrison	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmission Company	State: OH Samplin	g Point: W-MRK-021919-003 PUB
Investigator(s): M.R.Kline, R.C.Massa	Section, Township, Range: S	1 T 11N R 4W
Landform (hillslope, terrace, etc.): Bench	Local relief (concave, convex, n	one): concave Slope: 0.5% / 0.3 °
Subregion (LRR or MLRA): LRR N Lat.:	40.390961 Lon	g.: -80.873528
Soil Map Unit Name: Bhk4F-Bethesda channery silt loam, 25 to 70 pe		classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes O No (If no.	explain in Remarks.)
		Circumstances" present? Yes No •
		on cambiances present.
, , , , , ,	(explain any answers in Remarks.)
Summary of Findings - Attach site map showing s	ampling point location	is, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No		
Hydric Soil Present? Yes No	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present? Yes No	within a Wetland?	
This PUB section of a PEM/PUB complex begins at a small hillside see forested area where a pond is located within a depression. The wetland		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
✓ Surface Water (A1)	; (B14)	✓ Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide C	dor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizosphe	eres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	ed Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduc	tion in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	(C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in R	emarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
₩ Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No Depth (inches):	6	
Water Table Present? Yes No Depth (inches):	0	ology Present? Yes No
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	O wetiand Hydr	ology Present? Yes • No ·
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if avail	able:
Remarks:		
Source of hydrology is spring seeps and surface runoff. Spring seeps	are trampled by cattle.	

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

		inant	Sampling Point: W-MRK-021919-003 PUB		
Tree Stratum (Plot size: _30' radius)	Absolute Rel.S % Cover Cove	Strat. Indicator	Dominance Test		
A Callendary	20 1	.00.0% OBL	Number of Domina That are OBL, FAC		
1. <u>Salix nigra</u> 2.		0.0%	That are Obt, TAC	(A)	
3.		0.0%	Total Number of D		
		0.0%	Species Across All	Strata: (B)	
4		0.0%	Percent of domin	nant Species	
5		0.0%	That Are OBL, F.	ACW, or FAC: <u>100.0%</u> (A/B)	
5 7		0.0%	Prevalence Index	v worksheet:	
		0.0%	Total % Co		
3		l Cover	OBL species	30 x 1 = 30	
Sapling-Sapling/Shrub Stratum (Plot size:)		FACW species	$0 \times 2 = 0$	
1		0.0%		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
2		0.0%	FAC species		
3		0.0%	FACU species	x 4 =0	
1		0.0%	UPL species	$0 \times 5 = 0$	
5		0.0%	Column Totals:	30 (A)30 (B)	
5		0.0%	Prevalence 1	Index = B/A = 1.000	
7	0	0.0%		etation Indicators:	
3		0.0%		etation indicators: for Hydrophytic Vegetation	
)		0.0%			
)		0.0%		Test is > 50%	
	_	l Cover		Index is ≤3.0 ¹	
Shrub Stratum (Plot size:)		0.0%		cal Adaptations ¹ (Provide supporting narks or on a separate sheet)	
1		0.0%	I —	c Hydrophytic Vegetation 1 (Explain)	
2		0.0%			
3		0.0%		nydric soil and wetland hydrology must ess disturbed or problematic.	
1			Definition of V	/egetation Strata:	
5		0.0%	Four Vegetation	=	
5		0.0%	"	nsists of woody plants, excluding vines, 3	
7		0.0%	in. (7.6 cm) or mor	e in diameter at breast height (DBH),	
Herb Stratum (Plot size:)	0 = Tota	l Cover	regardless of heig		
1		0.0%		itum – Consists of woody plants, excluding in. DBH and greater than 3.28 ft (1 m) tall.	
2		0.0%		nsists of all herbaceous (non-woody)	
3		0.0%		of size, and all other plants less than 3.28	
ł		0.0%	Woody vines – Co	nsists of all woody vines greater than 3.28	
5		0.0%	it iii iieigiit.		
5		0.0%	Five Vegetatio	n Strata:	
7		0.0%		ts, excluding woody vines, approximately	
3		0.0%	20 ft (6 m) or more	in height and 3 in. (7.6 cm) or larger in	
9		0.0%	diameter at breast	• , ,	
).		0.0%		Consists of woody plants, excluding oximately 20 ft (6 m) or more in height and	
1		0.0%	less than 3 in. (7.6		
2.		0.0%		onsists of woody plants, excluding woody	
Woody Vine Stratum (Plot size:)	0 = Tota	I Cover	1 ' ' '	ely 3 to 20 ft (1 to 6 m) in height.	
	0 🗆	0.0%	plants, including h	nerbaceous vines, regardless of size, and	
1		0.0%	woody species, ex 3 ft (1 m) in height	ccept woody vines, less than approximately	
2		0.0%	` ´	nsists of all woody vines, regardless of	
3		0.0%	height.	noists of all woody villes, regardless of	
4					
5		0.0%	Hydrophytic		
5		0.0%	Vegetation Present?	Yes No	
	0 = Tot a	al Cover	1		

Soil Sampling Point: W-MRK-021919-003 PUB

		the depth r				nfirm the	absence of indicators.)		
Depth (inches)	Matrix Color (moist)	%	Rec Color (moist)	dox Featu %	Tvpe 1	Loc²	Texture	Domanico	
0-16	10YR 4/2	95	10YR 5/6	5	С	M	Silty Clay Loam	Remarks	
	10111 1/2		370				oney elay Louin		
	-								
	-		-						
	-								
1- 0.0									
		on. RM=Redu	ced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=I	Matrix	
Hydric Soil 1				67)			Indicators for Proble	ematic Hydric Soils	³ :
Histosol (•		Dark Surface (,	(CO) /M! D *	147 140	2 cm Muck (A10)	(MLRA 147)	
	pedon (A2)		Polyvalue Below Thin Dark Surf				Coast Prairie Red	ox (A16)	
Black Hist	iic (A3) i Sulfide (A4)					148)	(MLRA 147,148)		
	Layers (A5)		Loamy Gleyed✓ Depleted Matri)		Piedmont Floodpl	ain Soils (F19)	
	k (A10) (LRR N)		Redox Dark Su				(MLRA 136, 147)	I. C (TE12)	
	Below Dark Surface (A	(11)	Depleted Dark	. ,	7)		☐ Very Shallow Dar		
_ `	k Surface (A12)	(11)	Redox Depress	-	.,		Other (Explain in	Remarks)	
	ıck Mineral (S1) (LRR I	N	☐ Iron-Manganes		(F12) (LRR	N,			
MLRA 147	7, 148)	٧,	MLRA 136)						
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3 7-4	la calca a la calca con a a destita	
Sandy Re	dox (S5)		☐ Piedmont Floo	dplain Soil:	s (F19) (ML	RA 148)	wetland hyd	hydrophytic vegetation Irology must be prese	on and ent,
Stripped	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless di	sturbed or problemati	c.
Restrictive L	ayer (if observed):								
Туре:									
Depth (inc	:hes):						Hydric Soil Present?	Yes No)
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Pro	oject	City/County: Harrison	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmission	n Company	State: OH Samplin	g Point: W-MRK-003 UPL
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	1 T 11N R 4W
	lillside	Local relief (concave, convex, r	
			117
	Lat.:		
Soil Map Unit Name: MnD-Morristown			classification: N/A
Are climatic/hydrologic conditions on the	ne site typical for this time of ye	ear? Yes $lacktriangle$ No $lacktriangle$ (If no	explain in Remarks.)
Are Vegetation ✓ , Soil ✓ , o	or Hydrology 🗌 significantl	y disturbed? Are "Normal	Circumstances" present? Yes ○ No ●
Are Vegetation \square , Soil \square , \circ	or Hydrology 🔲 naturally p	roblematic? (If needed,	explain any answers in Remarks.)
		ampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes O No 💿		
Hydric Soil Present?	Yes O No 💿	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present?	Yes O No 💿	within a Wetland?	
Upland data point for W-MRK-003. Su			
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one r		(7.4.0)	Surface Soil Cracks (B6)
Surface Water (A1) High Water Table (A2)	☐ True Aquatic Plants☐ Hydrogen Sulfide C	` '	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	_ ′ -	eres along Living Roots (C3)	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduce	. ,	Dry Season Water Table (C2)
Sediment Deposits (B2)		tion in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface	• ,	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in R	emarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		•	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:			
Surface Water Present? Yes	No Depth (inches):		
Water Table Present? Yes	No Depth (inches):		rology Present? Yes O No •
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):	Wetland Hyd	rology Present? Yes U No 🖲
Describe Recorded Data (stream gaug	e, monitoring well, aerial photo	s, previous inspections), if avai	able:
Remarks:			
No source of hydrology.			

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

Masour Pict dize			—Species? –		Sampling Fourt. WY-WICK-003 OFL
1		Absolute		Indicator	Dominance Test worksheet:
1	Tree Stratum (Plot size:)	% Cover	Cover	Status	Number of Demissort Creation
2	1	0	0.0%		
1			0.0%		
1					
Percent of dominant Species CAVB Prevalence Index worksheet: Total % Cover of Multiply by: Total % Cover of Multiply					Species Across All Strata: 2 (B)
1					Percent of deminant Species
6 .	5	0			
Sapiling-Sapiling-Shrub Stratum (Plot size:)	6	0			That the OBL, thew, of the
Sapiling-Sapiling-Shrub Stratum (Plot size:)	7	0	0.0%		Prevalence Index worksheet:
Sapiling-Sapiling/Shrub Stratum (Plot size:)			0.0%		Total % Cover of: Multiply by:
Sapling/Shrubs Stratum (Plot size: 0 0.0%		Λ	= Total Cover		OBL species $0 \times 1 = 0$
1.	Sapling-Sapling/Shrub Stratum (Plot size:)			
2.	1	0	0.0%		
1			0.0%		•
4.			0.0%	-	· ·
Column Totals: 75 (A) 325 (B)			0.0%		UPL species $\frac{25}{}$ x 5 = $\frac{125}{}$
Prevalence Index = B/A = 4,333					Column Totals: 75 (A) 325 (B)
					Prevalence Index = B/A = 4.333
9.					Hydrophytic Vegetation Indicators:
Dominance Test is > 50% Dominance Test is \$ 50% Dominance Test i	8	0			Rapid Test for Hydrophytic Vegetation
O	9	0	0.0%		Dominance Test is > 50%
Shrub Stratum (Plot size:)	10	0	0.0%		l
1.		_	= Total Cover		
Problematic Hydrophytic Vegetation 1 (Explain)					
3.					I —
4.					Problematic nytrophytic vegetation (Explain)
Definition of Vegetation Strata: Four Vegetation Strata: Tree stratum — Consists of woody plants, excluding vines, approximately 3 to 2 mode of the plant is plant. Four Vegetation Strata: Four Vegetation Strata: Tree stratum — Consists of woody plants, excluding vines, approximately 3 to 2 mode of the plant is plant. Four Vegetation Strata: Tree stratum — Consists of woody plants, excluding vines, elses than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum — Consists of all herbaceous (non-woody) Herb stratum — Consists of all herbaceous (non-woody) Herb stratum — Consists of all woody vines greater than 3.2 ft (1 m) tall. Herb stratum — Consists of all woody vines greater than 3.2 ft in height. Five Vegetation Strata: Tree — Woody plants, excluding woody vines greater than 3.2 ft in height. Five Vegetation Strata: Tree — Woody plants, excluding woody vines greater than 3.2 ft (1 m) and provided in the plants	3	0			¹ Indicators of hydric soil and wetland hydrology must
5.			0.0%		be present, unless disturbed or problematic.
6.			0.0%		Definition of Vegetation Strata:
7.			0.0%		Four Vegetation Strata:
					Tree stratum – Consists of woody plants, excluding vines, 3
Sapling/shrub stratum - Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.2 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.2 ft in height. Sapling/shrub stratum - Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.2 ft in height. Sapling/shrub stratum - Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.29 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regardless of size, and all other plants less than 3.28 ft (1 m) tall that plants, regar					
1. Dactylis glomerata 2. Daucus carota 3. Daucus carota 4. Daucus carota all berbaceous (non-woody) 5. Daucus carota all herbaceous (non-woody) 6. Daucus carota all herbaceous (non-woody) 75 = Total Cover 1. Daucus carota all herbaceous (non-woody) 75 = Total Cover 1. Daucus carota all herbaceous (non-woody) 75 = Total Cover 1. Daucus carota all herbaceous (non-woody) 75 = Total Cover 1. Daucus carota all herbaceous (non-woody) 75 = Total Cover 1. Daucus carota all herbaceous (non-woody) 75 = Total Cover 1. Daucus carota all herbaceous carota all herbaceous carota all carota all carota carota carota all carota all carota carota carota all carota carota carota carota carota carota ca	Herb Stratum (Plot size: 5' radius)		= Total Cover		1 5
2. Daucus carota 3. Daucus carota 3. Daucus carota 4. Daucus carota 4. Daucus carota 4. Daucus carota 5. Daucus carota 6. Daucus carota 6. Daucus carota 7. Daucus carota 6. Daucus carota 7. Daucus carota 7. Daucus carota 7. Daucus carota 8. Daucus carota 8. Daucus carota 9. Daucus carota 9. Daucus carota 1. Daucus carota carot	1. Dactylis glomerata	50	✓ 66.7%	FACU	
1	2. Daucus carota	25	✓ 33.3%	UPL	
4.	3	0	0.0%	-	plants, regardless of size, and all other plants less than 3.28
5.			0.0%		ft tall. Woody vines – Consists of all woody vines greater than 3.28
6.					ft in height.
7.					
8				-	Five Vegetation Strata:
9					Tree - Woody plants, excluding woody vines, approximately
Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height ar less than 3 in. (7.6 cm) DBH. 10	8	0			
10	9	0	0.0%		_ · · ·
11.		_	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
Woody Vine Stratum (Plot size:) 75 = Total Cover 1.	11.	0	0.0%		
Woody Vine Stratum (Plot size:	12	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody
Herb stratum - Consists of all herbaceous (non-woody)					1
1.	Woody Vine Stratum (Plot size:)				1
3	1	0			woody species, except woody vines, less than approximately
3	2	0	0.0%		
4		0	0.0%		Woody vines - Consists of all woody vines, regardless of
5			0.0%	-	height.
6		0	0.0%		
O					
	0				Vegetation
0 = Total Cover		0	= Total Cove	r 	

Soil Sampling Point: W-MRK-003 UPL

Depth -	Matrix		Red	ox Features			
inches)	Color (moist)	%	Color (moist)		Loc²	Texture	Remarks
0-10	2.5Y 4/3	100				Silty Clay Loam	
e: C=Conc	entration. D=Depletion	n. RM=Redu	ced Matrix. CS=Covere	ed or Coated Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=	Matrix
	ndicators:						
Histosol (A			Dark Surface (S	i7)			ematic Hydric Soils ³ :
Histic Epip	•			, Surface (S8) (MLRA	147,148)	2 cm Muck (A10)	(MLRA 147)
Black Histi				ce (S9) (MLRA 147, 1		Coast Prairie Red	ox (A16)
	Sulfide (A4)		Loamy Gleyed N		,	(MLRA 147,148)	l : C : (E40)
Stratified L	ayers (A5)		Depleted Matrix			Piedmont Floodp (MLRA 136, 147)	iain Soiis (F19)
2 cm Muck	(A10) (LRR N)		Redox Dark Sur	face (F6)		Very Shallow Dar	k Surface (TF12)
Depleted E	Below Dark Surface (A:	11)	Depleted Dark S	Surface (F7)		Other (Explain in	
Thick Dark	Surface (A12)		Redox Depressi	ons (F8)		outer (Explain in	remarks)
Sandy Muc MLRA 147,	ck Mineral (S1) (LRR N . 148)	l ,	Iron-Manganese MLRA 136)	e Masses (F12) (LRR	N,		
	yed Matrix (S4)		Umbric Surface	(F13) (MLRA 136, 12	22)	2	
Sandy Red			☐ Piedmont Flood	plain Soils (F19) (ML	RA 148)	³ Indicators of	hydrophytic vegetation and drology must be present,
Stripped M	latrix (S6)		Red Parent Mat	erial (F21) (MLRA 12	7, 147)		sturbed or problematic.
	(if abanual).						
Type:	yer (if observed):						
Depth (inch	ec).					Hydric Soil Present?	Yes O No 💿
marks:							
Haiks.			atad by astila				
el refusal	at 10 inches. Soils	are compa	cted by cattle.				
el refusal	at 10 inches. Soils	are compa	cted by Cattle.				
el refusal	at 10 inches. Soils	are compa	cted by Cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by Cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by Cattle.				
vel refusal	at 10 inches. Soils	s are compa	cted by cattle.				
el refusal	at 10 inches. Soils	s are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	s are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	s are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	s are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	s are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by Cattle.				
vel refusal	at 10 inches. Soils	are compa	cted by Cattle.				

Wetland 67ab

Metric 1. Wetland Area (size). Select one size class and assign score. -50 acres (-20 2 2) (2) (2) (2) (2) (2) (2) (2) (2) (2	Site: AEP Carrollton-	-Gable Rater(s): M.R.	Kline, R.C.Massa	Date:	2/19/2019
Select one size class and assign score. Select one size class and assign score. 0.40 0		• , ,		-	
Sol acres (P.20 Zha) (6 pts) O.40 acres	2 2	Metric 1. Wetland Area (size).	W-MRK-021919-003	PEM/PUB	
### Page 22. Calculate average buffer width. Select only one and assign score. Do not double check. ### WIDE. Buffers average from (1c4ft) or more arround wetland permitter (7) ### MCRIVML Eufliers average from (1c4ft) or more arround wetland permitter (4) ### MCRIVML Eufliers average from (1c4ft) or more arround wetland permitter (4) ### MCRIVML Eufliers average from (1c4ft) or MCRIVML Eufliers ave	max 6 pts subtotal	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	0.40 acres		
WIDE. Buffers average 50m (164ft) or more around wetland perimeter (1) MREDIUM. Buffers average 25m to <25m (28 to <164b) around wetland perimeter (1) VERY NARROW. Buffers average 10m to <25m (28 to <164b) around wetland perimeter (1) Zo Intensity of surrounding land use. Select one or double check and average. VERY LOW. 40 field (>10 years), shrubland, young second growth forest, (5) LOW. 00f field (>10 years), shrubland, young second growth forest, (5) MODERATELY HIGH. Residential, frender pasture, park, conservation tillage, new falow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction, (1) 7.0 10.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High pH groundwater (5) Seasonal/Hermitian surface water (3) Seasonal/Hermitian surface water (3) Seasonal/Hermitian surface water (3) Seasonal/Hermitian surface water (3) Seasonal/Hermitian water depth. Select one. >0.70 (27 fiel) (3) -0.4 to 0.7m (15.7 to 27 fiel) (2) X -0.4m (+15.7h) (1) 3a. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Recovered (7) Recovered (7) Recovered (8) Recovered (9) Recovered	1 3	Metric 2. Upland buffers and s	surrounding land use.		
MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)	max 14 pts. subtotal	WIDE. Buffers average 50m (164ft) or more are MEDIUM. Buffers average 25m to <50m (82 to NARROW. Buffers average 10m to <25m (32ft x VERY NARROW. Buffers average <10m (<32ft 2b. Intensity of surrounding land use. Select VERY LOW. 2nd growth or older forest, prairie,	ound wetland perimeter (7) <164ft) around wetland perimeter (4) to <82ft) around wetland perimeter (1)) around wetland perimeter (0) t one or double check and average. savannah, wildlife area, etc. (7)	k.	
max 30 pts. Subtool High pH groundwater (5)		MODERATELY HIGH. Residential, fenced past	ure, park, conservation tillage, new fallow field. (3	3)	
High pH groundwater (5) x Other groundwater (3) x Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (ake or stream) (5) 3c. Maximum water depth. Select one. 3d. Ouration inundation/saturation. Score one or dbl check. Semilion to 10,77 (15,70 (27,61)) (2) x 0-4 m (-15,7m) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or one apparent (12) Recovered (7) Recovered (7) Recovering (3) x Recent or no recovery (1) Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovering (2) x Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Vary good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. Check all disturbances observed An Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovering (2) x Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Vary good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovering (3) Recovering (3) Recovering (3) Poor to fair (2) Poor (1) Ace Habitat alteration. Score one or double check and average. Check all disturbances observed None or none apparent (9) Recovering (3) Recovering (4) Recovering (5) Recovering (6) Recovering (7) Recovering (7	7.0 10.0	Metric 3. Hydrology.			
None or none apparent (4) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovered (6) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (4) Recovering (4) Recovering (4) Recovering (5) Recovering (6) Recovering (7) Recov		High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regin None or none apparent (12) Recovered (7) Recovering (3) x Recent or no recovery (1)	100 year floodplain (1) Between stream/lake and other Part of wetland/upland (e.g. fore Part of riparian or upland corrido 3d. Duration inundation/satur. Semi- to permanently inundated. Regularly inundated/saturated (3 Seasonally inundated (2) x Seasonally saturated in upper 3(ne. Score one or double check and average. Check all disturbances obsen ditich tile dike weir stormwater input x (human use (1) set), complex (1) or (1) ation. Score one or dbl /saturated (4) 3) 0cm (12in) (1) ved point source (nonstormw. filling/grading road bed/RR track dredging	
x toxic pollutants x nutrient enrichment		None or none apparent (4) Recovered (3) Recovering (2) x Recent or no recovery (1) 4b. Habitat development. Select only one an Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double c None or none apparent (9) Recovering (3) x Recent or no recovery (1)	heck and average. Check all disturbances observed: x mowing x grazing clearcutting selective cutting woody debris removal x distances observed x mowing x grazing clearcutting woody debris removal x distances observed	shrub/sapling removal herbaceous/aquatic bed sedimentation dredging	removal

wetland 67a | test_Field 3/8/2019

Wetland 67ab

Site: AEP Carrollton-Gable Rater	s): M.R.Kline, R.C	.Massa	Date:	2/19/2019
•	•	Field Id:		
13		W-MRK-021919-003 PEN	I/PUB	
subtotal this page				
0 13 Metric 5. Special Wet	lands.			
max 10 pts. subtotal Check all that apply and	score as indicated.			
Bog (10)				
Fen (10) Old growth forest (10)				
Mature forested wetland (5)				
Lake Erie coastal/tributary wetland	l-unrestricted hydrology (10)			
Lake Erie coastal/tributary wetland				
Lake Plain Sand Prairies (Oak Op Relict Wet Praires (10)	enings) (10)			
Known occurrence state/federal th	reatened or endangered spe	cies (10)		
Significant migratory songbird/wat	er fowl habitat or usage (10)			
Category 1 Wetland. See Question	÷ , ,			
2 15 Metric 6. Plant comm	unities, interspers	ion, microtopography.		
max 20pts. subtotal 6a. Wetland Vegetation C		Vegetation Community Cove		
Score all present using 0 to 3 sca	e. <u>0</u>	Absent or comprises <0.1ha (0.2471 a		
Aquatic bed 1 Emergent	1	Present and either comprises small par vegetation and is of moderate quality, or		
Shrub		significant part but is of low quality	л сотпривев а	
Forest	2	Present and either comprises significar		
Mudflats		vegetation and is of moderate quality o	r comprises a small	
1 Open water Other	- 3	part and is of high quality Present and comprises significant part,	or more of wetland's 3	
6b. horizontal (plan view) Inters		vegetation and is of high quality	, or more, or wellands 5	
Select only one.	-			
High (5)		Narrative Description of Vegetation		
Moderately high(4) Moderate (3)		Low spp diversity and/or predominance disturbance tolerant native species	e or nonnative or low	
Moderately low (2)		Native spp are dominant component of	the vegetation, mod	
x Low (1)		although nonnative and/or disturbance		
None (0)	Defer	can also be present, and species diver		
6c. Coverage of invasive plants Table 1 ORAM long form for list. <i>A</i>		moderately high, but generallyw/o pres- threatened or endangered spp to	ence of fale	
or deduct points for coverage		A predominance of native species, with	n nonnative spp high	
Extensive >75% cover (-5)		and/or disturbance tolerant native spp		
Moderate 25-75% cover (-3) x Sparse 5-25% cover (-1)		absent, and high spp diversity and ofte the presence of rare, threatened, or en		
Nearly absent <5% cover (0)		the presence of fare, threatened, or en	dangered spp	
Absent (1)		Mudflat and Open Water Class Qual	ity	
6d. Microtopography.		Absent <0.1ha (0.247 acres)		
Score all present using 0 to 3 sca Vegetated hummucks/tussucks		Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres	2)	
Coarse woody debris >15cm (6in)		High 4ha (9.88 acres) or more	-)	
Standing dead >25cm (10in) dbh				
Amphibian breeding pools	^	Microtopography Cover Scale		
	<u>0</u>	Absent Present very small amounts or if more	common	
		of marginal quality		
	2	Present in moderate amounts, but not		
Category 1	_	quality or in small amounts of highest q		
15 GRAND TOTAL(max 100 pts)	3	Present in moderate or greater amount	ts	
		and of highest quality		

wetland 67a | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 67a

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 67a

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 67a

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 67a

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 67a

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 67b

Date:

February 19, 2019

Description:

PUB

Category 1

Facing North





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 67b

Date:

February 19, 2019

Description:

PUB

Category 1

Facing East



Wetland 67b

Date:

February 19, 2019

Description:

PUB

Category 1

Facing South





WETLANDS

Client Name:

Site Location:

Project No.

60582598

AEP

Gable-Carrollton 138 kV Transmission Line Project

Wetland 67b

Date:

February 19, 2019

Description:

PUB

Category 1

Facing West



Wetland 67b

Date:

February 19, 2019

Description:

PUB

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: H	arrison		S	Sampling Date:	: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	sion Company	,	State: OH	Samplin	g Po	int: W	-MRK-02191	9-004 PUB
Investigator(s): M.R.Kline, R.C.Massa			Section, Townsh	nip, Range: S		1 T 11	N	R 4'
Landform (hillslope, terrace, etc.):	Bench		Local relief (conc	ave, convex, n	one)): concave	Slope:	0.5% / 0.3
Subregion (LRR or MLRA): LRR N		Lat.:	40.390689	Lon	a.:	-80.873592		Datum: NAD83
Soil Map Unit Name: Bhk4F-Betheso	la channery				-	sification: N/A		1.0.12.00
•	,		•					
Are climatic/hydrologic conditions on					-	lain in Remark		. ○ No ●
Are Vegetation , Soil .	, or Hydrolo	ogy 🗹 significantl	y disturbed?	Are "Normal	Circ	umstances" pr	esent? Yes	O NO O
Are Vegetation , Soil	, or Hydrolo	ogy 🗌 naturally p	roblematic?	(If needed, e	expla	ain any answer	s in Remarks.)	ı
Summary of Findings - At	ach site	map showing s	ampling poi	nt location	1S, '	transects,	important	features, etc
Hydrophytic Vegetation Present?	Yes	No O						
Hydric Soil Present?	Yes	No O	Is the Sa	mpled Area	V	● No ○		
Wetland Hydrology Present?	Yes	No O		Wetland?	res	● NO ∪		
This PUB wetland is located in a smawetland boundary follows edge of d		on on a hillside bench.	Depression is co	llecting surfac	e rui	noff and is hea	vily disturbed l	oy cattle. The
Hydrology								
Wetland Hydrology Indicators:					Sec	ondary Indicators	s (minimum of t	wo required)
Primary Indicators (minimum of on	e required;	check all that apply)				Surface Soil Crac	cks (B6)	
Surface Water (A1)		True Aquatic Plants	s (B14)		~	Sparsely Vegetat	ed Concave Sur	face (B8)
High Water Table (A2)		Hydrogen Sulfide C	odor (C1)			Drainage Patterr	ns (B10)	
Saturation (A3)		Oxidized Rhizosphe	eres along Living Ro	ots (C3)		Moss Trim Lines	(B16)	
Water Marks (B1)		Presence of Reduce	ed Iron (C4)			Dry Season Wate	er Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduct	tion in Tilled Soils (C	C6)		Crayfish Burrows	s (C8)	
Drift deposits (B3)		☐ Thin Muck Surface	(C7)			Saturation Visible	e on Aerial Imag	ery (C9)
Algal Mat or Crust (B4)		Other (Explain in R	emarks)			Stunted or Stress	sed Plants (D1)	
Iron Deposits (B5)					~	Geomorphic Posi	ition (D2)	
Inundation Visible on Aerial Imager	/ (B7)					Shallow Aquitard	l (D3)	
✓ Water-Stained Leaves (B9)						Microtopographi	c Relief (D4)	
Aquatic Fauna (B13)					✓	FAC-neutral Test	(D5)	
Field Observations:								
Surface Water Present? Yes •	No O	Depth (inches):	6					
Water Table Present? Yes Yes	No O	Depth (inches):	0	W-H			Yes • No	, (
Saturation Present? (includes capillary fringe) Yes Yes	No \bigcirc	Depth (inches):	0	Wetland Hydr	olog	y Present?	res 🙂 INC	,
Describe Recorded Data (stream gar	uge, monito	ring well, aerial photos	s, previous inspec	tions), if avail	able	:		
, , ,								
Remarks:								
Source of hydrology is surface runor	f. Area is t	rampled by cattle.						

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

		nant	Sampling Point: W-MRK-021919-004 PUB
Tree Stratum (Plot size: _30' radius)	Absolute Rel.S % Cover Cove	trat. Indicator	
A. Callendara	20 10	00.0% OBL	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
1 . <i>Saiix nigra</i> 2		0.0%	That are obe, then, of the.
3		0.0%	Total Number of Dominant
1		0.0%	Species Across All Strata: (B)
		0.0%	Percent of dominant Species
5		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
5 7		0.0%	Prevalence Index worksheet:
		0.0%	Total % Cover of: Multiply by:
3	30 = Total		OBL species 30 x 1 = 30
Sapling-Sapling/Shrub Stratum (Plot size:)		
l	0	0.0%	
2		0.0%	FAC species $0 \times 3 = 0$
3		0.0%	FACU species $0 \times 4 = 0$
ł		0.0%	UPL species $0 \times 5 = 0$
5		0.0%	Column Totals: 30 (A) 30 (B)
).		0.0%	Prevalence Index = B/A =1.000_
7.		0.0%	-
3		0.0%	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
)		0.0%	
)		0.0%	✓ Dominance Test is > 50%
	0 = Total	Cover	V Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)			Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
		0.0%	Problematic Hydrophytic Vegetation (Explain)
2.	0 📙 0	0.0%	
3		0.0%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
ł		0.0%	
5		0.0%	Definition of Vegetation Strata:
5		0.0%	Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3
7		0.0%	in. (7.6 cm) or more in diameter at breast height (DBH),
lerb Stratum (Plot size:)	0 = Total	Cover	regardless of height.
l		0.0%	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
).		0.0%	Herb stratum – Consists of all herbaceous (non-woody)
3		0.0%	plants, regardless of size, and all other plants less than 3.28
1	0 0	0.0%	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0 🗆 0	0.0%	ft in height.
5	0 🗆 0	0.0%	Five Vegetation Strate
· · · · · · · · · · · · · · · · · · ·	0 0 0	0.0%	Five Vegetation Strata:
3		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%	diameter at breast height (DBH).
)		0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
·		0.0%	less than 3 in. (7.6 cm) DBH.
2		0.0%	Shrub stratum – Consists of woody plants, excluding woody
	0 = Total		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Noody Vine Stratum (Plot size:)			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
		0.0%	woody species, except woody vines, less than approximately
2		0.0%	3 ft (1 m) in height.
3		0.0%	Woody vines – Consists of all woody vines, regardless of height.
ł	0	0.0%	norgina
5	0	0.0%	Hydrophytic
5	0	0.0%	Vegetation
	0 = Tota	l Cover	Present? Yes No

Soil Sampling Point: W-MRK-021919-004 PUB

Profile Description: (Description)	ribe to the depth r	eeded to document	the indic	ator or co	nfirm the	absence of indicators.)	
Depth M	latrix	Red	lox Featu	-			
(inches) Color (me	oist) %	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks
0-16 10YR 4	/2 95	10YR 5/6		C	M	Silty Clay Loam	
		-				,	
			-				
¹ Type: C=Concentration. D=I	Denletion RM=Redu	ced Matrix CS=Cover	ed or Coate	ed Sand Gr	ains ² l oca	ation: PI =Pore Lining M=N	Matrix
Hydric Soil Indicators:	Depletion: Kin-Redu	ced Matrix, C3=Cover	eu or coate	d Sand Gr	31115 -LOC6		
Histosol (A1)		Davis Confess (77)			Indicators for Proble	ematic Hydric Soils ³ :
` ′		Dark Surface (CO) (MIDA	147 140)	2 cm Muck (A10)	(MLRA 147)
☐ Histic Epipedon (A2) ☐ Black Histic (A3)		Thin Dark Surfa				Coast Prairie Redo	ox (A16)
Hydrogen Sulfide (A4)					.¬U)	(MLRA 147,148)	
Stratified Layers (A5)		Loamy Gleyed✓ Depleted Matrix				Piedmont Floodpl	ain Soils (F19)
2 cm Muck (A10) (LRR N	\	Redox Dark Su				(MLRA 136, 147)	
		Depleted Dark	` ,	7)		Very Shallow Dark	
Depleted Below Dark Sur		Redox Depress		')		Other (Explain in	Remarks)
Thick Dark Surface (A12)	•	☐ Iron-Manganes	. ,	F12\ /I DD I	M		
Sandy Muck Mineral (S1) MLRA 147, 148)) (LRR N,	MLRA 136)					
Sandy Gleyed Matrix (S4)	Umbric Surface				3 Indicators of	hydrophytic vegetation and
Sandy Redox (S5)		Piedmont Floor	lplain Soils	(F19) (MLI	RA 148)	wetland hyd	rology must be present,
Stripped Matrix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	7, 147)	unless dis	sturbed or problematic.
Restrictive Layer (if obser	ved):						
Туре:							·
Depth (inches):						Hydric Soil Present?	Yes No
Remarks:							
Soils are compacted by cat	tle movement.						
,							

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Harrison	Sa	ampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	ion Company	,	State: OH Sampl	ng Point: V	V-MRK-004-005 UPL
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range:	5 1 T 111	R 4W
Landform (hillslope, terrace, etc.):	Bench		Local relief (concave, convex,	none): convex	Slope: 1.0% / 0.6 °
Subregion (LRR or MLRA): LRR N		Lat.:	40.390658 L o	ng.: -80.873468	Datum: NAD83
Soil Map Unit Name: Bhk4F-Bethesd	a channery			classification: N/A	
				o, explain in Remarks	`
Are climatic/hydrologic conditions on					·
	, or Hydrolo			l Circumstances" pre	sent? 165 C NO C
Are Vegetation, Soil	, or Hydrolo	ogy	roblematic? (If needed	explain any answers	in Remarks.)
Summary of Findings - Att			sampling point location	ns, transects, i	mportant features, etc.
Hydrophytic Vegetation Present?		No •			
Hydric Soil Present?		No •	Is the Sampled Area	Yes O No •	
Wetland Hydrology Present?	Yes 🔾	No •	within a Wetland?		
Upland data point for W-MRK-004 ar	id W-MRK-(005. Surrounding land	d use is pasture.		
Hydrology					
Wetland Hydrology Indicators:				Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one	required;	check all that apply)		Surface Soil Crack	xs (B6)
Surface Water (A1)		True Aquatic Plants	s (B14)		ed Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide C	` '	Drainage Patterns	
Saturation (A3)			eres along Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)		Presence of Reduce	` ,	Dry Season Wate	• •
Sediment Deposits (B2)			tion in Tilled Soils (C6)	Crayfish Burrows	
☐ Drift deposits (B3)☐ Algal Mat or Crust (B4)		☐ Thin Muck Surface	• *	_	on Aerial Imagery (C9)
Iron Deposits (B5)		☐ Other (Explain in R	Remarks)	Stunted or Stress	` ,
Inundation Visible on Aerial Imagery	, (B7)			Geomorphic Posit	
Water-Stained Leaves (B9)	(07)			Shallow Aquitard	
Aquatic Fauna (B13)				Microtopographic	, ,
				FAC-neutral Test	(D3)
Field Observations: Surface Water Present? Yes	No 💿	Depth (inches):			
Water Table Present? Yes	No 💿				
		Depth (inches):	Wetland Hy	Irology Present?	Yes O No 💿
(includes capillary fringe) Yes	No 💿	Depth (inches):			
Describe Recorded Data (stream gau	ige, monito	ring well, aerial photo	s, previous inspections), if ava	ilable:	
Remarks:					
No source of hydrology.					
Journal of Trydrology.					
i					

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

		Dominan		Sampling Point: W-MRK-004-005 UPL
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat Cover	Indicator Status	Dominance Test worksheet:
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2		0.0%		
3.		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4		0.0%		Species Across All Strata: (B)
		0.0%		Percent of dominant Species
5		0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
6 7		0.0%		Prevalence Index worksheet:
		0.0%		Total % Cover of: Multiply by:
8		= Total Cov		
Sapling-Sapling/Shrub Stratum (Plot size:)	- Total Cov	CI	· — —
1	0	0.0%		FACW species x 2 =0
2		0.0%		FAC species $0 \times 3 = 0$
3		0.0%		FACU species 135 x 4 = 540
4		0.0%		UPL species $0 \times 5 = 0$
5		0.0%		Column Totals: <u>135</u> (A) <u>540</u> (B)
6		0.0%		Prevalence Index = B/A = 4.000
7	0	0.0%		,
8		0.0%		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
9		0.0%		
0		0.0%		Dominance Test is > 50%
	_	= Total Cov	er	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 (Explain)
2				
3		0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0.0%		Definition of Vegetation Strata:
5		0.0%		
6				Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3
7	0	0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5' radius</u>)	=	= Total Cov	er	regardless of height.
1. Dactylis glomerata	75	✓ 55.6%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. <i>Trifolium repens</i>	30	22.2%	FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Plantago major	20	14.8%	FACU	plants, regardless of size, and all other plants less than 3.28
4. Taraxacum officinale	10	7.4%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%		ft in height.
6		0.0%		Five Vegetation Strata:
7	0	0.0%		
8		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%		diameter at breast height (DBH).
0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1		0.0%		less than 3 in. (7.6 cm) DBH.
2.		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	135 =	= Total Cov		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)				Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1	0	0.0%		woody species, except woody vines, less than approximately
2		0.0%		3 ft (1 m) in height.
3		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0	0.0%		-
5		0.0%		Hydrophytic
6	0	0.0%		Vegetation Present? Yes No •
	0	= Total Co		

Soil Sampling Point: W-MRK-004-005 UPL

Profile Descr	iption: (Describe to	the depth n	eeded to document	t the indic	ator or co	nfirm the	absence of indicators.)		
Depth	Matrix		Re	dox Featu					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Tvpe 1	Loc ²	Texture	Rema	arks
0-10	10YR 4/2	100					Silt Loam		
				-					
							,		
¹ Type: C=Con	centration. D=Depletio	n. RM=Reduc	ed Matrix, CS=Cover	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N	Matrix	
Hydric Soil I	ndicators:						Indicators for Proble	ematic Hvdric	Soils ³ :
Histosol (A1)		Dark Surface (•			2 cm Muck (A10)		
Histic Epip	pedon (A2)		Polyvalue Belov	w Surface (S8) (MLRA	147,148)			
☐ Black Hist	tic (A3)		Thin Dark Surfa	ace (S9) (M	ILRA 147, :	148)	Coast Prairie Redo (MLRA 147,148)	ox (A16)	
☐ Hydrogen	Sulfide (A4)		Loamy Gleyed	Matrix (F2)				-i- C-il- (F10)	
Stratified	Layers (A5)		Depleted Matri	x (F3)			Piedmont Floodpl (MLRA 136, 147)	alii 50li5 (F19)	
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dark	k Surface (TF12	2)
Depleted	Below Dark Surface (A	11)	Depleted Dark	Surface (F7	7)		Other (Explain in		-7
	k Surface (A12)	,	Redox Depress	ions (F8)				Kemarks)	
	ick Mineral (S1) (LRR N	J	☐ Iron-Manganes	e Masses (F12) (LRR	N,			
MLRA 147	7, 148)	•,	MLRA 136)	-					
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (ML	RA 136, 12	22)	3		
☐ Sandy Re	dox (S5)		☐ Piedmont Floo	dplain Soils	(F19) (ML	RA 148)	³ Indicators of	hydrophytic veo Irology must be	getation and
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	7, 147)		sturbed or prob	
	ayer (if observed):								
Type:							Hydric Soil Present?	Yes 🔾	No •
Depth (inc	hes):						,		110
Remarks:									
Shovel refusa	l at 10 inches. Soils	are compa	cted by cattle.						

Site: AE	P Carrollto	n-Gable	Rater(s): M.R.K	íline, R.C.Massa	Date:	2/19/2019
				Field Id:	·	
	0	0 Metric 1. We	tland Area (size).	W-MRK-021919-	004 PUB	
max 6 pts	subtotal	Select one size cla	ss and assign score.			
		>50 acres (>20.2ha)		0.01	acres	
		25 to <50 acres (10.	1 to <20.2ha) (5 pts) c <10.1ha) (4 pts)			
		3 to <10 acres (1.2 t				
		0.3 to <3 acres (0.1)				
		x <0.1 acres (0.04ha)	04 to <0.12ha) (1 pt) (0 pts)			
	1			urrounding land use.		
				one and assign score. Do not double	chock	
max 14 pts.	subtotal		age 50m (164ft) or more arou		CHECK.	
		MEDIUM. Buffers as	verage 25m to <50m (82 to <	164ft) around wetland perimeter (4)		
				<82ft) around wetland perimeter (1)		
			uffers average <10m (<32ft) a			
				one or double check and average. avannah, wildlife area, etc. (7)		
			years), shrubland, young sec	* *		
				e, park, conservation tillage, new fallow fi	eld. (3)	
		x HIGH. Urban, indust	trial, open pasture, row croppi	ng, mining, construction. (1)		
	7.0 8	.0 Metric 3. Hyd	drology.			
max 30 pts.	subtotal	3a. Sources of Wat	er. Score all that apply.	3b. Connectivity. Score	all that apply.	
		High pH groundwate		100 year floodplain (1)		
		x Other groundwater (x Precipitation (1)	3)	Between stream/lake and Part of wetland/upland (e.g.		
		Seasonal/Intermitter	nt surface water (3)	Part of riparian or upland of		
			ater (lake or stream) (5)		saturation. Score one or dbl	check.
		3c. Maximum wate >0.7 (27.6in) (3)	r depth. Select one.	Semi- to permanently inun Regularly inundated/satura		
		0.4 to 0.7m (15.7 to	27.6in) (2)	Seasonally inundated (2)	aled (3)	
		x <0.4m (<15.7in) (1)	, , ,	x Seasonally saturated in up		
		3e. Modifications to None or none appar		e. Score one or double check and average Check all disturbances of		
		Recovered (7)	6111 (12)	ditch	point source (nonstormw	ater)
		Recovering (3)		tile	x filling/grading	,
		x Recent or no recove	ery (1)	dike weir	road bed/RR track dredging	
				stormwater input	x Other: pasture	
	3 1	1 Metric 4. Hal	oitat Alteration and			
max 20 pts.	subtotal		rbance. Score one or doub	•		
max 20 pto.	odbiotal	None or none appar		o oncon and avorage.		
		Recovered (3)				
		Recovering (2) x Recent or no recove	ery (1)			
			oment. Select only one and	assign score.		
		Excellent (7)				
		Very good (6) Good (5)				
		Moderately good (4)				
		Fair (3)				
		Poor to fair (2) x Poor (1)				
			on. Score one or double ch	eck and average.		
		None or none appar		Check all disturbances ob		
		Recovered (6) Recovering (3)		x mowing x grazing	shrub/sapling removal herbaceous/aquatic bed	removal
		x Recent or no recove	ery (1)	clearcutting	x sedimentation	ionoval
			/	selective cutting	dredging	
				woody debris removal x toxic pollutants	x farming x nutrient enrichment	
	1	1		A toxio poliutarità	A HAGINGTON CHINOTING	
		his page ORAM v. 5.0 Field F	form Quantitative Rating			
	Juliotell I					

wetland 68 | test_Field 3/8/2019

Site: AEP	Carrollton-	-Gable Rater(s): M.R.Klin	e, R.C.Massa	Date:	2/19/2019
			Field Id:		
	11]	W-MRK-021919-0	04 PUB	
	subtotal this	<u> </u>			
	0 11	Metric 5. Special Wetlands.			
max 10 pts.	subtotal	Check all that apply and score as indica Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrolog Lake Plain Sand Prairies (Oak Openings) (10)	ogy (10)		
		Relict Wet Praires (10) Known occurrence state/federal threatened or endang			
		Significant migratory songbird/water fowl habitat or us Category 1 Wetland. See Question 5 Qualitative Ratir			
	2 13			phy.	
max 20pts.	subtotal	6a. Wetland Vegetation Communities.	Vegetation Commun		
max zopio.	Subtotal	Score all present using 0 to 3 scale.	0 Absent or comprises <0.1ha		a
		Aquatic bed	Present and either comprise		
		Emergent	vegetation and is of moderat		
		1 Shrub Forest	significant part but is of low of 2 Present and either comprise)
		Mudflats		te quality or comprises a small	
		1 Open water	part and is of high quality	to quality or comprises a small	
		Other	3 Present and comprises signi	ificant part, or more, of wetland	l's 3
		6b. horizontal (plan view) Interspersion.	vegetation and is of high qua	ality	
		Select only one.			
		High (5)	Narrative Description of Vo		
		Moderately high(4)		dominance of nonnative or low	'
		Moderate (3) Moderately low (2)	disturbance tolerant native s	pecies mponent of the vegetation, mod	4
		Low (1)		isturbance tolerant native spp	1
		x None (0)	can also be present, and spe		
		6c. Coverage of invasive plants. Refer	moderately high, but general		
		Table 1 ORAM long form for list. Add	threatened or endangered sp		
		or deduct points for coverage	A predominance of native sp	pecies, with nonnative spp high	l
		Extensive >75% cover (-5)	and/or disturbance tolerant r	native spp absent or virtually	
		Moderate 25-75% cover (-3)	absent, and high spp diversi		
		Sparse 5-25% cover (-1)	the presence of rare, threate	ned, or endangered spp	
		x Nearly absent <5% cover (0)	MIff-4 I O W-4 O	Name Overlife	
		Absent (1) 6d. Microtopography.	Mudflat and Open Water C 0 Absent < 0.1ha (0.247 acres)		
		Score all present using 0 to 3 scale.	1 Low 0.1 to <1ha (0.247 acres)		
		Vegetated hummucks/tussucks	2 Moderate 1 to <4ha (2.47 to		
		Coarse woody debris >15cm (6in)	3 High 4ha (9.88 acres) or mo		
		Standing dead >25cm (10in) dbh	,		
		Amphibian breeding pools	Microtopography Cover So	cale	
			0 Absent		
			1 Present very small amounts	or if more common	
			of marginal quality	to but not of highest	
Category 1			 Present in moderate amount quality or in small amounts or 		
13 GRAND TOTAL(max 100 pts)			Present in moderate or great		
			and of highest quality		

wetland 68 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 68

Date:

February 19, 2019

Description:

PUB

Category 1

Facing North



Wetland 68

Date:

February 19, 2019

Description:

PUB

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 68

Date:

February 19, 2019

Description:

PUB

Category 1

Facing South



Wetland 68

Date:

February 19, 2019

Description:

PUB

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 68

Date:

February 19, 2019

Description:

PUB

Category 1

Soil Pit



Wetland 69

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV F	Project	City/County: Harrison	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	ion Company	State: OH Samplin	Point: W-MRK-021919-005 PUB
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	1 T 11N R 4W
Landform (hillslope, terrace, etc.):	Bench	Local relief (concave, convex, n	one): concave Slope: 0.5% / 0.3 °
Subregion (LRR or MLRA): LRR N	Lat.:	40.390569 Lon	3.: -80.873494
Soil Map Unit Name: Bhk4F-Bethesd			lassification: PUBGx
-		<u> </u>	
Are climatic/hydrologic conditions on			explain in Remarks.) Circumstances" present? Yes O No
Are Vegetation , Soil ,	, or Hydrology 🗹 significantl	ly disturbed? Are "Normal	Circumstances" present? Yes Vo No
Are Vegetation, Soil	, or Hydrology	roblematic? (If needed, e	xplain any answers in Remarks.)
Summary of Findings - Att	ach site map showing s	sampling point location	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?	res © NO O
boundary follows edge of depression		pona di ana co a large medane	system outside of the study area. The wetland
Hydrology			
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gau	True Aquatic Plants Hydrogen Sulfide C Oxidized Rhizosphe Presence of Reduce Recent Iron Reduce Thin Muck Surface Other (Explain in R (B7) No Depth (inches): No Depth (inches):	Odor (C1) eres along Living Roots (C3) ed Iron (C4) tion in Tilled Soils (C6) (C7) Remarks) 120 0 Wetland Hydr	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:			
Source of hydrology is surface runofi	: Area is trampled by cattle.		

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

		Dominant Species?	Sampling Point: W-MRK-021919-005 PUB
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	-Species? Rel.Strat. Indicator Cover Status	
1 Salix nigra	30	✓ 100.0% OBL	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
2		0.0%	
3		0.0%	Total Number of Dominant Species Across All Strata: 1 (B)
4		0.0%	Species Across Air Strata.
5		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
7	_	0.0%	Prevalence Index worksheet:
8		0.0%	Total % Cover of: Multiply by:
	30 =	= Total Cover	OBL species 30 x 1 = 30
Sapling-Sapling/Shrub Stratum (Plot size:)		FACW species $0 \times 2 = 0$
1			FAC species $0 \times 3 = 0$
2	0		
3			The species X : =
4	_	0.0%	UPL species $0 \times 5 = 0$
5	0		Column Totals: <u>30</u> (A) <u>30</u> (B)
6	_		Prevalence Index = $B/A = 1.000$
7	0		Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9		0.0%	Dominance Test is > 50%
0		0.0%	✓ Prevalence Index is ≤3.0 ¹
	_	= Total Cover	
Shrub Stratum (Plot size:)	0	0.0%	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		0.0%	Problematic Hydrophytic Vegetation ¹ (Explain)
2		0.0%	
3			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0.0%	Definition of Vegetation Strata:
5		0.0%	Four Vegetation Strata:
6		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
7			in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	=	= Total Cover	regardless of height.
1	0	0.0%	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2			Herb stratum – Consists of all herbaceous (non-woody)
3	0	0.0%	plants, regardless of size, and all other plants less than 3.28
4.	0	0.0%	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%	ft in height.
6	0	0.0%	Five Vegetation Strata:
7		0.0%	
8		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%	diameter at breast height (DBH).
o.	_	0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
0 1.			less than 3 in. (7.6 cm) DBH.
2.	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody
		= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)			Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1		0.0%	woody species, except woody vines, less than approximately
2			3 ft (1 m) in height.
3			Woody vines – Consists of all woody vines, regardless of height.
4			invigin.
5			Hydrophytic
6	0	0.0%	Vegetation
	0 :	= Total Cover	Present? Yes No O

Soil Sampling Point: W-MRK-021919-005 PUB

Profile Desci		the depth r				nfirm the	absence of indicators.)		
Depth	Matrix			Redox Features ist) % Type 1 Loc2		Toutere	Dame - I		
(inches) 0-16	Color (moist) 10YR 4/2	%	Color (moist) 10YR 5/6	. <u> </u>	Type C	Loc² M	Texture Silty Clay Loam	Remarks	
			3/0				Sity day Louin		
1 Type: C=Con	centration D=Denletic	on RM=Redu	ced Matrix CS=Cover	ed or Coat	ed Sand Gr	ains 21 oc	ation: PL=Pore Lining. M=	Matriy	
Hydric Soil 1		Jii. Ki-i-keda	ccu riadix, cs=cover	cu or coat	.cu Sana Gi	all is Loca			
Histosol (Dark Surface (S7)			Indicators for Proble	-	ł
·	pedon (A2)		Polyvalue Belov	,	(S8) (MLRA	147,148)	2 cm Muck (A10)	(MLRA 147)	
Black His			Thin Dark Surfa				Coast Prairie Red	ox (A16)	
	Sulfide (A4)		Loamy Gleyed			,	(MLRA 147,148)		
	Layers (A5)		✓ Depleted Matri		,		Piedmont Floodp (MLRA 136, 147)	ain Soils (F19)	
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			☐ Very Shallow Dar	k Surface (TF12)	
☐ Depleted	Below Dark Surface (A	A11)	Depleted Dark	Surface (F	7)		Other (Explain in		
☐ Thick Dar	k Surface (A12)		Redox Depress					,	
Sandy Mu MLRA 147	uck Mineral (S1) (LRR I 7, 148)	N,	Iron-Manganes MLRA 136)	e Masses	(F12) (LRR	N,			
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3		
☐ Sandy Re	dox (S5)		☐ Piedmont Floor	dplain Soil	s (F19) (ML	RA 148)	Indicators of wetland hy	hydrophytic vegetation Irology must be presen	and t.
Stripped	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)		sturbed or problematic.	
Restrictive L	ayer (if observed):								
Туре:									
Depth (inc	:hes):						Hydric Soil Present?	Yes No	
Remarks:									
Soils are com	pacted by cattle mo	vement.							

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Harrison	Sa	ampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	ion Company	,	State: OH Sampl	ng Point: V	V-MRK-004-005 UPL
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range:	5 1 T 111	R 4W
Landform (hillslope, terrace, etc.):	Bench		Local relief (concave, convex,	none): convex	Slope: 1.0% / 0.6 °
Subregion (LRR or MLRA): LRR N		Lat.:	40.390658 L o	ng.: -80.873468	Datum: NAD83
Soil Map Unit Name: Bhk4F-Bethesd	a channery			classification: N/A	
				o, explain in Remarks	`
Are climatic/hydrologic conditions on					·
	, or Hydrolo			l Circumstances" pre	sent? 165 C NO C
Are Vegetation, Soil	, or Hydrolo	ogy 🗌 naturally p	roblematic? (If needed	explain any answers	in Remarks.)
Summary of Findings - Att			sampling point location	ns, transects, i	mportant features, etc.
Hydrophytic Vegetation Present?		No •			
Hydric Soil Present?		No •	Is the Sampled Area	Yes O No •	
Wetland Hydrology Present?	Yes 🔾	No •	within a Wetland?		
Upland data point for W-MRK-004 ar	id W-MRK-(005. Surrounding land	d use is pasture.		
Hydrology					
Wetland Hydrology Indicators:				Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one	required;	check all that apply)		Surface Soil Crack	xs (B6)
Surface Water (A1)		True Aquatic Plants	s (B14)		ed Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide C	` '	Drainage Patterns	
Saturation (A3)			eres along Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)		Presence of Reduce	` ,	Dry Season Wate	• •
Sediment Deposits (B2)			tion in Tilled Soils (C6)	Crayfish Burrows	
☐ Drift deposits (B3)☐ Algal Mat or Crust (B4)		☐ Thin Muck Surface	• *	_	on Aerial Imagery (C9)
Iron Deposits (B5)		☐ Other (Explain in R	Remarks)	Stunted or Stress	` ,
Inundation Visible on Aerial Imagery	, (B7)			Geomorphic Posit	
Water-Stained Leaves (B9)	(07)			Shallow Aquitard	
Aquatic Fauna (B13)				Microtopographic	, ,
				FAC-neutral Test	(D3)
Field Observations: Surface Water Present? Yes	No 💿	Depth (inches):			
Water Table Present? Yes	No 💿				
		Depth (inches):	Wetland Hy	Irology Present?	Yes O No 💿
(includes capillary fringe) Yes	No 💿	Depth (inches):			
Describe Recorded Data (stream gau	ige, monito	ring well, aerial photo	s, previous inspections), if ava	ilable:	
Remarks:					
No source of hydrology.					
Journal of Trydrology.					
i					

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

		Dominan		Sampling Point: W-MRK-004-005 UPL
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat Cover	Indicator Status	Dominance Test worksheet:
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2		0.0%		
3.		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4		0.0%		Species Across All Strata: (B)
		0.0%		Percent of dominant Species
5		0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
6 7		0.0%		Prevalence Index worksheet:
		0.0%		Total % Cover of: Multiply by:
8		= Total Cov		
Sapling-Sapling/Shrub Stratum (Plot size:)	- Total Cov	CI	
1	0	0.0%		FACW species x 2 =0
2		0.0%		FAC species $0 \times 3 = 0$
3		0.0%		FACU species 135 x 4 = 540
4		0.0%		UPL species $0 \times 5 = 0$
5		0.0%		Column Totals: <u>135</u> (A) <u>540</u> (B)
6		0.0%		Prevalence Index = B/A = 4.000
7	0	0.0%		,
8		0.0%		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
9		0.0%		
0		0.0%		Dominance Test is > 50%
	_	= Total Cov	er	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 (Explain)
2				
3		0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0.0%		Definition of Vegetation Strata:
5		0.0%		-
6				Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3
7	0	0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5' radius</u>)	=	= Total Cov	er	regardless of height.
1. Dactylis glomerata	75	✓ 55.6%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. <i>Trifolium repens</i>	30	22.2%	FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Plantago major	20	14.8%	FACU	plants, regardless of size, and all other plants less than 3.28
4. Taraxacum officinale	10	7.4%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%		ft in height.
6		0.0%		Five Vegetation Strata:
7	0	0.0%		
8		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%		diameter at breast height (DBH).
0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1		0.0%		less than 3 in. (7.6 cm) DBH.
2.		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	135 =	= Total Cov		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)				Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1	0	0.0%		woody species, except woody vines, less than approximately
2		0.0%		3 ft (1 m) in height.
3		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0	0.0%		-
5		0.0%		Hydrophytic
6	0	0.0%		Vegetation Present? Yes No •
	0	= Total Co		

Soil Sampling Point: W-MRK-004-005 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			dox Featu	ires				_
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Tvpe 1	Loc ²	Texture	Rema	nrks
0-10	10YR 4/2						Silt Loam		
							-		
			-	-			,		
-			-	-			-		
¹ Type: C=Con	centration. D=Depletic	on. RM=Reduc	ced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=1	Matrix	
Hydric Soil I	Indicators:						Indicators for Proble	ematic Hydric	Soils ³ :
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10)	-	
Histic Epi	pedon (A2)		Polyvalue Belo	w Surface	(S8) (MLRA	147,148)			
Black Hist	tic (A3)		☐ Thin Dark Surf	ace (S9) (N	MLRA 147, 1	L48)	Coast Prairie Redo (MLRA 147,148)	ox (A16)	
Hydrogen	Sulfide (A4)		Loamy Gleyed	Matrix (F2)		Piedmont Floodpl	ain Soils (F19)	
Stratified	Layers (A5)		Depleted Matri	x (F3)			(MLRA 136, 147)	u 00.10 (1 25)	
2 cm Muc	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dar	k Surface (TF12	2)
Depleted	Below Dark Surface (A	11)	Depleted Dark	-	7)		Other (Explain in Remarks)		
Thick Dar	k Surface (A12)		Redox Depress						
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR N 7, 148)	Ν,	Iron-Manganes MLRA 136)	e Masses ((F12) (LRR	N,			
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3		
☐ Sandy Re	dox (S5)		☐ Piedmont Floo	dplain Soils	s (F19) (ML	RA 148)	³ Indicators of wetland hyd	hydrophytic veo Irology must be	getation and e present.
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)		sturbed or prob	
Restrictive I	ayer (if observed):								
Type:	uyer (ii observeu).								
Depth (inc	hes):						Hydric Soil Present?	Yes 🔾	No 💿
Remarks:									
	l at 10 inches Coile	ro compa	atad by sattle						
Snovei reiusa	at 10 inches. Soils	s are compa	cted by cattle.						

Wetland 69

-Gable Rater(s): M.R.Kline,	, R.C.Massa	Date:	2/19/2019
	Field Id:	-	
Metric 1. Wetland Area (size).	W-MRK-021919-005	PUB	
Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.46acres	\$	
Metric 2. Upland buffers and surro	unding land use.		
WIDE. Buffers average 50m (164ft) or more around wet MEDIUM. Buffers average 25m to <50m (82 to <164ft) it NARROW. Buffers average 10m to <25m (32ft to <82ft) x VERY NARROW. Buffers average <10m (<32ft) around 2b. Intensity of surrounding land use. Select one or VERY LOW. 2nd growth or older forest, prairie, savanna	land perimeter (7) around wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) double check and average. ah, wildlife area, etc. (7)	ck.	
x MODERATELY HIGH. Residential, fenced pasture, park	k, conservation tillage, new fallow field. (3	3)	
Metric 3. Hydrology.	.,		
None or none apparent (12) Recovered (7) x Recovering (3) Recent or no recovery (1)	100 year floodplain (1) Between stream/lake and other Part of wetland/upland (e.g. fore Part of riparian or upland corridd 3d. Duration inundation/satur X Semi- to permanently inundated Regularly inundated (2) Seasonally inundated (2) Seasonally saturated in upper 3 re one or double check and average. Check all disturbances obser ditch tile dike weir stormwater input X	human use (1) est), complex (1) or (1) ration. Score one or dbl of //saturated (4) 3) //ocm (12in) (1) ved point source (nonstormwa filling/grading road bed/RR track dredging	
None or none apparent (4) Recovered (3) X Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	d average. Check all disturbances observe mowing x grazing clearcutting selective cutting woody debris removal x	shrub/sapling removal herbaceous/aquatic bed re sedimentation dredging farming	emoval
	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (10.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <4ha) (2 pts) 0.1 to <0.3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surro 2a. Calculate average buffer width. Select only one a MEDIUM. Buffers average 50m (164ft) or more around weth MEDIUM. Buffers average 10m to <25m (32ft to <82ft) very NARROW. Buffers average 10m to <25m (32ft to <82ft) very NARROW. Buffers average <10m (<32ft) around 2b. Intensity of surrounding land use. Select one or very Very Narrow. Buffers average <10m (<32ft) around 1.0W. Old field (>10 years), shrubland, young second graded in the continuous of the	Field Id: W-MRK-021919-005 Select one size class and assign score. >50 acres (20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 3 to <10 acres (12.10 c-4ha) (3 pts) 3 to <10 acres (12.2 to <4ha) (3 pts) 3 to <10 acres (12.2 to <4ha) (3 pts) 4 to <2.3 acres (4 to <10.1 ha) (4 pts) 5 to <50 acres (0.04ha) (0 pts) 7 to <0.3 acres (0.24ha) (0 pts) 7 to <0.3 acres (0.24ha) (0 pts) 8 to <10 acres (12.2 to <4ha) (3 pts) 9 to <10 acres (12.2 to <4ha) (3 pts) 9 to <10 acres (12.2 to <4ha) (3 pts) 10 to <2.3 acres (0.04ha) (0 pts) 9 to <10 acres (0.04ha) (0 pts) 10 to <0.3 acres (0.04ha) (0 pts) 10 to <0.4 acres (0.04ha) (0 pts) 10 to <0.	Metric 1. Wetland Area (size). Select one size class and assign score.

wetland 69 | test_Field 3/8/2019

Site: AEP Carrollton-Gable	Rater(s): M.R.Kline	, R.C.	Massa	Date:	2/19/2019
	. ,		Field Id:		
26.5			W-MRK-021919-005 PUE	3	
subtotal this page					
0 26.5 Metric 5.	Special Wetlands.				
max 10 pts. subtotal Check all th	nat apply and score as indicat	ted.			
Bog (10)					
Fen (10)					
Old growth fore Mature forested					
	al/tributary wetland-unrestricted hydrolo	ogy (10)			
	al/tributary wetland-restricted hydrology				
	d Prairies (Oak Openings) (10)				
Relict Wet Prair					
	nce state/federal threatened or endang atory songbird/water fowl habitat or usa		ies (10)		
	tland. See Question 5 Qualitative Rating				
5 31.5 Metric 6.	Plant communities, inter	spersi	on, microtopography.		
max 20pts. subtotal 6a. Wetland	Vegetation Communities.	-	Vegetation Community Cove	er Scale	
	nt using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
Aquatic bed			Present and either comprises small pa		
1 Emergent Shrub			vegetation and is of moderate quality,	or comprises a	
Forest			significant part but is of low quality Present and either comprises significal	nt nart of wetland's 2	
Mudflats			vegetation and is of moderate quality of		
2 Open water			part and is of high quality		
Other	 -		Present and comprises significant part	, or more, of wetland's 3	
6b. horizontal Select only one	(plan view) Interspersion.		vegetation and is of high quality		
High (5)			Narrative Description of Vegetation	Quality	
Moderately high	n(4)		Low spp diversity and/or predominance		
Moderate (3)			disturbance tolerant native species		
Moderately low	(2)		Native spp are dominant component of		
x Low (1) None (0)			although nonnative and/or disturbance can also be present, and species diver		
	of invasive plants. Refer		moderately high, but generallyw/o pres		
	long form for list. Add		threatened or endangered spp to		
or deduct points			A predominance of native species, with		
Extensive >759			and/or disturbance tolerant native spp		
Moderate 25-75 Sparse 5-25%			absent, and high spp diversity and ofte the presence of rare, threatened, or er		
x Nearly absent <			and processes of raise, amountained, or or	adingorod opp	
Absent (1)			Mudflat and Open Water Class Qual	ity	
6d. Microtopo			Absent <0.1ha (0.247 acres)		
	nt using 0 to 3 scale. mucks/tussucks		Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres	-)	
	debris >15cm (6in)		High 4ha (9.88 acres) or more	<u> </u>	
	>25cm (10in) dbh		,		
1 Amphibian bree	eding pools		Microtopography Cover Scale		
			Absent		
			Present very small amounts or if more of marginal quality	common	
Modified			Present in moderate amounts, but not	of highest	
Category 2			quality or in small amounts of highest o		
31.5 GRAND TOTAL(max 10	0 pts)	3	Present in moderate or greater amoun	ts	
			and of highest quality		

wetland 69 | test_Field 3/8/2019



PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 69

Date:

February 19, 2019

Description:

PUB

Modified Category 2

Facing North



Wetland 69

Date:

February 19, 2019 **Description:**

PUB

Modified Category 2

Facing East





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 69

Date:

February 19, 2019

Description:

PUB

Modified Category 2

Facing South



Wetland 69

Date:

February 19, 2019

Description:

PUB

Modified Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

60582598

Client Name: Site Location: Project No.

Gable-Carrollton 138 kV Transmission Line Project

Wetland 69

Date:

AEP

February 19, 2019

Description:

PUB

Modified Category 2

Soil Pit



Wetland 70

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Harrise	on		Sampling	g Date: 19-Feb-19)
Applicant/Owner: AEP Ohio Transmiss	sion Company		State: OH	Sampling	Poin	t: W-MRK-	021919-006 PSS	5
Investigator(s): M.R.Kline, R.C.Massa			Section, Township,	Range: S	1	T 11N		R 4W
Landform (hillslope, terrace, etc.):	Gulch or Gu	ıllv	Local relief (concave,	convex, no	ne):	concave s	Slope: 1.0% /	0.6 °
	Guicii di Ge		,	,	,		11070	
Subregion (LRR or MLRA): LRR N			40.390090		_	30.873743	Datum: NAI	<i>J</i> 63
Soil Map Unit Name: Bhk4F-Betheso	,		·	NW1 CI	lassifi	ication: N/A		
Are climatic/hydrologic conditions on	the site typ	ical for this time of ye	ar? Yes • No ·	(If no, e	explai	in in Remarks.)		\sim
Are Vegetation \square , Soil \square	, or Hydrolo	gy 🗌 significantly	y disturbed? Are	e "Normal C	Circur	mstances" present?	Yes No)
Are Vegetation , Soil	, or Hydrolo	gy 🗌 naturally pr	roblematic? (If	needed, ex	xplair	n any answers in Ren	narks.)	
Summary of Findings - Att	tach site	map showing s	ampling point l	ocations	s, tr	ansects, impo	rtant feature	s, etc.
Hydrophytic Vegetation Present?	Yes	No O						
Hydric Soil Present?	Yes	No O	Is the Sample	ed Area	. (3 0		
		No O	within a Wet		Yes (● No ○		
Wetland Hydrology Present? Remarks:								
the wetland. Wetland is very large	and continue	es outside of the study	area. The wetland b	ooundary fo	ollows	s toe-of-slope.		
Hydrology								
Wetland Hydrology Indicators:					Secon	dary Indicators (minim	um of two required)	
Primary Indicators (minimum of on	e required; c	check all that apply)			Su	urface Soil Cracks (B6)		
Surface Water (A1)		True Aquatic Plants	s (B14)		Sp	parsely Vegetated Conc	ave Surface (B8)	
₩ High Water Table (A2)		Hydrogen Sulfide O	` '		✓ Dı	rainage Patterns (B10)		
Saturation (A3)			eres along Living Roots (C3)	_	oss Trim Lines (B16)		
Water Marks (B1)		Presence of Reduce	* *	L	_	ry Season Water Table	(C2)	
Sediment Deposits (B2)			tion in Tilled Soils (C6)	L		rayfish Burrows (C8)		
☐ Drift deposits (B3)		Thin Muck Surface	(C7)	L		aturation Visible on Aeri	,	
Algal Mat or Crust (B4)		Other (Explain in R	emarks)	L		cunted or Stressed Plant	` '	
✓ Iron Deposits (B5)	(DZ)			<u> </u>	_	eomorphic Position (D2)	
Inundation Visible on Aerial Imager	/ (B/)			L	_	nallow Aquitard (D3)		
Water-Stained Leaves (B9)				L		icrotopographic Relief (D4)	
Aquatic Fauna (B13)					✓ F/	AC-neutral Test (D5)		
Field Observations: Surface Water Present? Yes	No O	5 4 (1)						
		Depth (inches):						
Water Table Present? Yes •		Depth (inches):	Wet	land Hydro	logy	Dresent? Yes	No O	
Saturation Present? (includes capillary fringe) Yes	No 🔾	Depth (inches):		iuna myaro	nogy	Tresent: 100 -		
Describe Recorded Data (stream ga	uge, monitor	ring well, aerial photos	s, previous inspections	s), if availal	ble:			
Remarks:								
Source of hydrology is spring seeps	, pond discha	arge, and surface rund	off.					
, 1 1 79, 12 199 00000	,	5.,						
								ļ

Wetland 70 **VEGETATION (Five/Four Strata)- Use scientific names of plants.**

		Dominant		Sampling Point: W-MRK-021919-006 PSS
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
2.		0.0%		
3		0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
1		0.0%		Species Across All Strata.
5		0.0%		Percent of dominant Species
5		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7		0.0%		Prevalence Index worksheet:
3		0.0%		Total % Cover of: Multiply by:
	0 :	= Total Cove	r	OBL species 60 x 1 = 60
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius				FACW species $120 \times 2 = 240$
. Salix nigra		100.0%	OBL	FAC species $10 \times 3 = 30$
2		0.0%		FACU species $\frac{5}{}$ x 4 = $\frac{20}{}$
3				0 X 4 =
ł.,		0.0%		•
5	0	0.0%		Column Totals: 195 (A) 350 (B)
)		0.0%		Prevalence Index = B/A = 1.795
7		0.0%		Hydrophytic Vegetation Indicators:
3	0	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	0.0%		✓ Dominance Test is > 50%
)	0	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 15' radius)	10 :	= Total Cove	r	Morphological Adaptations ¹ (Provide supporting
Salix discolor	20	57.1%	FACW	data in Remarks or on a separate sheet)
2 Salix nigra	10	28.6%	OBL	Problematic Hydrophytic Vegetation 1 (Explain)
3. Rosa multiflora	5	14.3%	FACU	¹ Indicators of hydric soil and wetland hydrology must
1.		0.0%		be present, unless disturbed or problematic.
5.		0.0%		Definition of Vegetation Strata:
)		0.0%		Four Vegetation Strata:
7		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
lerb Stratum (Plot size: <u>5' radius</u>)	35 :	= Total Cove	r	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
. Poa palustris	90	€ 60.0%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
. Leersia oryzoides	30	20.0%	OBL	Herb stratum – Consists of all herbaceous (non-woody)
3. Eupatorium perfoliatum	10	6.7%	FACW	plants, regardless of size, and all other plants less than 3.28
Typha angustifolia	10	6.7%	OBL	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Verbesina alternifolia	10	6.7%	FAC	it in neight.
5	0	0.0%		Five Vegetation Strata:
7	0	0.0%		Tree - Woody plants, excluding woody vines, approximately
3	0	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	0.0%		diameter at breast height (DBH).
)		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
I.	0	0.0%		less than 3 in. (7.6 cm) DBH.
2	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody
Noody Vine Stratum (Plot size:)	150 :	= Total Cove	r	vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb stratum – Consists of all herbaceous (non-woody)
	0	0.0%		plants, including herbaceous vines, regardless of size, and
l		0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
). 		0.0%		Woody vines – Consists of all woody vines, regardless of
3		0.0%		height.
4 -				
5		0.0%		Hydrophytic
5	0			Vegetation Present? Yes No
	0	= Total Cove	er .	T 77

Soil Sampling Point: W-MRK-021919-006 PSS

Profile Desc		the depth				nfirm the	absence of indicators.)		
Depth	Matrix	0,		lox Featu		10:3	Tantonia	Domestic	
(inches) 0-16	Color (moist) 10YR 2/1	% 100	Color (moist)	<u></u> %	Type 1	Loc²	Texture Silty Clay	Remarks	
	101K 2/1						Silty Clay		
							,		
			-						
1									
		on. RM=Redi	iced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N		
Hydric Soil							Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (• •		Dark Surface (,	CO) (MI DA	147 140\	2 cm Muck (A10)	(MLRA 147)	
Black His	ipedon (A2)		Thin Dark Surfa				Coast Prairie Redo	ox (A16)	
	n Sulfide (A4)		Loamy Gleyed			.40)	(MLRA 147,148)		
	Layers (A5)		Depleted Matrix		1		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)	
	ck (A10) (LRR N)		Redox Dark Su				Very Shallow Dark	Curface (TE12)	
	Below Dark Surface (A	\11)	Depleted Dark	. ,	7)				
	rk Surface (A12)	(11)	Redox Depress	-	,		Other (Explain in	Remarks)	
	uck Mineral (S1) (LRR I	N.	☐ Iron-Manganes		F12) (LRR	N,			
MLRA 14	7, 148)	,	MLRA 136)						
Sandy GI	eyed Matrix (S4)		Umbric Surface				3 Indicators of	hydrophytic vegetation and	
Sandy Re			☐ Piedmont Floor	dplain Soils	(F19) (ML	RA 148)	wetland hyd	rology must be present,	
☐ Stripped	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless dis	sturbed or problematic.	
Restrictive L	.ayer (if observed):								
Type:									
Depth (inc	ches):						Hydric Soil Present?	Yes No	
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV F	Project	City/County: Harrison	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmissi	ion Company	State: OH Samplin	ng Point: W-MRK-006-007 UPL
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	1 T 11N R 4W
	Hillside	Local relief (concave, convex,	none): convex Slope: 1.0% / 0.6 °
-			1 1070 0.0
Subregion (LRR or MLRA): LRR N	Lat.		
Soil Map Unit Name: Bhk4F-Bethesda			classification: N/A
Are climatic/hydrologic conditions on	the site typical for this time of	year? Yes ● No ○ (If no	, explain in Remarks.)
Are Vegetation, Soil,	, or Hydrology 🗌 significa	ntly disturbed? Are "Norma	l Circumstances" present? Yes No
Are Vegetation \square , Soil \square ,	, or Hydrology $\ \square$ naturally	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Att		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 O No •	within a Wetland?	ies C NO C
Upland data point for W-MRK-006 an	d W-MRK-007. Surrounding la	and use is pasture.	
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Pla	nts (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	• •	Drainage Patterns (B10)
Saturation (A3)		oheres along Living Roots (C3)	Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Sediment Deposits (B2)	Presence of Red	ucea Iron (C4) uction in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)
Drift deposits (B3)		• ,	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	☐ Thin Muck Surfa	, ,	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		i Remarks)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery	(B7)		Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	,		Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:	_		
Surface Water Present? Yes	No Depth (inches)	:	
Water Table Present? Yes	No Depth (inches)	:	
Saturation Present? (includes capillary fringe) Yes	No Depth (inches)	: Wetland Hyd	rology Present? Yes O No 💿
Describe Recorded Data (stream gau	ge, monitoring well, aerial pho	tos, previous inspections), if avai	lable:
Remarks:			
No source of hydrology.			
Saide of Hydrology.			

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

		Dominant Cassing?	Sampling Point: W-MRK-006-007 UPL
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Cover Indicator Status	
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2		0.0%	macare obly from or their
3.		0.0%	Total Number of Dominant Species Across All Strata: 1 (B)
4		0.0%	Species Across All Strata: (B)
5.		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 0.0% (A/B)
7		0.0%	Prevalence Index worksheet:
8.	0	0.0%	Total % Cover of: Multiply by:
	0 =	Total Cover	OBL species
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species
1			FAC species $0 \times 3 = 0$
2			FACU species $\frac{115}{2}$ x 4 = $\frac{460}{2}$
3			0
4			1
5			Column Totals:115 (A)460 (B)
6		0.0%	Prevalence Index = B/A = 4.000
7		0.0%	Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9			☐ 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		Problematic Hydrophytic Vegetation (Explain)
3	0		¹ Indicators of hydric soil and wetland hydrology must
4		0.0%	be present, unless disturbed or problematic.
5	0	0.0%	Definition of Vegetation Strata:
6	0	0.0%	Four Vegetation Strata:
7	0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5' radius)		Total Cover	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1 . Dactylis glomerata		✓ 65.2% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Plantago major		17.4% FACU	Herb stratum – Consists of all herbaceous (non-woody)
3Trifolium repens	20	17.4% FACU	plants, regardless of size, and all other plants less than 3.28 ft.tall.
4			ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5			
6			Five Vegetation Strata:
7		0.0%	Tree - Woody plants, excluding woody vines, approximately
8			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9			Sapling stratum – Consists of woody plants, excluding
0			woody vines, approximately 20 ft (6 m) or more in height and
1			less than 3 in. (7.6 cm) DBH.
2	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:)		Total Cover	Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1	0	0.0%	woody species, except woody vines, less than approximately
2			3 ft (1 m) in height.
3		0.0%	Woody vines – Consists of all woody vines, regardless of height.
4			
5			Hydrophytic
6	0	0.0%	Vegetation Vac Na (a)
u	0 :	= Total Cover	Present? Yes UNO W

Soil Sampling Point: W-MRK-006-007 UPL

Depth Matrix
0-16 10YR 4/4 100 Silty Clay Loam
¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Dark Surface (S7)
☐ Histic Epipedon (A2) ☐ Polyvalue Below Surface (S8) (MLRA 147,148) ☐ Coart Projetic Redox (A15)
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147,148)
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Piedmont Floodplain Soils (F19)
☐ Stratified Layers (A5) ☐ Depleted Matrix (F3) (MLRA 136, 147)
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)
Thick Dark Surface (A12) Redox Depressions (F8)
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136)
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Reday (F5) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators of hydrophytic vegetation and
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches):
Remarks:

Site: AE	P Carrollton-	Gable	Rater(s): M.R.k	(line, R.C.Massa	Date:	2/19/2019
				Field Id:		
	3 3	Metric 1. W	etland Area (size).	W-MRK-021919-0	06 PSS	
max 6 pts	subtotal	Select one size c	ass and assign score.			
		>50 acres (>20.2h	-	0.04 ad	cres	
			0.1 to <20.2ha) (5 pts)	extends outside survey corri	dor	
			to <10.1ha) (4 pts)			
		x 3 to <10 acres (1.2	? to <4ha) (3 pts) 12 to <1.2ha) (2pts)			
			0.04 to <0.12ha) (2pts)			
		<0.1 acres (0.04ha				
	8 11	Metric 2. Ur	oland buffers and s	urrounding land use.		
max 14 pts.	subtotal			y one and assign score. Do not double c	heck.	
			rage 50m (164ft) or more arou			
		x MEDIUM. Buffers	average 25m to <50m (82 to <	164ft) around wetland perimeter (4)		
				<82ft) around wetland perimeter (1)		
			Buffers average <10m (<32ft)	, , ,		
			-	one or double check and average.		
			•	avannah, wildlife area, etc. (7)		
			0 years), shrubland, young se	cond growth forest. (5) re, park, conservation tillage, new fallow field	4 (2)	
			strial, open pasture, row cropp		1. (3)	
	14.0 25.0	Metric 3. Hy		(٠/		
max 30 pts.	subtotal		ater. Score all that apply.	3b. Connectivity. Score all	that apply.	
		High pH groundwa		100 year floodplain (1)		
		x Other groundwater	(3)	Between stream/lake and ot		
		x Precipitation (1)		Part of wetland/upland (e.g.		
			ent surface water (3)	Part of riparian or upland co	rridor (1) aturation. Score one or dbl	ahaak
			water (lake or stream) (5) er depth. Select one.	Semi- to permanently inunda		crieck.
		>0.7 (27.6in) (3)	o. aop oo	x Regularly inundated/saturate		
		0.4 to 0.7m (15.7 t		Seasonally inundated (2)	` '	
		x <0.4m (<15.7in) (1		Seasonally saturated in upper		
		None or none appa		e. Score one or double check and average Check all disturbances ob		
		Recovered (7)	arent (12)	ditch	point source (nonstormwa	iter)
		x Recovering (3)		tile	filling/grading	,
		Recent or no reco	very (1)	dike	road bed/RR track	
				weir stormwater input	dredging Others poeture	
		1			X Other: pasture	
	8 33	4	ibitat Alteration and	•		
max 20 pts.	subtotal	4a. Substrate dis	turbance. Score one or doub	le check and average.		
		Recovered (3)	aront (+)			
		x Recovering (2)				
		Recent or no reco				
			opment. Select only one and	assign score.		
		Excellent (7) Very good (6)				
		Good (5)				
		Moderately good (4)			
		x Fair (3)				
		Poor to fair (2)				
		Poor (1) 4c. Habitat altera	tion. Score one or double ch	eck and average.		
		None or none appa		Check all disturbances obse	rved	
		Recovered (6)		mowing	shrub/sapling removal	
		x Recovering (3)	(4)	x grazing	herbaceous/aquatic bed r	emoval
		Recent or no reco	/ery (1)		x sedimentation	
				selective cutting woody debris removal	dredging x farming	
					x nutrient enrichment	
	33	1				
		page ORAM v. 5.0 Field	Form Quantitative Rating			
			3			

wetland 70 | test_Field 3/8/2019

Site: AEP	Carrollton-	Gable	Rater(s):	M.R.Kline, R	.C.	Massa	Date:	2/19/2019
						Field Id:		
	33					W-MRK-021919-006 PSS	3	
	subtotal this p							
	0 33	Metric 5. Speci	ai wetian	as.				
max 10 pts.	subtotal	Check all that app	ly and sco	re as indicated.				
		Bog (10)						
		Fen (10)						
		Old growth forest (10) Mature forested wetland	1 (5)					
		Lake Erie coastal/tributa		estricted hydrology (1	10)			
		Lake Erie coastal/tributa						
		Lake Plain Sand Prairies Relict Wet Praires (10)	s (Oak Opening	gs) (10)				
		Known occurrence state	/federal threat	ened or endangered	sner	sies (10)		
		Significant migratory sor						
		Category 1 Wetland. Se	e Question 5 0	Qualitative Rating (-10))			
	4 37	Metric 6. Plant	commun	ities, interspe	ers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland Veget	ation Com	munities.		Vegetation Community Cove	er Scale	
		Score all present using	0 to 3 scale.	_		Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed			1	Present and either comprises small pa		
		1 Emergent 1 Shrub				vegetation and is of moderate quality, significant part but is of low quality	or comprises a	
		Forest		-	2	Present and either comprises significa	nt part of wetland's 2	
		Mudflats				vegetation and is of moderate quality of		
		1 Open water		-		part and is of high quality		
		Other 6b. horizontal (plan vic		ion	3	Present and comprises significant part vegetation and is of high quality	, or more, of wetland's 3	
		Select only one.	ew) interspers	ion.		vegetation and is of high quality		
		High (5)				Narrative Description of Vegetation	Quality	
		Moderately high(4)				Low spp diversity and/or predominance	e of nonnative or low	
		Moderate (3) x Moderately low (2)				disturbance tolerant native species Native spp are dominant component or	f the vegetation, med	
		Low (1)				although nonnative and/or disturbance		
		None (0)				can also be present, and species dive		
	•	6c. Coverage of invasi		er		moderately high, but generallyw/o pres	ence of rare	
		Table 1 ORAM long form				threatened or endangered spp to	nonnativo ann high	
		or deduct points for cover (A predominance of native species, with and/or disturbance tolerant native spp		
		x Moderate 25-75% cover				absent, and high spp diversity and often		
		Sparse 5-25% cover (-1				the presence of rare, threatened, or er	idangered spp	
		Nearly absent <5% cove	er (0)			Model and Once Water Class Ovel	14	
		Absent (1) 6d. Microtopography.			Ω	Mudflat and Open Water Class Qual Absent <0.1ha (0.247 acres)	ity	
		Score all present using	0 to 3 scale.	-		Low 0.1 to <1ha (0.247 to 2.47 acres)		
		1 Vegetated hummucks/tu	issucks		2	Moderate 1 to <4ha (2.47 to 9.88 acre	s)	
		Coarse woody debris >1			3	High 4ha (9.88 acres) or more		
		Standing dead >25cm (* 1 Amphibian breeding poor				Microtopography Cover Scale		
			,,,,		0	Absent		
				-		Present very small amounts or if more	common	
Modified				-	_	of marginal quality	-f b:-b	
Category 2					2	Present in moderate amounts, but not quality or in small amounts of highest of		
50., -	37 GRAND	TOTAL(max 100 pts)		-	3	Present in moderate or greater amoun	•	
	S. C. C.	. O . AL(IIIUX 100 pts)			J	_		
						and of highest quality		

wetland 70 | test_Field 3/8/2019



PHOTOGRAPHIC RECORD **WETLANDS**

Site Location:

Gable-Carrollton 138 kV Transmission Line Project AEP

Project No. 60582598

Wetland 70

Client Name:

Date:

February 19, 2019

Description:

PSS

Modified Category 2

Facing North



Wetland 70

Date:

February 19, 2019 **Description:**

PSS

Modified Category 2

Facing East





PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 70

Date:

February 19, 2019

Description:

PSS

Modified Category 2

Facing South



Wetland 70

Date:

February 19, 2019 **Description:**

PSS

Modified Category 2

Facing West





PHOTOGRAPHIC RECORD

WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 70

Date:

February 19, 2019

Description:

PSS

Modified Category 2

Soil Pit



Wetland 71

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Proj	ect	City/County: Harrison	Sampling D	ate: 19-Feb-19
Applicant/Owner: AEP Ohio Transmission	Company	State: OH Samplin	Point: W-MRK-02:	1919-007 PUB
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	1 T 11N	R 4W
Landform (hillslope, terrace, etc.): Bei	nch	Local relief (concave, convex, n	one): concave Slo	DE: 0.5% / 0.3 °
Subregion (LRR or MLRA): LRR N	Lat.:	40.389791 Lon		Datum: NAD83
Soil Map Unit Name: Bhk4F-Bethesda cl			lassification: PUBGx	
	<u> </u>			
Are climatic/hydrologic conditions on the			explain in Remarks.)	Yes O No 💿
Are Vegetation , Soil , or	Hydrology significantly	y disturbed? Are "Normal	Circumstances" present?	res Uno S
Are Vegetation , Soil , or	Hydrology 🗌 naturally pr	roblematic? (If needed,	xplain any answers in Remar	ks.)
Summary of Findings - Attac	h site map showing s	ampling point location	s, transects, importa	ant features, etc.
Hydrophytic Vegetation Present? Ye	es No			
Hydric Soil Present? Ye	es No	Is the Sampled Area	Yes No	
_ ·	es No	within a Wetland?	Yes ♥ No ∪	
Remarks: This PUB wetland is located in a depres wetland boundary follows edge of depre			off and is heavily disturbed by	cattle. The
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minimum	of two required)
Primary Indicators (minimum of one re	quired; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	True Aquatic Plants	s (B14)	✓ Sparsely Vegetated Concave	Surface (B8)
✓ High Water Table (A2)	Hydrogen Sulfide O	Odor (C1)	Drainage Patterns (B10)	
Saturation (A3)	Oxidized Rhizosphe	eres along Living Roots (C3)	Moss Trim Lines (B16)	
Water Marks (B1)	Presence of Reduce	ed Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduct	tion in Tilled Soils (C6)	Crayfish Burrows (C8)	
Drift deposits (B3)	☐ Thin Muck Surface	(C7)	Saturation Visible on Aerial I	magery (C9)
Algal Mat or Crust (B4)	Other (Explain in R	emarks)	Stunted or Stressed Plants (I	D1)
Iron Deposits (B5)			Geomorphic Position (D2)	
☐ Inundation Visible on Aerial Imagery (B	7)		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):	6		
Water Table Present? Yes •	No O Depth (inches):	0	.	
Saturation Present? (includes capillary fringe) Yes •	No O Depth (inches):	Wetland Hydr	ology Present? Yes	No O
Describe Recorded Data (stream gauge,	monitoring well, aerial photos	s, previous inspections), if avail	able:	
	,	-, ,		
Remarks:				
Source of hydrology is spring seeps and	l surface runoff. Area is tramp	oled by cattle.		

Wetland 71 **VEGETATION** (Five/Four Strata)- Use scientific names of plants.

			ominant		Sampling Point: W-MRK-021919-007 PUB		
Tree Stratum (Plot size: _30' radius)	Absolute % Cover	Re	ecies? – el.Strat. over	Indicator Status			
A Calling Inves	10	V		OBL	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)		
1 . <i>Saiix nigra</i> 2			0.0%		That are obt, facw, of fac.		
3		\Box	0.0%		Total Number of Dominant		
		\Box	0.0%		Species Across All Strata:3(B)		
ł		\Box	0.0%		Percent of dominant Species		
5			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)		
5		\Box	0.0%		Duninlan or Tudou workshoot.		
7			0.0%		Prevalence Index worksheet: Total % Cover of: Multiply by:		
3							
Sapling-Sapling/Shrub Stratum (Plot size:)10 :	= 10	otal Cover		OBL species $10 \times 1 = 10$		
			0.0%		FACW species $50 \times 2 = 100$		
2.			0.0%		FAC species $0 \times 3 = 0$		
3			0.0%		FACU species $0 \times 4 = 0$		
·			0.0%		UPL species $0 \times 5 = 0$		
5			0.0%		Column Totals: 60 (A) 110 (B)		
S.		\Box	0.0%		Dravalance Index P/A 1 022		
		\Box	0.0%		Prevalence Index = B/A = 1.833		
7.		\Box	0.0%		Hydrophytic Vegetation Indicators:		
3		\Box	0.0%		Rapid Test for Hydrophytic Vegetation		
9		\Box			✓ Dominance Test is > 50%		
)	_	Ш,	0.0%		✓ Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)	:	= To	otal Cover		Morphological Adaptations ¹ (Provide supporting		
l		\square	0.0%		data in Remarks or on a separate sheet)		
2	0	Ш	0.0%		Problematic Hydrophytic Vegetation 1 (Explain)		
3	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must		
i			0.0%		be present, unless disturbed or problematic.		
5			0.0%		Definition of Vegetation Strata:		
8.			0.0%		Four Vegetation Strata:		
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3		
Herb Stratum (Plot size: 5' radius)		= To	otal Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
	30	V	60.0%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding		
			40.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
. Juncus effusus	0		0.0%	TACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28		
3		\Box	0.0%		ft tall. Woody vines – Consists of all woody vines greater than 3.28		
·			0.0%		ft in height.		
5							
). ,			0.0%		Five Vegetation Strata:		
·			0.0%		Tree - Woody plants, excluding woody vines, approximately		
3			0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
9			0.0%		Sapling stratum – Consists of woody plants, excluding		
)			0.0%		woody vines, approximately 20 ft (6 m) or more in height and		
		\square	0.0%		less than 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.		
Noody Vine Stratum (Plot size:)	50 :	= To	otal Cover		Herb stratum – Consists of all herbaceous (non-woody)		
1	0		0.0%		plants, including herbaceous vines, regardless of size, and		
2.			0.0%		woody 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		
ł			0.0%		height.		
5			0.0%		Hydrophytic		
5		Щ	0.0%		Vegetation Present? Yes No		
	0		otal Cove	_			

Soil Sampling Point: W-MRK-021919-007 PUB

Profile Description: (Description)	ribe to the depth r	eeded to document	the indic	ator or co	nfirm the	absence of indicators.)			
Depth M	latrix	Red	lox Featu	-					
(inches) Color (me	oist) %	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks		
0-16 10YR 4	/2 95	10YR 5/6		C	M	Silty Clay Loam			
		-				,			
			-			-			
¹ Type: C=Concentration. D=I	Denletion RM=Redu	ced Matrix CS=Cover	ed or Coate	ed Sand Gr	ains ² l oca	ation: PI =Pore Lining M=N	Matrix		
Hydric Soil Indicators:	Depletion: Kin-Redu	ced Matrix, C3=Cover	eu or coate	d Sand Gr	31115 -LOC6				
Histosol (A1)		Davis Confess (77)			Indicators for Proble	ematic Hydric Soils ³ :		
` ′		Dark Surface (CO) (MIDA	147 140)	2 cm Muck (A10)	(MLRA 147)		
☐ Histic Epipedon (A2) ☐ Black Histic (A3)		Thin Dark Surfa				Coast Prairie Redo	ox (A16)		
Hydrogen Sulfide (A4)					.¬U)	(MLRA 147,148)			
Stratified Layers (A5)		Loamy Gleyed✓ Depleted Matrix				Piedmont Floodpl	ain Soils (F19)		
2 cm Muck (A10) (LRR N	\	Redox Dark Su				(MLRA 136, 147)			
		Depleted Dark	` ,	7)		Very Shallow Dark			
Depleted Below Dark Sur		Redox Depress		')		Other (Explain in	Remarks)		
Thick Dark Surface (A12)	•	☐ Iron-Manganes	. ,	F12\ /I DD I	M				
Sandy Muck Mineral (S1) MLRA 147, 148)) (LRR N,	MLRA 136)							
Sandy Gleyed Matrix (S4)	Umbric Surface				3 Indicators of	hydrophytic vogotation and		
Sandy Redox (S5)		Piedmont Floor	lplain Soils	(F19) (MLI	RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
Stripped Matrix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	7, 147)	unless dis	sturbed or problematic.		
Restrictive Layer (if obser	ved):								
Туре:							·		
Depth (inches):						Hydric Soil Present?	Yes No		
Remarks:									
Soils are compacted by cat	tle movement.								
,									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV F	Project	City/County: Harrison	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmissi	ion Company	State: OH Samplin	ng Point: W-MRK-006-007 UPL
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	1 T 11N R 4W
	Hillside	Local relief (concave, convex,	none): convex Slope: 1.0% / 0.6 °
-			1 1070 0.0
Subregion (LRR or MLRA): LRR N	Lat.		
Soil Map Unit Name: Bhk4F-Bethesda			classification: N/A
Are climatic/hydrologic conditions on	the site typical for this time of	year? Yes ● No ○ (If no	, explain in Remarks.)
Are Vegetation, Soil,	, or Hydrology 🗌 significa	ntly disturbed? Are "Norma	l Circumstances" present? Yes No
Are Vegetation \square , Soil \square ,	, or Hydrology $\ \square$ naturally	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Att		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 O No •	within a Wetland?	ies C NO C
Upland data point for W-MRK-006 an	d W-MRK-007. Surrounding la	and use is pasture.	
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Pla	nts (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	• •	Drainage Patterns (B10)
Saturation (A3)		oheres along Living Roots (C3)	Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Sediment Deposits (B2)	Presence of Red	ucea Iron (C4) uction in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)
Drift deposits (B3)		• ,	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	☐ Thin Muck Surfa	, ,	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		i Remarks)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery	(B7)		Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	,		Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:	_		
Surface Water Present? Yes	No Depth (inches)	:	
Water Table Present? Yes	No Depth (inches)	:	
Saturation Present? (includes capillary fringe) Yes	No Depth (inches)	: Wetland Hyd	rology Present? Yes O No 💿
Describe Recorded Data (stream gau	ge, monitoring well, aerial pho	tos, previous inspections), if avai	lable:
Remarks:			
No source of hydrology.			
Saide of Hydrology.			

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

		Dominant Cassing?	Sampling Point: W-MRK-006-007 UPL
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Cover Indicator Status	
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2		0.0%	macare obly from or their
3.		0.0%	Total Number of Dominant Species Across All Strata: 1 (B)
4		0.0%	Species Across All Strata: (B)
5.		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 0.0% (A/B)
7		0.0%	Prevalence Index worksheet:
8.	0	0.0%	Total % Cover of: Multiply by:
		Total Cover	OBL species
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species
1			FAC species $0 \times 3 = 0$
2			FACU species $\frac{115}{2}$ x 4 = $\frac{460}{2}$
3			0
4			1
5			Column Totals:115 (A)460 (B)
6		0.0%	Prevalence Index = B/A = 4.000
7		0.0%	Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9			☐ 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		Problematic Hydrophytic Vegetation (Explain)
3	0		¹ Indicators of hydric soil and wetland hydrology must
4		0.0%	be present, unless disturbed or problematic.
5	0	0.0%	Definition of Vegetation Strata:
6	0	0.0%	Four Vegetation Strata:
7	0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5' radius)		Total Cover	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1 . Dactylis glomerata		✓ 65.2% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Plantago major		17.4% FACU	Herb stratum – Consists of all herbaceous (non-woody)
3Trifolium repens	20	17.4% FACU	plants, regardless of size, and all other plants less than 3.28 ft.tall.
4			ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5			
6			Five Vegetation Strata:
7		0.0%	Tree - Woody plants, excluding woody vines, approximately
8			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9			Sapling stratum – Consists of woody plants, excluding
0			woody vines, approximately 20 ft (6 m) or more in height and
1			less than 3 in. (7.6 cm) DBH.
2	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:)		Total Cover	Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1	0	0.0%	woody species, except woody vines, less than approximately
2			3 ft (1 m) in height.
3		0.0%	Woody vines – Consists of all woody vines, regardless of height.
4			
5			Hydrophytic
6	0	0.0%	Vegetation Vac Na (a)
u	0 :	= Total Cover	Present? Yes UNO W

Soil Sampling Point: W-MRK-006-007 UPL

Profile Description: (Describe to the dep	th needed to document the indicator or confirm the	absence of indicators.)
Depth Matrix	Redox Features	
(inches)Color (moist)%	Color (moist)%Tvpe_1Loc2	Texture Remarks
0-16 10YR 4/4 100		Silty Clay Loam
¹ Type: C=Concentration, D=Depletion, RM=I	Reduced Matrix, CS=Covered or Coated Sand Grains ² Loc	ation: PL=Pore Lining M=Matrix
**	-Localed Matrix, C3—Covered of Coaled Sand Grains -Localed Sand Grains	
Hydric Soil Indicators: Histosol (A1)	☐ Dark Surface (S7)	Indicators for Problematic Hydric Soils ³ :
	Dark Surface (57) Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2) Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147,148)	Coast Prairie Redox (A16)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	(MLRA 147,148)
Stratified Layers (A5)		Piedmont Floodplain Soils (F19)
2 cm Muck (A10) (LRR N)	Depleted Matrix (F3) Redox Dark Surface (F6)	(MLRA 136, 147)
	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Redox Depressions (F8)	Other (Explain in Remarks)
Thick Dark Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR N,	
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19) (MLRA 148)	wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
Restrictive Layer (if observed):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes ○ No •
Remarks:		

Wetland 71

	R.C.Massa	Date:	2/19/2019
<u> </u>	Field Id:	-	
Metric 1. Wetland Area (size).	W-MRK-021919-007 F	PUB	
Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.46 acres		
Metric 2. Upland buffers and surrou	nding land use.		
WIDE. Buffers average 50m (164ft) or more around wetlan MEDIUM. Buffers average 25m to <50m (82 to <164ft) ard NARROW. Buffers average 10m to <25m (32ft to <82ft) a VERY NARROW. Buffers average <10m (<32ft) around w 2b. Intensity of surrounding land use. Select one or d. VERY LOW. 2nd growth or older forest, prairie, savannah LOW. Old field (>10 years), shrubland, young second growth or older forest.	nd perimeter (7) ound wetland perimeter (4) iround wetland perimeter (1) wetland perimeter (0) ouble check and average. , wildlife area, etc. (7) wth forest. (5)		
	0 '		
Metric 3. Hydrology.			
None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1)	100 year floodplain (1) Between stream/lake and other hu Part of wetland/upland (e.g. forest Part of riparian or upland corridor (3d. Duration inundation/saturati X Semi- to permanently inundated/s Regularly inundated/saturated (3) Seasonally saturated in upper 30c one or double check and average. Check all disturbances observe ditch tile dike weir stormwater input X Ot	iman use (1)), complex (1) (1) ion. Score one or dbl chect aturated (4) m (12in) (1) d int source (nonstormwater) ng/grading ad bed/RR track edging	ck.
None or none apparent (4) Recovered (3) X Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and assign sexellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	average. Check all disturbances observed mowing sh x grazing he clearcutting X se selective cutting dre woody debris removal X far	rbaceous/aquatic bed remo dimentation edging ming	val
	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) × 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <1.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrou 2a. Calculate average buffer width. Select only one ar WIDE. Buffers average 50m (164ft) or more around wetla MEDIUM. Buffers average 25m to <50m (82 to <164ft) ar × NARROW. Buffers average 25m to <50m (82 to <164ft) ar × NARROW. Buffers average 25m to <25m (32ft to <82ft) a VERY NARROW. Buffers average <10m (<32ft) around v 2b. Intensity of surrounding land use. Select one or d VERY LOW. 2nd growth or older forest, prairie, savannah LOW. Old field (>10 years), shrubland, young second groved one of the complex of the com	Metric 1. Wetland Area (size). W-MRK-021919-007 F Select one size class and assign score. >-50 acres (>20.2ha) (6 pts)	Metric 1. Wetland Area (size). Select one size class and assign score. > 50 acres (20 20 2h) (ph ps) 50 40 acres (10 1 to <20 2h) (ph ps) 50 1 to <20 acres (10 to 1 ho (4 ps) 3 to 10 acres (1 2 to 4ha) (3 ps) 0 1 to <20 acres (10 to 1 ho) (4 ps) 3 to 10 acres (1 2 to 4ha) (3 ps) 0 1 to <30 acres (0 40 to 40 12ha) (1 pt) 0 1 to <30 acres (2 to 4ha) (2 ps) 0 1 to <30 acres (2 to 4ha) (2 ps) 0 1 to <30 acres (2 to 4ha) (2 ps) 0 1 to <30 acres (2 to 4ha) (2 ps) 0 1 to <30 acres (2 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (2 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (4 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (4 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (4 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (4 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (4 ps) 0 1 to <30 acres (2 ps) (4 to 4ha) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acres (2 ps) (4 ps) 0 1 to <30 acre

wetland 71 | test_Field 3/8/2019

Site: AEF	Carrollton-	Gable	Rater(s):	M.R.Kline, I	R.C.	Massa	Date:	2/19/2019
						Field Id:	-	
	26.5]				W-MRK-021919-0	07 PUB	
	subtotal this	page						
	0 26.5	Metric 5. Sp	ecial Wetlar	ds.				
max 10 pts.	subtotal	Check all that	apply and sco	re as indicated	d.			
		Bog (10)						
		Fen (10) Old growth forest (10)					
		Mature forested we						
		Lake Erie coastal/ti		estricted hydrology	(10)			
		Lake Erie coastal/ti			5)			
		Lake Plain Sand Pr Relict Wet Praires		gs) (10)				
		Known occurrence		ened or endangere	ed spec	cies (10)		
		Significant migrator				, ,		
	-1 -1 -	Category 1 Wetlan						
	5 31.5	Metric 6. Pla	int commun	ities, intersp	oersi	ion, microtopogra	phy.	
max 20pts.	subtotal	6a. Wetland Ve	-	munities.		Vegetation Commun	,	
		Score all present u	sing 0 to 3 scale.				a (0.2471 acres) contiguous area	
		Aquatic bed 1 Emergent			1	Present and either comprise vegetation and is of modera		
		1 Shrub				significant part but is of low		
		Forest			2		es significant part of wetland's 2	
		Mudflats					te quality or comprises a small	
		1 Open water Other			3	part and is of high quality	ificant part, or more, of wetland's 3	
		6b. horizontal (pla	ın view) Interspers	ion.	3	vegetation and is of high qu		
		Select only one.				N		
		High (5) Moderately high(4)				Narrative Description of V	edetation Quality edominance of nonnative or low	
		Moderate (3)				disturbance tolerant native s		
		Moderately low (2)					mponent of the vegetation, mod	
		x Low (1)					listurbance tolerant native spp	
		None (0) 6c. Coverage of ir	vasive nlants Re	for		can also be present, and sp moderately high, but genera		
		Table 1 ORAM long				threatened or endangered s		
		or deduct points for					pecies, with nonnative spp high	
		Extensive >75% co					native spp absent or virtually	
		Moderate 25-75% of Sparse 5-25% covers				the presence of rare, threate	ity and often, but not always,	
		x Nearly absent <5%				,		
		Absent (1)				Mudflat and Open Water C		
		6d. Microtopograp				Absent < 0.1ha (0.247 acres		
		Score all present us Vegetated hummus				Low 0.1 to <1ha (0.247 to 2 Moderate 1 to <4ha (2.47 to		
		Coarse woody deb				High 4ha (9.88 acres) or mo		
		Standing dead >25				,		
		1 Amphibian breeding	g pools		0	Microtopography Cover S	cale	
						Absent Present very small amounts	or if more common	
Modified						of marginal quality		
Modified	I				2	Present in moderate amoun		
Category 2	24 5 00 4	TOTAL (400	4-1			quality or in small amounts of		
	31.5 GRANI	O TOTAL(max 100 p	its)		3	Present in moderate or grea	iter amounts	
						and of highest quality		

wetland 71 | test_Field 3/8/2019



PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 71

Date:

February 19, 2019

Description:

PUB

Modified Category 2

Facing North



Wetland 71

Date:

February 19, 2019 **Description:**

PUB

Modified Category 2

Facing East





PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 71

Date:

February 19, 2019

Description:

PUB

Modified Category 2

Facing South



Wetland 71

Date:

February 19, 2019 **Description:**

PUB

Modified Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

WEILANDS

AEP Gable-Carrollton 138 kV Transmission Line Project

Site Location:

Project No. 60582598

Wetland 71

Client Name:

Date:

February 19, 2019

Description:

PUB

Modified Category 2

Soil Pit



Wetland 72

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Harris	on		Sampli	ng Date: 19-Feb-1	9
Applicant/Owner: AEP Ohio Transmiss	sion Compan	у	State: OH	Sampling	Point:	W-MRK	-021919-008 PE	М
Investigator(s): M.R.Kline, R.C.Massa			Section, Township,	Range: S	1	T 11N		R 4W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (concave,	convex, no	one):	concave	Slope: 3.0%	/ _{1.7} °
Subregion (LRR or MLRA): LRR N		Lat.:	40.387069	Long	ı.: -80	0.871601	Datum: NA	
Soil Map Unit Name: BmD-Berks-Gu	ernsey com					ation: N/A		
Are climatic/hydrologic conditions on			· ·	_		in Remarks.)		
					-	-	Yes • No	\bigcirc
Are Vegetation, Soil	, or Hydrol		-			stances" present?		
Are Vegetation, Soil	, or Hydrol	ogy 🔲 naturally p	roblematic? (If	f needed, ex	xplain a	any answers in Re	emarks.)	
Summary of Findings - Att	ach site	map showing s	ampling point l	ocation	s, tra	nsects, impo	ortant featur	es, etc.
Hydrophytic Vegetation Present?	Yes	No O						
Hydric Soil Present?	Yes 💿	No O	Is the Sampl	ed Area 、	Yes •	No O		
Wetland Hydrology Present?	Yes	No O	within a Wet		res 💌	NO C		
This PEM wetland begins at a hillside of the study area. The wetland bou					ater the	en drains to a wa	tercourse just outs	iide
Hydrology								
Wetland Hydrology Indicators:					Seconda	ary Indicators (minir	mum of two required)
Primary Indicators (minimum of one	e required;	check all that apply)			Surfa	ace Soil Cracks (B6)	
Surface Water (A1)		True Aquatic Plants	s (B14)		Spar	rsely Vegetated Cor	icave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide C	` '	[Draiı	nage Patterns (B10)	
Saturation (A3)		✓ Oxidized Rhizosphe	eres along Living Roots (C3)	Moss	s Trim Lines (B16)		
Water Marks (B1)		Presence of Reduce	ed Iron (C4)			Season Water Table	e (C2)	
Sediment Deposits (B2)		Recent Iron Reduct	tion in Tilled Soils (C6)		Cray	fish Burrows (C8)		
Drift deposits (B3)		Thin Muck Surface	(C7)	Į	Satu	ıration Visible on Ae	erial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in R	emarks)	Į	Stun	nted or Stressed Pla	nts (D1)	
☐ Iron Deposits (B5)				Į		morphic Position (D)2)	
Inundation Visible on Aerial Imagery	/ (B7)			Į	Shall	llow Aquitard (D3)		
Water-Stained Leaves (B9)				Ĺ		otopographic Relief	(D4)	
☐ Aquatic Fauna (B13)				Ĺ	✓ FAC-	-neutral Test (D5)		
Field Observations:								
Surface Water Present? Yes		Depth (inches):						
Water Table Present? Yes		Depth (inches):	Wet	tland Hydro	ology Pr	resent? Yes	● No ○	
Saturation Present? (includes capillary fringe) Yes	No 💿	Depth (inches):			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- Coolie		
Describe Recorded Data (stream gar	uge, monito	oring well, aerial photo	s, previous inspection	s), if availa	ıble:			
Remarks:								
Source of hydrology is spring seeps.								

Wetland 72 **VEGETATION (Five/Four Strata)- Use scientific names of plants.**

		Dominant Species 2	Sampling Point: W-MRK-021919-008 PEM			
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Indicator Cover Status	Dominance Test worksheet:			
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)			
2.		0.0%	macure obe, racw, or rac.			
3		0.0%	Total Number of Dominant			
1		0.0%	Species Across All Strata: (B)			
5.		0.0%	Percent of dominant Species			
)		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)			
7		0.0%	Prevalence Index worksheet:			
3	0	0.0%	Total % Cover of: Multiply by:			
	. 0 =	= Total Cover	OBL species $0 \times 1 = 0$			
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species 135 x 2 = 270			
			FAC species $10 \times 3 = 30$			
2			FACU species $\frac{10}{10}$ x 4 = $\frac{40}{10}$			
3			UPL species $0 \times 5 = 0$			
·			· ·			
5			Column Totals: <u>155</u> (A) <u>340</u> (B)			
)			Prevalence Index = $B/A = \underline{2.194}$			
.			Hydrophytic Vegetation Indicators:			
3			✓ Rapid Test for Hydrophytic Vegetation			
)			✓ Dominance Test is > 50%			
)		0.0%	✓ Prevalence Index is ≤3.0 ¹			
Shrub Stratum (Plot size:)		= Total Cover	Morphological Adaptations ¹ (Provide supporting			
	0	0.0%	data in Remarks or on a separate sheet)			
2	0	0.0%	Problematic Hydrophytic Vegetation (Explain)			
3	0	0.0%	¹ Indicators of hydric soil and wetland hydrology must			
·		0.0%	be present, unless disturbed or problematic.			
j		0.0%	Definition of Vegetation Strata:			
5		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),			
lerb Stratum (Plot size: _5' radius)		= Total Cover	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding			
_ Eupatorium perfoliatum		✓ 48.4% FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
Poa palustris		✓ 19.4% FACW	Herb stratum – Consists of all herbaceous (non-woody)			
3. Juncus effusus		12.9%FACW	plants, regardless of size, and all other plants less than 3.28 ft.tall.			
Rumex crispus			ft tall woody vines – Consists of all woody vines greater than 3.28 ft in height.			
Epilobium coloratum						
Apocynum cannabinum			Five Vegetation Strata:			
·			Tree - Woody plants, excluding woody vines, approximately			
3			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).			
			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.			
2.			Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.			
Noody Vine Stratum (Plot size:)		= Total Cover	Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and			
		0.0%	woody species, except woody vines, less than approximately			
		0.0%	3 ft (1 m) in height.			
3		0.0%	Woody vines – Consists of all woody vines, regardless of height.			
j.,			Hydrophytic			
)			Vegetation Present? Yes No			
	0 :	= Total Cover	Fleschit 100 - 110 -			

Soil Sampling Point: W-MRK-021919-008 PEM

Depth (inches) 0-16	Matrix		Re	dox Featu				
0-16	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks
	5YR 4/2	80	10YR 5/6	_ 20	C	M,PL	Silty Clay Loam	10% oxidized rhizospheres
vne: C=Conc	entration D=Denletio	n RM=Redu	ced Matrix CS=Cove	ed or Coate	ed Sand Gra	ins 21 oc:	ation: PL=Pore Lining. M	I=Matrix
lydric Soil In		II. KIII–Kedu	ccu matrix, c5=cover	ca or coate	u Sana Ore	iiii Loca		
Histosol (A			Dark Surface (C7)				blematic Hydric Soils ³ :
Histic Epipe	*		Polyvalue Belo	-	S8) (MI DA	147 148)	2 cm Muck (A1	0) (MLRA 147)
Black Histic			Thin Dark Surf				Coast Prairie R	
_	Sulfide (A4)		Loamy Gleyed			10)	(MLRA 147,148	•
Stratified La			✓ Depleted Matri				Piedmont Flood (MLRA 136, 14	dplain Soils (F19)
_	(A10) (LRR N)		Redox Dark Su				_ ` .	•
_	Below Dark Surface (A.	11\	Depleted Dark		')			Park Surface (TF12)
_ '	. Surface (A12)	11)	Redox Depress		,		Other (Explain	in Remarks)
_	k Mineral (S1) (LRR N	ı	☐ Iron-Mangane		F12) (LRR I	l.		
MLRA 147,	. 148)	1,	MLRA 136)	(/ (-,		
Sandy Gley	ed Matrix (S4)		Umbric Surfac	e (F13) (ML	RA 136, 12	2)	2	
Sandy Red			Piedmont Floo	dplain Soils	(F19) (MLF	A 148)	³ Indicators	of hydrophytic vegetation and nydrology must be present,
Stripped Ma	atrix (S6)		Red Parent Ma	iterial (F21)	(MLRA 127	', 147)		disturbed or problematic.
	yer (if observed):							
Type:							Hydric Soil Present?	? Yes ● No ○
Depth (inch	es):							165 0 116 0
temarks:								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV I	Project		City/County: Harrison		Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmission Company			State: OH Samp	ling Point:	W-MRK-008 UPL
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range:	S 1 T 1	1N R 4W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (concave, convex	c, none): convex	Slope: 2.0% / 1.1 °
Subregion (LRR or MLRA): LRR N		Lat.:	40.387169	ong.: -80.871590	Datum: NAD83
Soil Map Unit Name: BmD-Berks-Gu	ernsey con	nplex, 15 to 25 percent	t slopes NV	VI classification: N/	'A
Are climatic/hydrologic conditions on	the site ty	pical for this time of ye	ear? Yes • No O (If	no, explain in Remar	ks.)
	, or Hydrol			nal Circumstances" p	resent? Yes No
Are Vegetation, Soil	, or Hydrol			d, explain any answe	
Summary of Findings - Att	ach site	e map showing s	sampling point locati	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes O	No 💿			
Hydric Soil Present?	Yes 🔾	No •	Is the Sampled Area	Yes O No •	
Wetland Hydrology Present?	Yes 🔾	No •	within a Wetland?	Yes ∪ No ♥	
Upland data point for W-MRK-008. S	Surroundin	g land use is agricultur	ral.		
Hydrology					
Wetland Hydrology Indicators:				Secondary Indicato	ors (minimum of two required)
Primary Indicators (minimum of one	required;	check all that apply)		Surface Soil Cra	acks (B6)
Surface Water (A1)		True Aquatic Plants	s (B14)		ated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide C	` '	Drainage Patte	rns (B10)
Saturation (A3)			eres along Living Roots (C3)	Moss Trim Line	• •
Water Marks (B1)		Presence of Reduce	• ,	Dry Season Wa	` '
Sediment Deposits (B2)			tion in Tilled Soils (C6)	Crayfish Burrov	
☐ Drift deposits (B3)☐ Algal Mat or Crust (B4)		☐ Thin Muck Surface	• •		ole on Aerial Imagery (C9) essed Plants (D1)
Iron Deposits (B5)		☐ Other (Explain in R	Remarks)	Geomorphic Po	` '
Inundation Visible on Aerial Imagery	, (B7)			Shallow Aquita	` '
Water-Stained Leaves (B9)	(57)			Microtopograph	
Aquatic Fauna (B13)				FAC-neutral Te	• •
Field Observations:				TAC ficulturi TC	3. (23)
Surface Water Present? Yes	No 💿	Depth (inches):			
Water Table Present? Yes	No 💿	Depth (inches):			
Saturation Present? (includes capillary fringe) Yes	No •	Depth (inches):	Wetland H	ydrology Present?	Yes ○ No •
Describe Recorded Data (stream gau	ige, monito	oring well, aerial photo	s, previous inspections), if a	vailable:	
Demonitor					
Remarks:					
No source of hydrology.					

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

		Dominant Consider	Sampling Point: W-MRK-008 UPL
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Cover Indicator Status	
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2		0.0%	
3.		0.0%	Total Number of Dominant Species Across All Strata: 2 (B)
4		0.0%	Species Across Air Strata.
5.		0.0%	Percent of dominant Species
6.		0.0%	That Are OBL, FACW, or FAC: 0.0% (A/B)
7		0.0%	Prevalence Index worksheet:
8	0	0.0%	Total % Cover of: Multiply by:
	0 =	= Total Cover	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species
1		0.0%	FAC species $0 \times 3 = 0$
2			FACU species $130 \times 4 = 520$
3			UPL species $\frac{10}{2}$ x 5 = $\frac{50}{2}$
4			1
5			Column Totals: <u>140</u> (A) <u>570</u> (B)
6			Prevalence Index = B/A = 4.071
7			Hydrophytic Vegetation Indicators:
8			Rapid Test for Hydrophytic Vegetation
9			☐ Dominance Test is > 50%
0	_		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 15' radius)	0=	= Total Cover	Morphological Adaptations ¹ (Provide supporting
1. Lonicera morrowii		✓ 100.0% FACU	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.
5		0.0%	Definition of Vegetation Strata:
6		0.0%	Four Vegetation Strata:
7	0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5' radius</u>)		= Total Cover	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Phleum pratense		✓ 83.3% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Daucus carota		8.3% UPL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Solidago canadensis		8.3% FACU	fit tall, Woody vines – Consists of all woody vines greater than 3.28
4		0.0%	ft in height.
5		0.0%	
6			Five Vegetation Strata:
7		0.0%	Tree - Woody plants, excluding woody vines, approximately
8		0.0%	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9			Sapling stratum – Consists of woody plants, excluding
0			woody vines, approximately 20 ft (6 m) or more in height and
1			less than 3 in. (7.6 cm) DBH.
2	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	120=	= Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
1	0		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0	0.0%	3 ft (1 m) in height.
3			Woody vines – Consists of all woody vines, regardless of
4	0		height.
5	0		Hydronhytic
	0	0.0%	Hydrophytic Vegetation Present? Yes No
U			
6	0 :	= Total Cover	Present? Yes V NO V

Soil Sampling Point: W-MRK-008 UPL

		the depth				nfirm the	absence of indicators.)	
Depth (inches)	Matrix Color (moist)	%		dox Featu	Tvpe 1	Loc ²	Towtore	Domestre
(inches) 0-16	2.5Y 4/3	98	Color (moist) 10YR 5/6	% 20	C C	Loc²_	Texture Silt Loam	Remarks
0-10	2.51 4/3	90					SIIL LUdIII	
-				_				
1 Tymas C—Cons	contration D_Donlatio	n DM_Dad	and Matrix CC—Cover	rad ar Caat	ad Cand Cr	nina 21 aa	ntion, DI —Doro Lining M—M	lateiv
		ווע. אויו=אeal	iceu Maurx, CS=C0Ve	eu or Coat	eu Sallú Gli	aii iSLOC	ation: PL=Pore Lining. M=M	
Hydric Soil I				(07)			Indicators for Proble	matic Hydric Soils ³ :
Histosol (A	,		☐ Dark Surface (. ,	(60) (11) = :	147 140	2 cm Muck (A10)	(MLRA 147)
	pedon (A2)		Polyvalue Belo				Coast Prairie Redo	x (A16)
☐ Black Hist			☐ Thin Dark Surf			148)	(MLRA 147,148)	()
	Sulfide (A4)		Loamy Gleyed)		Piedmont Floodpla	in Soils (F19)
	Layers (A5)		Depleted Matri	` '			(MLRA 136, 147)	
2 cm Mucl	k (A10) (LRR N)		Redox Dark Su	, ,			Very Shallow Dark	Surface (TF12)
Depleted	Below Dark Surface (A	A11)	Depleted Dark		7)		Other (Explain in F	Remarks)
	k Surface (A12)		Redox Depress					
Sandy Mu MLRA 147	ck Mineral (S1) (LRR I 7, 148)	N,	Iron-Mangane MLRA 136)	se Masses ((F12) (LRR	N,		
☐ Sandy Gle	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	22)	2	
Sandy Red	dox (S5)		☐ Piedmont Floo	dplain Soils	s (F19) (ML	RA 148)	Indicators of h	nydrophytic vegetation and rology must be present,
Stripped N	Matrix (S6)		Red Parent Ma	aterial (F21) (MLRA 12	7, 147)		turbed or problematic.
Restrictive La	ayer (if observed):							
Type:	., (
Depth (incl	hes):						Hydric Soil Present?	Yes O No 💿
Remarks:								
Kemarks.								

Site: AEP Cari	ollton-C	Gable Rater(s): M.R.K	line, R.C.Massa	Date:	2/19/2019
		-	Field Id:		
1	1	Metric 1. Wetland Area (size).	W-MRK-021919-008	8 PEM	
max 6 pts	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.03 acre extends outside survey corrido		
1	2	Metric 2. Upland buffers and su	irrounding land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only WIDE. Buffers average 50m (164ft) or more arour MEDIUM. Buffers average 25m to <50m (82 to <1 NARROW. Buffers average 10m to <25m (32ft to X VERY NARROW. Buffers average <10m (<32ft) a 2b. Intensity of surrounding land use. Select o	nd wetland perimeter (7) 64ft) around wetland perimeter (4) <82ft) around wetland perimeter (1) around wetland perimeter (0)	eck.	
	-	VERY LOW. 2nd growth or older forest, prairie, sa LOW. Old field (>10 years), shrubland, young sec MODERATELY HIGH. Residential, fenced pasture x HIGH. Urban, industrial, open pasture, row croppin	avannah, wildlife area, etc. (7) ond growth forest. (5) e, park, conservation tillage, new fallow field.	(3)	
7.0	9.0	Metric 3. Hydrology.			
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) x Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >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 None or none apparent (12) Recovered (7) Recovering (3) x Recent or no recovery (1) Metric 4. Habitat Alteration and	Check all disturbances obse	er human use (1) prest), complex (1) dor (1) pration. Score one or dbl of d/saturated (4) (3) 30cm (12in) (1) proted point source (nonstormwai filling/grading road bed/RR track dredging	
max 20 pts.	subtotal [4a. Substrate disturbance. Score one or double None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and a Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or double che None or none apparent (9) Recovered (6) Recovered (6) Recovering (3) X Recent or no recovery (1)	assign score. Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal x	shrub/sapling removal herbaceous/aquatic bed re sedimentation dredging	emoval

wetland 72 | test_Field 3/8/2019

Site: AEP	Carrollton-	Gable	Rater(s):	M.R.Kline, R.0	C.M	lassa	Date:	2/19/2019
					F	ield ld:		
	12	1			٧	V-MRK-021919-008 PEN	I	
	subtotal this p							
	0 12	Metric 5. Spec	al Wetland	s.				
max 10 pts.	subtotal	Check all that app	oly and score	as indicated.				
		Bog (10)						
		Fen (10) Old growth forest (10)						
		Mature forested wetland	d (5)					
		Lake Erie coastal/tributa			0)			
		Lake Erie coastal/tributa Lake Plain Sand Prairie						
		Relict Wet Praires (10)	s (Oak Operlings)(10)				
		Known occurrence state	e/federal threater	ed or endangered sp	pecies	s (10)		
		Significant migratory so						
	41 40	Category 1 Wetland. Se			_			
	1 13	Metric 6. Plant	communit	ies, intersper	rsio	n, microtopography.		
max 20pts.	subtotal	6a. Wetland Vege				egetation Community Cove		
		Score all present using	0 to 3 scale.			bsent or comprises <0.1ha (0.2471 ac resent and either comprises small par		
		Aquatic bed 1 Emergent				resent and either comprises small par egetation and is of moderate quality, c		
		Shrub				gnificant part but is of low quality	comprisco a	
		Forest				resent and either comprises significar		
		Mudflats				egetation and is of moderate quality or	r comprises a small	
		Open water Other		-		art and is of high quality resent and comprises significant part,	or more of wetland's 3	
		6b. horizontal (plan vi	ew) Interspersion			egetation and is of high quality	or more, or morando o	
		Select only one. High (5)			N	arrative Description of Vegetation	Quality	
		Moderately high(4)				ow spp diversity and/or predominance		
		Moderate (3)				sturbance tolerant native species		
		Moderately low (2) Low (1)				ative spp are dominant component of though nonnative and/or disturbance		
		x None (0)				an also be present, and species diver		
		6c. Coverage of invas	ive plants. Refer			oderately high, but generallyw/o prese		
		Table 1 ORAM long for				reatened or endangered spp to		
		or deduct points for cov Extensive >75% cover				predominance of native species, with nd/or disturbance tolerant native spp a		
		Moderate 25-75% cover				bsent, and high spp diversity and often		
		Sparse 5-25% cover (-1				e presence of rare, threatened, or en		
		x Nearly absent <5% cov	er (0)					
		Absent (1) 6d. Microtopography.		,		ludflat and Open Water Class Quali bsent <0.1ha (0.247 acres)	ty	
		Score all present using	0 to 3 scale.			ow 0.1 to <1ha (0.247 acres)		
		Vegetated hummucks/t	ussucks		2 M	loderate 1 to <4ha (2.47 to 9.88 acres	3)	
		Coarse woody debris >		(3 H	igh 4ha (9.88 acres) or more		
		Standing dead >25cm (Amphibian breeding po			м	licrotopography Cover Scale		
		suprission processing por		(0 A	bsent		
				-		resent very small amounts or if more	common	
				-		f marginal quality resent in moderate amounts, but not o	of highest	
Category 1				•		uality or in small amounts of highest q		
	13 GRAND	TOTAL(max 100 pts)			3 P	resent in moderate or greater amount	s	
					ar	nd of highest quality		

wetland 72 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 72

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 72

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 72

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 72

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 72

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 73

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project	City/County: Jefferson		Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	State: OH Sar	mpling Point:	W-MRK-021919-009 PEM	
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Rang	e: S 36 T	9N R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, conv	vex, none): concav	ve Slope: 3.0% / 1.7 °
Subregion (LRR or MLRA): LRR N		Lat.: 40.381067	Long.: -80.86687	Datum: NAD83
Soil Map Unit Name: BmD-Berks-Gu	ernsey complex, 15 to 25 p	ercent slopes	NWI classification:	N/A
Are climatic/hydrologic conditions on	the site typical for this time	e of year? Yes No (1	If no, explain in Rema	arks.)
			ormal Circumstances"	present? Yes No
		_	ded, explain any ansv	•
Summary of Findings - Att	ach site map show	ing sampling point loca	tions, transect	s, important features, etc.
Hydrophytic Vegetation Present?	Yes No			
Hydric Soil Present?	Yes ● No ○	Is the Sampled Ar	rea 🔾 🔾	
Wetland Hydrology Present?	Yes No	within a Wetland?		
This PEM wetland begins at a hillside wetland boundary follows edge of de			ya vaca dien dien	
Hydrology				
Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gau	True Aquation Hydrogen So Voxidized Rhi Presence of Recent Iron Thin Muck S Other (Explain (B7) No Depth (incomposite incomposite incomp	c Plants (B14) ulfide Odor (C1) izospheres along Living Roots (C3) Reduced Iron (C4) Reduction in Tilled Soils (C6) iurface (C7) ain in Remarks) hes): hes): hes): wetland	Surface Soil of Sparsely Veg Sparsely Veg Drainage Pat Moss Trim Li Dry Season of Crayfish Burr Saturation Vi Stunted or St Geomorphic Shallow Aqui Microtopogra FAC-neutral	etated Concave Surface (B8) terns (B10) nes (B16) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) tard (D3) sphic Relief (D4)
Remarks:				
Source of hydrology is spring seeps.				

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

		Dominant Species 2	Sampling Point: W-MRK-021919-009 PEM
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Indicator Cover Status	Dominance Test worksheet:
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
7. 2.		0.0%	mat are obt, racw, or rac.
3		0.0%	Total Number of Dominant
1		0.0%	Species Across All Strata: (B)
5		0.0%	Percent of dominant Species
)		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
7		0.0%	Prevalence Index worksheet:
3	0	0.0%	Total % Cover of: Multiply by:
	0 =	Total Cover	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:)	_	FACW species 135 x 2 = 270
	0		
)			· — —
3		0.0%	A 4
			UPL species $0 \times 5 = 0$
5	0		Column Totals: <u>145</u> (A) <u>310</u> (B)
)			Prevalence Index = B/A =2.138
7			Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
)		0.0%	✓ Dominance Test is > 50%
)		0.0%	✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0=	Total Cover	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%	be present, unless disturbed or problematic.
5		0.0%	Definition of Vegetation Strata:
		0.0%	Four Vegetation Strata:
S		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
·		= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
lerb Stratum (Plot size: <u>5' radius</u>)			Sapling/shrub stratum – Consists of woody plants, excluding
. Eupatorium perfoliatum		✓ 51.7% FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Poa palustris		✓ 20.7% FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
Juncus effusus		13.8%FACW	
. Apocynum cannabinum			ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Epilobium coloratum			
)			Five Vegetation Strata:
·			Tree - Woody plants, excluding woody vines, approximately
S			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
			Sapling stratum – Consists of woody plants, excluding
			woody vines, approximately 20 ft (6 m) or more in height and
	0		less than 3 in. (7.6 cm) DBH.
)		0.0%	Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Noody Vine Stratum (Plot size:)	145 =	: Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
	0	0.0%	plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2		0.0%	3 ft (1 m) in height.
3		0.0%	Woody vines – Consists of all woody vines, regardless of
	0	0.0%	height.
5	0	0.0%	
). 		0.0%	Hydrophytic Vegetation
··		= Total Cover	Present? Yes No
	•		

Soil Sampling Point: W-MRK-021919-009 PEM

Profile Descr		the depth i				onfirm the	absence of indicators.)	
Depth (inches)						Loc ²	Texture	Remarks
0-16	5YR 4/2	80	10YR 5/6	20	С	M,PL	Silty Clay Loam	10% oxidized rhizospheres.
	31K 1/2		10111 370				Sity Clay Louin	
						-		
							,	
1 Type: C-Con	centration D-Depletic	on DM-Dedu	uced Matrix CS-Cover	red or Coat	ted Sand Gr	aine 21 oc	ation: PL=Pore Lining. M=I	Matrix
Hydric Soil 1		JII. KM-Keut	iced Matrix, C3=Cover	eu oi Coai	leu Sanu Gi	allis -Luca		
Hydric Soil I			Dark Surface ((\$7)				ematic Hydric Soils ³ :
`	pedon (A2)		Polyvalue Belo		(S8) (MI RA	147.148)	2 cm Muck (A10)	(MLRA 147)
Black Hist			☐ Thin Dark Surf				Coast Prairie Red	ox (A16)
	Sulfide (A4)		Loamy Gleyed			,	(MLRA 147,148)	
	Layers (A5)		✓ Depleted Matri	-	,		Piedmont Floodpl (MLRA 136, 147)	lain Soils (F19)
	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dar	
	Below Dark Surface (A	\11)	Depleted Dark	Surface (F	7)		Other (Explain in	
Thick Dar	k Surface (A12)	•	Redox Depress	sions (F8)			Outer (Explain in	Kemanoy
Sandy Mu MLRA 147	ick Mineral (S1) (LRR I 7, 148)	N,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR	N,		
Sandy Gle	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	22)	2	
Sandy Re	dox (S5)		Piedmont Floo	dplain Soil	s (F19) (ML	RA 148)	Indicators of wetland hyd	hydrophytic vegetation and drology must be present,
Stripped I	Matrix (S6)		Red Parent Ma	iterial (F21	.) (MLRA 12	7, 147)		sturbed or problematic.
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	hes):						Hydric Soil Present?	Yes No
Remarks:								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Jefferson	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	ion Compan	у	State: OH Samplin	g Point: W-MRK-009 UPL
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range: S	36 T 9N R 3W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (concave, convex, n	one): convex Slope: 2.0% / 1.1 °
Subregion (LRR or MLRA): LRR N		Lat.:	40.380941 Lon	g.: 80.866787
Soil Map Unit Name: BmD-Berks-Gu	ernsey con	nplex, 15 to 25 percent	t slopes NWI	classification: N/A
Are climatic/hydrologic conditions on	the site ty	pical for this time of ye	$_{ m ear}$? Yes $leftilde{left}$ No $leftilde{igcap}$ (If no,	explain in Remarks.)
	, or Hydrol			Circumstances" present? Yes ● No ○
Are Vegetation , Soil	, or Hydrol	ogy naturally p	roblematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Att	ach site	map showing s		ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes O	No •		
Hydric Soil Present?	Yes O	No •	Is the Sampled Area	
Wetland Hydrology Present?	Yes O	No •	within a Wetland?	Yes ○ No •
Upland data point for W-MRK-009.	Surroundin	g land use is right-of-v	vay and forest.	
Hydrology				
Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	: required;			Surface Soil Cracks (B6)
Surface Water (A1)		☐ True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide (ogor (C1) eres along Living Roots (C3)	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
Water Marks (B1)		Presence of Reduc		Dry Season Water Table (C2)
Sediment Deposits (B2)			tion 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 R		Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		Outer (Explain in it	cinano)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery	(B7)			Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)				Microtopographic Relief (D4)
Aquatic Fauna (B13)				FAC-neutral Test (D5)
Field Observations:				
Surface Water Present? Yes	No 💿	Depth (inches):		
Water Table Present? Yes	No 💿	Depth (inches):		
Saturation Present? (includes capillary fringe)	No •	Depth (inches):		ology Present? Yes No •
Describe Recorded Data (stream gau	ige, monito	oring well, aerial photo	s, previous inspections), if avail	able:
Remarks:				
No source of hydrology.				

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

		Dominant Species 2	Sampling Point: W-MRK-009 UPL
Tree Stratum (Plot size:)	Absolute % Cover		30
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2		0.0%	mat are obt, racw, or rac.
3		0.0%	Total Number of Dominant
		0.0%	Species Across All Strata: 2 (B)
4		0.0%	Percent of dominant Species
5		0.0%	That Are OBL, FACW, or FAC: 0.0% (A/B)
6 7		0.0%	Prevalence Index worksheet:
		0.0%	Total % Cover of: Multiply by:
8		= Total Cover	OBL species
Sapling-Sapling/Shrub Stratum (Plot size:)		FACW species $0 \times 2 = 0$
1	0	0.0%	
2		0.0%	
3		0.0%	FACU species $\frac{145}{10}$ x 4 = $\frac{580}{10}$
4		0.0%	UPL species $\frac{10}{}$ x 5 = $\frac{50}{}$
5		0.0%	Column Totals: <u>155</u> (A) <u>630</u> (B)
6		0.0%	Prevalence Index = B/A = 4.065
7	0	0.0%	Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9		0.0%	Dominance Test is > 50%
0		0.0%	Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	_	= Total Cover	
1	0	0.0%	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
		0.0%	Problematic Hydrophytic Vegetation (Explain)
2	0	0.0%	1 Indicators of hydric coil and wotland hydrology must
3		0.0%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			Definition of Vegetation Strata:
5		0.0%	Four Vegetation Strata:
6		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
7	0	0.0%	in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5' radius</u>)		= Total Cover	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Phleum pratense	60	✓ 38.7% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Andropogon virginicus	40	✓ 25.8% FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Rubus allegheniensis	20	12.9% FACU	plants, regardless of size, and all other plants less than 3.28
4. Solidago canadensis	10	6.5% FACU	t tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Daucus carota	10	6.5%UPL	
6. Plantago major	10	6.5% FACU	Five Vegetation Strata:
7. Taraxacum officinale	5	3.2% FACU	Tree - Woody plants, excluding woody vines, approximately
8	0	0.0%	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	0.0%	diameter at breast height (DBH).
0		0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1		0.0%	less than 3 in. (7.6 cm) DBH.
2	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	155 =	= Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%	plants, including herbaceous vines, regardless of size, and
		0.0%	 woody species, except woody vines, less than approximately 3 ft (1 m) in height.
2		0.0%	Woody vines – Consists of all woody vines, regardless of
3		0.0%	height.
4			
5		0.0%	Hydrophytic
tai	0		Vegetation Present? Yes ○ No ●
6	0	= Total Cover	Present? Yes V No V

Soil Sampling Point: W-MRK-009 UPL

		the depth			r or confirm the	absence of indicators.)	
Depth (in aboa)	Matrix	0′		ox Features	1	- Tankon-	Demondre
(inches)	Color (moist)	100	Color (moist)	<u> % T</u>	vpe 1 Loc²	City Clay Learn	Remarks
0-16	7.5YR 4/4	100				Silty Clay Loam	
-							
¹ Type: C=Con	centration. D=Depletic	n. RM=Redu	iced Matrix, CS=Covere	ed or Coated S	and Grains ² Loo	cation: PL=Pore Lining. M=I	Matrix
Hydric Soil I						Indicators for Proble	ematic Hydric Soils ³ :
Histosol (,		Dark Surface (S	•		2 cm Muck (A10)	(MLRA 147)
Histic Epip	pedon (A2)		Polyvalue Belov	Surface (S8)	(MLRA 147,148)		
☐ Black Hist	ic (A3)		Thin Dark Surfa	ce (S9) (MLRA	147, 148)	Coast Prairie Red (MLRA 147,148)	DX (A16)
Hydrogen	Sulfide (A4)		Loamy Gleyed I	/latrix (F2)		Piedmont Floodpl	ain Soils (F19)
Stratified	Layers (A5)		Depleted Matrix	(F3)		(MLRA 136, 147)	ani 3013 (113)
2 cm Mucl	k (A10) (LRR N)		Redox Dark Sur	face (F6)		Very Shallow Dar	k Surface (TF12)
Depleted	Below Dark Surface (A	11)	Depleted Dark S	Surface (F7)		Other (Explain in	
Thick Darl	k Surface (A12)	,	Redox Depressi	ons (F8)		Outer (Explain in	Kemarksy
Sandy Mu	ck Mineral (S1) (LRR I	٧,	Iron-Manganese MLRA 136)	e Masses (F12)) (LRR N,		
MLRA 147			Umbric Surface	(F13) (ΜΙ DΔ	136 122)		
	eyed Matrix (S4)					³ Indicators of	hydrophytic vegetation and
Sandy Red			☐ Piedmont Flood			wetland hyd	Irology must be present,
☐ Stripped N	Matrix (S6)		Red Parent Mat	erial (F21) (M	LRA 127, 147)	unless di	sturbed or problematic.
Restrictive La	ayer (if observed):						
Туре:							
Depth (incl	hes):					Hydric Soil Present?	Yes O No 💿
Remarks:							
Remarks.							

Wetland 73

Site: AEP Carrollton	ı-Gable	Rater(s): M.R.Kli	ne, R.C.Massa	Date:	2/19/2019
			Field Id:	-	
0	0 Metric 1. Wetla	and Area (size).	W-MRK-021919-0	09 PEM	
max 6 pts subtotal	Select one size class >50 acres (>20.2ha) (6 25 to <50 acres (10.11 10 to <25 acres (4 to < 3 to <10 acres (1.2 to 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.42 to 1.4 to <0.44 to <4 x <0.1 acres (0.44a) (0	pts) o <20.2ha) (5 pts) 10.1ha) (4 pts) 44ha) (3 pts) ><1.2ha) (2pts) to <0.12ha) (1 pt)	0.02 ad	cres	
5	Metric 2. Upla	nd buffers and sur	rounding land use.		
max 14 pts. subtotal	WIDE. Buffers average MEDIUM. Buffers average X NARROW. Buffers aver VERY NARROW. Buff 2b. Intensity of surro VERY LOW. 2nd grow X LOW. Old field (>10 ye X MODERATELY HIGH.	s 50m (164ft) or more around age 25m to <50m (82 to <16 rage 10m to <25m (32ft to <16 rayes average <10m (<32ft) or carding land use. Select on the or older forest, prairie, savars), shrubland, young secor	4ft) around wetland perimeter (4) 82ft) around wetland perimeter (1) 9und wetland perimeter (0) 9 or double check and average. 9annah, wildlife area, etc. (7) 1d growth forest. (5) 9ark, conservation tillage, new fallow fiele		
8.0 13.0	Metric 3. Hydr	ology.			
max 30 pts. subtotal	None or none apparen Recovered (7) X Recovering (3) X Recent or no recovery	urface water (3) (r (lake or stream) (5) epth. Select one. (6in) (2) atural hydrologic regime. \$ (12)	Semi- to permanently inunda Regularly inundated/saturate Seasonally inundated (2) X Seasonally saturated in upport Check all disturbances ob ditch tile dike weir stormwater input	her human use (1) forest), complex (1) rridor (1) aturation. Score one or dbl a ted/saturated (4) ad (3) er 30cm (12in) (1)	
max 20 pts. subtotal 17.: subtotal th	None or none apparen Recovered (3) X Recovering (2) X Recent or no recovery 4b. Habitat developm Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Yeor (1) 4c. Habitat alteration None or none apparen Recovered (6) X Recovering (3) X Recent or no recovery	(1) ent. Select only one and as Score one or double chect (9)	k and average. Check all disturbances obse mowing grazing	rved X shrub/sapling removal herbaceous/aquatic bed rown sedimentation dredging farming nutrient enrichment	emoval

wetland 73 | test_Field 3/8/2019

Site: AEP Carrollton-Gable	Rater(s): M.R.Kline	e, R.C.	Massa	Date:	2/19/2019
			Field Id:		
17.5			W-MRK-021919-009 PEN	Л	
subtotal this page					
0 17.5 Metric 5. Spe	ecial Wetlands.				
max 10 pts. subtotal Check all that a	apply and score as indicat	ted.			
Bog (10)					
Fen (10)	0)				
Old growth forest (1 Mature forested wet					
	butary wetland-unrestricted hydrolo	ogy (10)			
	butary wetland-restricted hydrology				
	airies (Oak Openings) (10)				
Relict Wet Praires (
	state/federal threatened or endang r songbird/water fowl habitat or usa		ties (10)		
	. See Question 5 Qualitative Rating				
		,	ion, microtopography.		
max 20pts. subtotal 6a. Wetland Ve	getation Communities.		Vegetation Community Cove	er Scale	
Score all present us	ing 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
Aquatic bed		1	Present and either comprises small pa		
1 Emergent Shrub			vegetation and is of moderate quality, or significant part but is of low quality	or comprises a	
Forest		2	Present and either comprises significal	nt part of wetland's 2	
Mudflats		-	vegetation and is of moderate quality of		
Open water			part and is of high quality		
Other		3	Present and comprises significant part	, or more, of wetland's 3	
6b. horizontal (pla Select only one.	n view) Interspersion.		vegetation and is of high quality		
High (5)			Narrative Description of Vegetation	Quality	
Moderately high(4)			Low spp diversity and/or predominance		
Moderate (3)			disturbance tolerant native species		
Moderately low (2)			Native spp are dominant component of		
Low (1) x None (0)			although nonnative and/or disturbance		
	asive plants. Refer		can also be present, and species diver moderately high, but generallyw/o pres		
Table 1 ORAM long			threatened or endangered spp to	choc of fare	
or deduct points for	coverage		A predominance of native species, with	n nonnative spp high	
Extensive >75% cov			and/or disturbance tolerant native spp		
Moderate 25-75% c			absent, and high spp diversity and ofter		
Sparse 5-25% cove x Nearly absent <5%			the presence of rare, threatened, or er	idangered spp	
Absent (1)	5515. (0)		Mudflat and Open Water Class Qual	ity	
6d. Microtopograp	hy.	0	Absent <0.1ha (0.247 acres)	<u> </u>	
Score all present us			Low 0.1 to <1ha (0.247 to 2.47 acres)		
Vegetated hummucl			Moderate 1 to <4ha (2.47 to 9.88 acres High 4ha (9.88 acres) or more	s)	
Coarse woody debri		3	Inigit 4tta (9.86 acres) of filore		
Amphibian breeding			Microtopography Cover Scale		
	•		Absent		
		1	Present very small amounts or if more	common	
		- 2	of marginal quality	of highost	
Category 1		2	Present in moderate amounts, but not quality or in small amounts of highest of		
18.5 GRAND TOTAL(max 100 pt	s)	3	Present in moderate or greater amoun		
			and of highest quality		

wetland 73 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 73

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 73

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 73

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 73

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 73

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 74

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Jefferson		Sampling Date	e: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	sion Compan	у	State: OH Sa	mpling Point:	W-MRK-0219	19-010 PEM
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Rang	ge: S 36	T 9N	R 3W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (concave, con	vex, none): CO	ncave Slope:	: 2.0% / 1.1 °
Subregion (LRR or MLRA): LRR N		Lat.:	40.377602	Long.: -80.86	4516	Datum: NAD83
Soil Map Unit Name: BmD-Berks-Gu	ernsev con			NWI classification		
		• • • • • • • • • • • • • • • • • • • •	<u> </u>			
Are climatic/hydrologic conditions on				(If no, explain in R		es No
Are Vegetation, Soil	, or Hydrol			ormal Circumstan	ces" present?	.S © 110 C
Are Vegetation , Soil .	, or Hydrol	ogy 🗌 naturally p	roblematic? (If nee	eded, explain any	answers in Remarks	.)
Summary of Findings - Att	ach site	e map showing s	ampling point loca	ations, trans	ects, importan	t features, etc.
Hydrophytic Vegetation Present?	Yes	No O				
Hydric Soil Present?	Yes	No O	Is the Sampled A	rea 🕤		
Wetland Hydrology Present?	Yes	No O	within a Wetland		, ()	
Remarks:						
This PEM wetland begins at a hillside				ion. Water then d	drains to a small wat	ercourse. The
wetland boundary follows edge of d	epression a	ind hydrophytic vegeta	tion.			
Hydrology						
Wetland Hydrology Indicators:				Secondary I	ndicators (minimum of	two required)
Primary Indicators (minimum of one	e required;	check all that apply)		Surface	Soil Cracks (B6)	
Surface Water (A1)		True Aquatic Plants	s (B14)	Sparsely	Vegetated Concave Su	urface (B8)
High Water Table (A2)		Hydrogen Sulfide C	Odor (C1)	Drainage	e Patterns (B10)	
Saturation (A3)		✓ Oxidized Rhizosphe	eres along Living Roots (C3)	Moss Tri	im Lines (B16)	
☐ Water Marks (B1)		Presence of Reduce	ed Iron (C4)	☐ Dry Seas	son Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduct	tion in Tilled Soils (C6)	Crayfish	Burrows (C8)	
☐ Drift deposits (B3)		☐ Thin Muck Surface	(C7)	Saturation	on Visible on Aerial Ima	agery (C9)
☐ Algal Mat or Crust (B4)		Other (Explain in R	` '	Stunted	or Stressed Plants (D1)
☐ Iron Deposits (B5)		Other (Explain in N	cmarks)		phic Position (D2)	,
☐ Inundation Visible on Aerial Imager	/ (B7)				Aquitard (D3)	
Water-Stained Leaves (B9)	(5,)				pographic Relief (D4)	
Aquatic Fauna (B13)					itral Test (D5)	
Field Observations:				TAC-fieu	ital Test (D3)	
Surface Water Present? Yes	No 💿	Depth (inches):				
Water Table Present? Yes		Depth (inches):				
			Wetland	d Hydrology Prese	ent? Yes 💿 N	lo 🔾
(includes capillary fringe) Yes		Depth (inches):				
Describe Recorded Data (stream ga	uge, monito	oring well, aerial photo	s, previous inspections), i	f available:		
Remarks:						
Source of hydrology is spring seeps.						

Wetland 74 **VEGETATION (Five/Four Strata)- Use scientific names of plants.**

				ominant		Sampling Point: W-MRK-021919-010 PEM
Tr	ee Stratum (Plot size:)	Absolute % Cover	R	pecies? – el.Strat. over	Indicator Status	Dominance Test worksheet:
		0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
		0		0.0%		
				0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
				0.0%		Species Across Air Strata.
				0.0%		Percent of dominant Species That Are OBL FACW or FAC: 50.0% (A/B)
		_		0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)
		_		0.0%		Prevalence Index worksheet:
8.		0		0.0%		Total % Cover of: Multiply by:
-	pling-Sapling/Shrub Stratum (Plot size:	,	= T	otal Cover		OBL species 0 x 1 = 0
		_		0.0%		FACW species
				0.0%		FAC species $\underline{100}$ x 3 = $\underline{300}$
			\Box	0.0%		FACU species $10 \times 4 = 40$
				0.0%		UPL species $0 \times 5 = 0$
• • •				0.0%		Column Totals: 180 (A) 480 (B)
				0.0%		Prevalence Index = B/A = 2.667
-			\Box	0.0%		· —
				0.0%		Hydrophytic Vegetation Indicators:
			$\overline{\Box}$	0.0%		Rapid Test for Hydrophytic Vegetation
			$\overline{\Box}$	0.0%		☐ Dominance Test is > 50%
			 = T	otal Cover		✓ Prevalence Index is ≤3.0 ¹
	rub Stratum (Plot size: 15' radius)		 ✓	100.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
	Rubus allegheniensis			0.0%	FACU	Problematic Hydrophytic Vegetation (Explain)
				0.0%		
				0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				0.0%		Definition of Vegetation Strata:
				0.0%		Four Vegetation Strata:
				0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
	erb Stratum (Plot size: _5' radius)		= T	otal Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	Dichanthelium clandestinum	100	V	58.8%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
	Onoclea sensibilis	25		14.7%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
	Eupatorium perfoliatum	20		11.8%	FACW	plants, regardless of size, and all other plants less than 3.28
-	Phalaris arundinacea	20		11.8%	FACW	ft tall, Woody vines – Consists of all woody vines greater than 3.28
5.	Juncus effusus	5		2.9%	FACW	ft 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
-		0		0.0%		less than 3 in. (7.6 cm) DBH.
12.		0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
w	oody Vine Stratum (Plot size:)	170	= T	otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb stratum – Consists of all herbaceous (non-woody)
	/ / / / / / / / / / / / / / / / / / /	0	П	0.0%		plants, including herbaceous vines, regardless of size, and
				0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
				0.0%		Woody vines – Consists of all woody vines, regardless of
				0.0%		height.
				0.0%		
-		0		0.0%		Hydrophytic Vegetation
υ.			 = T	otal Cove		Present? Yes No
_	weeken (Tarabada ahata				•	
Ker	narks: (Include photo numbers here or on a separate she	eet.)				

Soil Sampling Point: W-MRK-021919-010 PEM

inches)	Matrix			dox Featu				
	Color (moist)		Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks 5% oxized rhizospheres
0-16	7.5YR 5/2	90	10YR 5/8	10	C	M,PL	Silty Clay Loam	
								· · · · · · · · · · · · · · · · · · ·
	-						-	· 9
	-	-						
	-	-					-	
		on. RM=Redu	iced Matrix, CS=Cove	red or Coat	ed Sand Gra	ins ² Loca	ation: PL=Pore Lining.	M=Matrix
	ndicators:		Davids Confessor	(67)			Indicators for Pr	oblematic Hydric Soils ³ :
Histosol (A	A1) Dedon (A2)		Dark Surface	. ,	'S8) (MI RA	147 148)	2 cm Muck (A	A10) (MLRA 147)
Black Histi			☐ Thin Dark Surf				Coast Prairie	
Hydrogen	Sulfide (A4)		Loamy Gleyed				(MLRA 147,14	odplain Soils (F19)
	Layers (A5)		✓ Depleted Matr				(MLRA 136, 1	.47)
	k (A10) (LRR N)		Redox Dark Su	. ,	7)		_	Dark Surface (TF12)
•	Below Dark Surface (A k Surface (A12)	11)	Depleted Dark Redox Depres		/)		Other (Explai	n in Remarks)
	ck Mineral (S1) (LRR N	٧,	☐ Iron-Mangane		F12) (LRR I	١,		
MLRA 147	', 148)	,	MLRA 136)	- (E12) (MI	DA 126 12	2)		
	eyed Matrix (S4)		Umbric Surfac				³ Indicators	s of hydrophytic vegetation and
Sandy Red			Red Parent Ma				wetland	hydrology must be present, s disturbed or problematic.
Stripped N	יומרו אווואוי		Red ratefit in	aterial (121)	(ITEIOT 12)	, 117)	diffes	s distarbed of problematici
Stripped N								
strictive La	ayer (if observed):							
strictive La	ayer (if observed):						Hydric Soil Present	t? Yes ◉ No ◯
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No
trictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No O
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Presen	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Presen	t? Yes • No O
trictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No ·
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No ·
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No
strictive La	ayer (if observed):						Hydric Soil Present	t? Yes • No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes No
strictive La Type: Depth (inch	ayer (if observed):						Hydric Soil Present	t? Yes • No

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV I	Project		City/County: Jefferson		Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	ion Compan	у	State: OH Samp	ling Point:	W-MRK-010-011 UPL
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range:	s 36 T 9	9N R 3W
	Hillside		Local relief (concave, convex	c, none): convex	Slope: 2.0% / 1.1 °
	Tillisiac	1-1-			Datum: NAD83
Subregion (LRR or MLRA): LRR N		Lat.:		-80.864401	
Soil Map Unit Name: BmE-Berks-Gue				VI classification: N	
Are climatic/hydrologic conditions on	the site ty	pical for this time of ye	ear? Yes ● No ◯ (Ifi	no, explain in Rema	-
Are Vegetation, Soil	, or Hydrol	ogy Significant	ly disturbed? Are "Norn	nal Circumstances"	present? Yes No
Are Vegetation . , Soil .	, or Hydrol	ogy 🗌 naturally p	oroblematic? (If neede	d, explain any answ	ers in Remarks.)
Summary of Findings - Att	ach site	e map showing s	sampling point locati	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes 🔾	No			
Hydric Soil Present?	Yes 🔾	No •	Is the Sampled Area	Yes O No •	
Wetland Hydrology Present?	Yes \bigcirc	No	within a Wetland?	res UNO U	
Remarks: Upland data point for W-MRK-010.	Surroundin	g land use is forest an	d right-of-way.		
Hydrology					
Wetland Hydrology Indicators:				_Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one	required;	check all that apply)		Surface Soil Co	racks (B6)
Surface Water (A1)		True Aquatic Plant	` '		tated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide (` '	Drainage Patte	` ,
Saturation (A3)			eres along Living Roots (C3)	Moss Trim Line	` '
☐ Water Marks (B1) ☐ Sediment Deposits (B2)		Presence of Reduc	` '		ater Table (C2)
Drift deposits (B3)			tion in Tilled Soils (C6)	Crayfish Burro	• •
Algal Mat or Crust (B4)		Thin Muck Surface	` '		ble on Aerial Imagery (C9) essed Plants (D1)
Iron Deposits (B5)		Other (Explain in F	Remarks)	Geomorphic P	` '
☐ Inundation Visible on Aerial Imagery	(B7)			Shallow Aguita	, ,
Water-Stained Leaves (B9)	(57)				hic Relief (D4)
Aquatic Fauna (B13)				FAC-neutral Te	` '
Field Observations:					(23)
Surface Water Present? Yes	No 💿	Depth (inches):			
Water Table Present? Yes	No 💿	Depth (inches):			
Saturation Present?	No •	Depth (inches):	Wetland H	ydrology Present?	Yes ○ No •
(includes capillary fringe) Describe Recorded Data (stream gau			os previous inspections) if a	vailables	
Describe Recorded Data (Stream gat	ige, monit	oring well, derial prioto	s, previous irispections), ir av	raliable.	
Remarks:					
No source of hydrology.					
ino source or riyurology.					

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

		Dominant		Sampling Point: W-MRK-010-011 UPL
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	Dominance Test worksheet:
	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)
1		0.0%		That are OBL, FACW, OF FAC.
3		0.0%		Total Number of Dominant
4		0.0%		Species Across All Strata:3 (B)
5		0.0%		Percent of dominant Species
6	_	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7	_	0.0%		Prevalence Index worksheet:
8		0.0%		Total % Cover of: Multiply by:
		= Total Cover		OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum_ (Plot size:)				FACW species $0 \times 2 = 0$
1	0			FAC species $0 \times 3 = 0$
2	0			,
3	0			0
4	0			ore species —— x y = ——
5	0			Column Totals: 110 (A) 440 (B)
6	0			Prevalence Index = $B/A = 4.000$
7				Hydrophytic Vegetation Indicators:
8	0			Rapid Test for Hydrophytic Vegetation
9	0			☐ Dominance Test is > 50%
10	0	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 15' radius)	:	= Total Cover		Morphological Adaptations ¹ (Provide supporting
1. Rubus allegheniensis	_10_	✓ 100.0%	FACU	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.
5	0	0.0%		Definition of Vegetation Strata:
6.		0.0%		Four Vegetation Strata:
7.	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
Herb Stratum (Plot size: 5' radius)	10 :	= Total Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	75	✓ 75.0%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding
1. Andropogon virginicus	20	✓ 73.0% ✓ 20.0%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Dactylis glomerata	5	5.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Plantago major 4.	0	0.0%	TACO	ft tall, Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%		ft in height.
6	0	0.0%		
7.	0	0.0%		Five Vegetation Strata:
8.	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0	0.0%		diameter at breast height (DBH).
9 10	0	0.0%		Sapling stratum – Consists of woody plants, excluding
11	0	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12.	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody
		= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
		0.00/		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1		0.0%		woody species, except woody vines, less than approximately
2		0.0%		3 ft (1 m) in height.
3		0.0%		Woody vines – Consists of all woody vines, regardless of height.
4		0.0%		
5		0.0%		Hydrophytic
6		0.0%		Vegetation Present? Yes No No
	0	= Total Cover	•	
Remarks: (Include photo numbers here or on a separate shee	et.)			

Soil Sampling Point: W-MRK-010-011 UPL

Profile Descript	ion: (Describe to	the depth ne	eded to document	the indic	ator or co	nfirm the	absence of indicators.)	
Depth —	Matrix		Red	lox Featu	res			
(inches)	Color (moist)		Color (moist)	<u>%</u>	Tvpe 1	Loc ²	Texture	Remarks
0-10	7.5YR 4/3	100					Silt Loam	
			-					
			-					
1 Type: C=Censen	stration D-Donlatio	n DM-Doduce	nd Matrix CS-Cover	ad or Coate	nd Cand Cr	nine 21 oc	ation: PL=Pore Lining. M=M	Antrix
, ·	<u>`</u>	n. RM=Reduce	ed Matrix, CS=Cover	ed or Coate	ed Sand Gr	ains ²Loca		
Hydric Soil Ind							Indicators for Proble	matic Hydric Soils ³ :
Histosol (A1)			Dark Surface (•	CO) (MI DA	1.47.1.40\	2 cm Muck (A10)	(MLRA 147)
Histic Epiped			Polyvalue Belov				Coast Prairie Redo	ox (A16)
Black Histic (Thin Dark Surfa			148)	(MLRA 147,148)	
Hydrogen Su			Loamy Gleyed				Piedmont Floodpla	ain Soils (F19)
Stratified Lay			Depleted Matrix				(MLRA 136, 147)	
2 cm Muck (/			Redox Dark Su	, ,	7)		Very Shallow Dark	Surface (TF12)
	ow Dark Surface (A	11)	Depleted Dark		')		Other (Explain in	Remarks)
☐ Thick Dark S			Redox Depress	. ,	E12\ /I DD	NI		
Sandy Muck MLRA 147, 1	Mineral (S1) (LRR N 48)	Ι,	Iron-Manganes MLRA 136)					
Sandy Gleye	d Matrix (S4)		Umbric Surface	(F13) (ML	RA 136, 12	22)	3	
Sandy Redox	c (S5)		Piedmont Floor	lplain Soils	(F19) (ML	RA 148)	Indicators of i	nydrophytic vegetation and rology must be present,
Stripped Mat	rix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	7, 147)		turbed or problematic.
Postrictive Lave	er (if observed):							
Type:	er (ii observed).							
Depth (inches							Hydric Soil Present?	Yes O No O
	9)							
Remarks:								
Shovel refusal a	t 10 inches.							

Wetland 74

Site: AEP Ca	rrollton-G	able Rate	r(s): M.R.Kline, I	R.C.Massa		Date:	2/19/2019
			· · · · · · · · · · · · · · · · · · ·	Field Id:			
(0	Metric 1. Wetland Ar	ea (size).	W-MRK-02191	9-010 PEM	l	
max 6 pts	subtotal	Select one size class and assi >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ht 10 to <25 acres (4 to <10.1ha) (6 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 <0.12l x <0.1 acres (0.04ha) (0 pts)	a) (5 pts) 4 pts) ts) (2pts)	0.03	acres		
		Metric 2. Upland but	fers and surrou	nding land use.			
max 14 pts.	subtotal	2a. Calculate average buffer w WIDE. Buffers average 50m (16 MEDIUM. Buffers average 25m X NARROW. Buffers average 10m VERY NARROW. Buffers average 2b. Intensity of surrounding la	4ft) or more around wetla to <50m (82 to <164ft) an to <25m (32ft to <82ft) a ge <10m (<32ft) around w	nd perimeter (7) ound wetland perimeter (4) iround wetland perimeter (1) vetland perimeter (0)	ble check.		
		VERY LOW. 2nd growth or older X LOW. Old field (>10 years), shru MODERATELY HIGH. Resident HIGH. Urban, industrial, open pa	bland, young second gro al, fenced pasture, park,	wth forest. (5) conservation tillage, new fallo	w field. (3)		
8.0	13.0	Metric 3. Hydrology.					
max 30 pts.	<u> </u>	3a. Sources of Water. Score al High pH groundwater (5)	ater (3) stream) (5) ect one. drologic regime. Score	Semi- to permanently in Regularly inundated/sa Seasonally inundated (x Seasonally saturated in one or double check and a Check all disturbance ditch tille dike weir stormwater input	(e.g. forest), com nd corridor (1) on/saturation. S onundated/saturate tturated (3) 2) n upper 30cm (12 verage. es observed x filling/gra	use (1) nplex (1) sicore one or dbl checl ed (4) tin) (1) urce (nonstormwater) ading td/RR track	c .
max 20 pts.		4a. Substrate disturbance. Sco None or none apparent (4) Recovered (3) X Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Sele Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score of None or none apparent (9) Recovered (6) X Recovering (3) X Recent or no recovery (1)	ct only one and assign	score.	x shrub/sa herbace x sedimen dredging farming		al

wetland 74 | test_Field 3/8/2019

Site: AEP Carrollton-Gable	Rater(s):	M.R.Kline, R	C.Massa	Date:	2/19/2019
			Field Id:	-	
17.5			W-MRK-021	1919-010 PEM	
subtotal this page					
0 17.5 Metric 5. Sp	ecial Wetlar	ıds.			
max 10 pts. subtotal Check all that	apply and sco	re as indicated.			
Bog (10)					
Fen (10) Old growth forest (10)				
Mature forested w					
		estricted hydrology (1	0)		
	ributary wetland-res rairies (Oak Openin	tricted hydrology (5)			
Relict Wet Praires		gs) (10)			
		ened or endangered	pecies (10)		
		wl habitat or usage (1			
		Qualitative Rating (-10			
0 17.5 Metric 6. Pl	ant commun	ities, interspe	rsion, microto	pography.	
	egetation Com	munities.		ommunity Cover Scale	
Score all present u	sing 0 to 3 scale.	-		ses <0.1ha (0.2471 acres) contiguous area	
Aquatic bed 1 Emergent				r comprises small part of wetland's 1 of moderate quality, or comprises a	
Shrub			significant part but		
Forest		-		r comprises significant part of wetland's 2	
Mudflats				of moderate quality or comprises a small	
Open water Other		-	part and is of high	orises significant part, or more, of wetland's 3	
	an view) Intersper	sion.	vegetation and is		
Select only one.			-		
High (5) Moderately high(4)				and/or predominance of nonnative or low	
Moderate (3)			disturbance tolera		
Moderately low (2)				minant component of the vegetation, mod	
Low (1)				e and/or disturbance tolerant native spp	
x None (0)	ıvasive plants. Re	fa		nt, and species diversity moderate to	
Table 1 ORAM lon		iei	threatened or end	out generallyw/o presence of rare angered spp to	
or deduct points fo				of native species, with nonnative spp high	
Extensive >75% c				e tolerant native spp absent or virtually	
Moderate 25-75% x Sparse 5-25% cov				spp diversity and often, but not always, are, threatened, or endangered spp	
Nearly absent <59			are presence or re	ine, threatened, or chadingered app	
Absent (1)	, ,			n Water Class Quality	
6d. Microtopogra		-	0 Absent < 0.1ha (0.		
Score all present u		-		0.247 to 2.47 acres) na (2.47 to 9.88 acres)	
Coarse woody deb		-	3 High 4ha (9.88 ac		
Standing dead >25			, - ,		
Amphibian breedir	g pools		Microtopography	/ Cover Scale	
		-	Absent Present very small	Il amounts or if more common	
			of marginal quality	•	
0.1		-		ate amounts, but not of highest	
Category 1		-		amounts of highest quality	
17.5 GRAND TOTAL(max 100	ots)		3 Present in modera	ate or greater amounts	
			and of highest qua	ality	

wetland 74 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 74

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 74

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 74

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 74

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 74

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 75

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project	City/County: Jefferson	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmission Company	State: OH Samplin	g Point: W-MRK-021919-011 PFO
Investigator(s): M.R.Kline, R.C.Massa	Section, Township, Range: S	36 T 9N R
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, n	one): concave Slope: 1.0% / 0.
Subregion (LRR or MLRA): LRR N Lat.:	40.376812 Lon	g.: -80.864345
Soil Map Unit Name: BmE-Berks-Guernsey complex, 25 to 40 percent		classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes O No (If no.	explain in Remarks.)
		Circumstances" present? Yes No
	-	circumstances present.
Are Vegetation, Soil, or Hydrology naturally pr	(explain any answers in Remarks.)
Summary of Findings - Attach site map showing s	ampling point locatior	ns, transects, important features, e
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes ● No ○	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present? Yes ● No ○	within a Wetland?	
Hydrology		
Water Marks (B1) Presence of Reduce	idor (C1) bres along Living Roots (C3) ed Iron (C4) cion in Tilled Soils (C6) (C7) emarks) 1 0 Wetland Hydr	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: Source of hydrology is spring seeps and seasoal flooding.		

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

		Dominant		Sampling Point: W-MRK-021919-011 PFO
Tree Stratum (Plot size: _30' radius)	Absolute % Cover		Indicator Status	
A	30	75.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)
1. Oimus rubra 2. Acer rubrum		25.0%	FAC	That are obe, thew, or the (v)
3		0.0%		Total Number of Dominant
		0.0%		Species Across All Strata:4(B)
4		0.0%		Percent of dominant Species
5		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6 7		0.0%		Prevalence Index worksheet:
		0.0%		Total % Cover of: Multiply by:
8		= Total Cover		
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius)	- Total Cover		
1 _ Ulmus rubra	10	✓ 100.0%	FAC	FACW species $10 \times 2 = 20$
2	0	0.0%		FAC species $\underline{50}$ x 3 = $\underline{150}$
3		0.0%		FACU species $0 \times 4 = 0$
4.		0.0%		UPL species $0 \times 5 = 0$
5		0.0%		Column Totals: <u>160</u> (A) <u>270</u> (B)
6.		0.0%		Prevalence Index = B/A = 1.688
7		0.0%		, <u>-</u>
8		0.0%		Hydrophytic Vegetation Indicators:
9		0.0%		Rapid Test for Hydrophytic Vegetation
0		0.0%		✓ Dominance Test is > 50%
		= Total Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)				Morphological Adaptations ¹ (Provide supporting
1				data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation 1 (Explain)
2	0			Problematic Hydrophytic Vegetation (Explain)
3				¹ Indicators of hydric soil and wetland hydrology must
4	0			be present, unless disturbed or problematic.
5	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),
Herb Stratum (Plot size: <u>5' radius</u>)	:	= Total Cover		regardless of height.
1. Symplocarpus foetidus	100	90.9%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Onoclea sensibilis	10	9.1%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3	0	0.0%		plants, regardless of size, and all other plants less than 3.28
4	0	0.0%		fit tall, Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%		ft in height.
6	0	0.0%		Five Vegetation Strata:
7	0	0.0%		
3		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%		diameter at breast height (DBH).
).		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
5 1		0.0%		less than 3 in. (7.6 cm) DBH.
2		0.0%		Shrub stratum – Consists of woody plants, excluding woody
		= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)				Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1	0			woody species, except woody vines, less than approximately
2				3 ft (1 m) in height.
3				Woody vines – Consists of all woody vines, regardless of
4	0	0.0%		height.
5	0	0.0%		Hydrophytic
6	0	0.0%		Vegetation Vac A Na O
	0	= Total Cove		Present? Yes No

Soil Sampling Point: W-MRK-021919-011 PFO

Profile Descr		the depth i				onfirm the	absence of indicators.)	
Depth	Matrix	0′		dox Featu	res 1	1 2	Tandan	Damant
(inches) 0-16	Color (moist) 2.5YR 4/1	% 85	Color (moist) 10YR 5/8	% 15	Tvpe 1	Loc ² M,PL	Texture Silty Clay	Remarks 5% oxidized rhizospheres
	2.511		10110 3/0				Sity Clay	_
							-	
	-					-		
								_
1 Type: C-Con	centration D-Depletic	on DM-Dedu	uced Matrix CS-Cover	red or Coat	ted Sand Gr	aine 21 oc	ation: PL=Pore Lining. M=	-Matrix
Hydric Soil 1		JII. KIII–Keut	iced Matrix, C3=Cover	eu or coar	led Salid Gi	allis -Loca		
Hydric Soil I			Dark Surface ((\$7)				lematic Hydric Soils ³ :
`	pedon (A2)		Polyvalue Belo		(S8) (MI RA	147.148)	2 cm Muck (A10)) (MLRA 147)
Black Hist			☐ Thin Dark Surf				Coast Prairie Re	
	Sulfide (A4)		Loamy Gleyed			,	(MLRA 147,148)	
	Layers (A5)		✓ Depleted Matri		,		Piedmont Flood (MLRA 136, 147	plain Soils (F19) ')
	k (A10) (LRR N)		Redox Dark Su					ark Surface (TF12)
	Below Dark Surface (A	\11)	Depleted Dark	Surface (F	7)		Other (Explain in	
Thick Dar	k Surface (A12)	•	Redox Depress	sions (F8)			Other (Explain)	in remarks)
Sandy Mu MLRA 147	uck Mineral (S1) (LRR 7, 148)	N,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR	N,		
Sandy Gle	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	22)	2	
Sandy Re	dox (S5)		Piedmont Floo	dplain Soil	s (F19) (ML	RA 148)	³ Indicators o wetland by	f hydrophytic vegetation and ydrology must be present,
Stripped I	Matrix (S6)		Red Parent Ma	iterial (F21	.) (MLRA 12	7, 147)		disturbed or problematic.
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	hes):						Hydric Soil Present?	Yes No
Remarks:								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project	City/County: Jefferson	Sampling Date: 19-Feb-19							
Applicant/Owner: AEP Ohio Transmission Company	State: OH Sampl	ing Point: W-MRK-010-011 UPL							
Investigator(s): M.R.Kline, R.C.Massa	Section, Township, Range:	Section, Township, Range: S 36 T 9N R 3W							
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex,								
		2.070							
Subregion (LRR or MLRA): LRR N									
Soil Map Unit Name: BmE-Berks-Guernsey complex, 25 to 40 percent slopes NWI classification: N/A									
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No O (If no, explain in Remarks.)									
Are Vegetation . , Soil . , or Hydrology . significantly disturbed? Are "Normal Circumstances" present? Yes . No .									
Are Vegetation . , Soil . , or Hydrology . naturally problematic? (If needed, explain any answers in Remarks.)									
Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? Yes O No									
Hydric Soil Present? Yes No	Is the Sampled Area	Yes ○ No ●							
Wetland Hydrology Present? Yes O No	within a Wetland?	res UNO U							
Remarks: Upland data point for W-MRK-010. Surrounding land	l use is forest and right-of-way.								
Hydrology									
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)							
Primary Indicators (minimum of one required; check	all that apply)	Surface Soil Cracks (B6)							
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)							
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)							
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)							
Water Marks (B1) Sediment Deposits (B2)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)							
Drift deposits (B3)		Saturation Visible on Aerial Imagery (C9)							
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)							
Iron Deposits (B5)	Other (Explain in Remarks)	Geomorphic Position (D2)							
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)							
Water-Stained Leaves (B9)		Microtopographic Relief (D4)							
Aquatic Fauna (B13)		FAC-neutral Test (D5)							
Field Observations:									
Surface Water Present? Yes No •	Depth (inches):								
Water Table Present? Yes No •	Depth (inches):								
Saturation Present? (includes capillary frings) Yes No No	Depth (inches):	drology Present? Yes O No 💿							
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									
No source of hydrology.									
The source of flydrology.									

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

	Dominant			Sampling Point: W-MRK-010-011 UPL		
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	Dominance Test worksheet:		
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)		
2.	0	0.0%				
3		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)		
4		0.0%		Species Across All Strata		
5.		0.0%		Percent of dominant Species		
6	_	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)		
7.	_	0.0%		Prevalence Index worksheet:		
8		0.0%		Total % Cover of: Multiply by:		
	0 :	= Total Cover		OBL species 0 x 1 = 0		
Sapling-Sapling/Shrub Stratum_ (Plot size:)				FACW species $0 \times 2 = 0$		
1				FAC species $0 \times 3 = 0$		
2				FACU species $\frac{110}{2}$ x 4 = $\frac{440}{2}$		
3				0		
4	0			(2)		
5	0			Column Totals: <u>110</u> (A) <u>440</u> (B)		
6	0			Prevalence Index = B/A = 4.000		
7				Hydrophytic Vegetation Indicators:		
8	0			Rapid Test for Hydrophytic Vegetation		
9	0			☐ Dominance Test is > 50%		
10	0	0.0%		Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size: 15' radius)	:	= Total Cover		Morphological Adaptations ¹ (Provide supporting		
1. Rubus allegheniensis	10	100.0%	FACU	data in Remarks or on a separate sheet)		
2	0	0.0%		$igsqcup$ 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.		
5	0	0.0%		Definition of Vegetation Strata:		
6		0.0%		Four Vegetation Strata:		
7.	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3		
Herb Stratum (Plot size: 5' radius) 10 = Total Cover			in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
4	75	✓ 75.0%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding		
Andropogon virginicus Dactylis glomerata		20.0%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
3. Plantago major	5	5.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28		
4.	0	0.0%	TACO	ft tall. Woody vines – Consists of all woody vines greater than 3.28		
5	0	0.0%		ft in height.		
6.	0	0.0%				
7.	0	0.0%		Five Vegetation Strata:		
8.	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in		
9.	0	0.0%		diameter at breast height (DBH).		
9 10	0	0.0%		Sapling stratum – Consists of woody plants, excluding		
11	0	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
12.	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody		
		= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Woody Vine Stratum (Plot size:)	0	0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and		
1				woody species, except woody vines, less than approximately		
2		0.0%		3 ft (1 m) in height.		
3	0	0.0%		Woody vines – Consists of all woody vines, regardless of height.		
4		0.0%				
5	-	0.0%		Hydrophytic		
6				Vegetation Present? Yes ○ No ●		
	0	= Total Cover	•			
Remarks: (Include photo numbers here or on a separate shee	et.)					

Soil Sampling Point: W-MRK-010-011 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth Matrix Redox Features									
(inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc2	Texture	Remarks	
0-10	7.5YR 4/3	100					Silt Loam		
	 -								
1 Type: C=Censen	stration D-Donlatio	n DM-Doduc	ad Matrix CS-Cover	ad or Coate	nd Cand Cr	nine 21 oc	ation: PL=Pore Lining. M=M	latriv	
, ·		n. RM=Reduc	ed Matrix, CS=Cover	ed or Coate	ed Sand Gr	ains ²Loca			
Hydric Soil Ind							Indicators for Proble	matic Hydric Soils ³ :	
Histosol (A1)			☐ Dark Surface (S	•	CO) (MI DA	1.47.1.40\	2 cm Muck (A10)	(MLRA 147)	
Histic Epiped			Polyvalue Belov				Coast Prairie Redo	x (A16)	
Black Histic (☐ Thin Dark Surfa			148)	(MLRA 147,148)	, ,	
Hydrogen Su			Loamy Gleyed				Piedmont Floodpla	nin Soils (F19)	
Stratified Lay			Depleted Matrix				(MLRA 136, 147)		
2 cm Muck (/			Redox Dark Sur	` ,	7)		Very Shallow Dark	Surface (TF12)	
_ `	low Dark Surface (A	11)	Depleted Dark		′)		Other (Explain in I	Remarks)	
☐ Thick Dark S			Redox Depress	. ,	E12) /I DD	NI			
Sandy Muck MLRA 147, 1	Mineral (S1) (LRR N 48)	Ι,	Iron-Manganes MLRA 136)						
Sandy Gleye	d Matrix (S4)		Umbric Surface	(F13) (ML	RA 136, 12	22)	3		
Sandy Redox	(S5)		Piedmont Floor	lplain Soils	(F19) (ML	RA 148)	Indicators of r wetland hyd	nydrophytic vegetation and rology must be present,	
Stripped Mat	trix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	7, 147)		turbed or problematic.	
Postrictive Lave	er (if observed):								
Type:	ei (ii obseiveu).								
Depth (inches							Hydric Soil Present?	Yes O No •	
	9)								
Remarks:									
Shovel refusal a	t 10 inches.								

Site: AEP Carrollton	n-Gable	Rater(s): M.R.Klin	e, R.C.Massa	Date:	2/19/2019
		•	Field Id:	•	
2	2 Metric 1. Wetla	and Area (size).	W-MRK-021919	0-011 PFO	
max 6 pts subtotal	Select one size class >50 acres (>20.2ha) (6 25 to <50 acres (10.1 10 to <25 acres (4 to < 3 to <10 acres (1.2 to x 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04	5 pts) to <20.2ha) (5 pts) :10.1ha) (4 pts) <4ha) (3 pts) o <1.2ha) (2pts) l to <0.12ha) (1 pt)	0.13 extends outside the surv	acres vey corridor	
9 1	<0.1 acres (0.04ha) (0 Metric 2. Upla	pts) nd buffers and surr	ounding land use.		
max 14 pts. subtotal	2a. Calculate average WIDE. Buffers average X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buff 2b. Intensity of surro VERY LOW. 2nd grow	e buffer width. Select only on e 50m (164ft) or more around v rage 25m to <50m (82 to <164ferage 10m to <25m (32ft to <8) ers average <10m (<32ft) arou	te and assign score. Do not doub wetland perimeter (7) ft) around wetland perimeter (4) 2ft) around wetland perimeter (1) ind wetland perimeter (0) or double check and average. nnah, wildlife area, etc. (7)	le check.	
	MODERATELY HIGH.	,	ark, conservation tillage, new fallow	field. (3)	
17.0 28.	0 Metric 3. Hydr	ology.			
max 30 pts. subtotal	High pH groundwater (x Other groundwater (3) x Precipitation (1) x Seasonal/Intermittent seasonal/Intermitten	surface water (3) er (lake or stream) (5) lepth. Select one. 7.6in) (2) natural hydrologic regime. Select (12)	Semi- to permanently in Regularly inundated/satt Seasonally inundated (2 x Seasonally saturated in core one or double check and ave Check all disturbances ditch tile dike weir stormwater input	d other human use (1) e.g. forest), complex (1) d corridor (1) n/saturation. Score one or dbl urated (3)) upper 30cm (12in) (1) erage.	
max 20 pts. subtotal	None or none apparen x Recovered (3) Recovering (2) Recent or no recovery 4b. Habitat developm Excellent (7) Very good (6) Good (5) Moderately good (4) x Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration None or none apparen x Recovered (6) Recovering (3) Recent or no recovery	(1) lent. Select only one and ass Score one or double check t (9)	ign score.	observed shrub/sapling removal herbaceous/aquatic bed i sedimentation dredging farming nutrient enrichment	removal
	is page ORAM v. 5.0 Field For	m Quantitative Rating			

wetland 75 | test_Field 3/8/2019

Site: AEP Car	rollton-G	able Rater(s): M.R.Kline, F	R.C.Massa	Date:	2/19/2019
			Field Id:		
	40		W-MRK-021919-0	11 PFO	
0	subtotal this page	Metric 5. Special Wetlands.			
max 10 pts.	subtotal	Check all that apply and score as indicated Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrology (1) Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Praires (10) Known occurrence state/federal threatened or endangered Significant migratory songbird/water fowl habitat or usage (1) Category 1 Wetland. See Question 5 Qualitative Rating (-1)	(10) I species (10) (10) (0)		
5	45	Metric 6. Plant communities, intersp			
max 20pts.		6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale. Aquatic bed Emergent Shrub 1 Forest Mudflats Open water Other 6b. horizontal (plan view) Interspersion. Select only one. High (5) Moderately high(4) Moderately high(4) Moderately low (2) Low (1) None (0) 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	Present and either comprise vegetation and is of moderar significant part but is of low Present and either comprise vegetation and is of moderar part and is of high quality Present and comprises sign vegetation and is of high quality Present and comprises sign vegetation and is of high quality Narrative Description of V Low spp diversity and/or predisturbance tolerant native s Native spp are dominant co although nonnative and/or of can also be present, and sp moderately high, but genera threatened or endangered s A predominance of native si and/or disturbance tolerant	a (0.2471 acres) contiguous area es small part of wetland's 1 ate quality, or comprises a quality es significant part of wetland's 2 ate quality or comprises a small nificant part, or more, of wetland's failty editional expectation and expected in a control of the vegetation and isturbance tolerant native spp pecies diversity moderate to expect of the pecies, with nonnative spp high native spp absent or virtually ity and often, but not always,	
Category 2		Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools	Mudflat and Open Water C 0 Absent < 0.1ha (0.247 acres 1 Low 0.1 to < 1ha (0.247 to 2 2 Moderate 1 to < 4ha (2.47 to 2 3 High 4ha (9.88 acres) or mo	Class Quality s) 4.47 acres) 5.9.88 acres) ore clase s or if more common sits, but not of highest of highest quality	

wetland 75 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 75

Date:

February 19, 2019

Description:

PFO

Category 2

Facing North



Wetland 75

Date:

February 19, 2019

Description:

PFO

Category 2

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 75

Date:

February 19, 2019

Description:

PFO

Category 2

Facing South



Wetland 75

Date:

February 19, 2019

Description:

PFO

Category 2

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 75

Date:

February 19, 2019

Description:

PFO

Category 2

Soil Pit



Wetland 76

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Jefferso	on		S	Sampling Date:	19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	sion Compan	у	State: OH	Sampling	, Poi	int: W	-MRK-02191	9-012 PEM
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, R	ange: S	3	86 T 9N		R 3W
Landform (hillslope, terrace, etc.):	Bench		Local relief (concave, c	convex, no	one)	: concave	Slope:	1.0% / 0.6
Subregion (LRR or MLRA): LRR N		Lat.:	40.375552	Long		-80.863259		Datum: NAD83
Soil Map Unit Name: BmD-Berks-Gu	erncey con				_	ification: N/A		10.000
•	· · · · · · · · · · · · · · · · · · ·		·	_				
Are climatic/hydrologic conditions on				-	-	ain in Remark		(a) No. (1)
Are Vegetation, Soil	, or Hydrol	ogy 🗌 significantl	y disturbed? Are	"Normal (Circu	umstances" pr	esent? Yes	No
Are Vegetation \square , Soil \square	, or Hydrol	ogy 🗌 naturally p	roblematic? (If r	needed, e	xpla	in any answer	s in Remarks.)	
Summary of Findings - Att	ach site	map showing s	ampling point lo	ocation	s, t	transects,	important	features, etc.
Hydrophytic Vegetation Present?	Yes 💿	No O						
Hydric Soil Present?	Yes	No O	Is the Sample	d Area 、	Voc	● No ○		
Wetland Hydrology Present?	Yes	No O	within a Wetla	and?	165			
This PEM wetland is located on a hil boundary follows edge of depression		within a depression. \	Watercourse S-MRK-01:	.3 drains i	nto :	the the small o	lepression. Th	e wetland
Hydrology								
Wetland Hydrology Indicators:				-	Seco	ondary Indicators	s (minimum of tv	vo required)
Primary Indicators (minimum of one	e required;			[Surface Soil Crac	:ks (B6)	
Surface Water (A1)		✓ True Aquatic Plants	• •	[ted Concave Surf	face (B8)
✓ High Water Table (A2)		Hydrogen Sulfide C	` '	Į	<u> </u>	Drainage Patterr	ıs (B10)	
✓ Saturation (A3)			eres along Living Roots (C	3)		Moss Trim Lines	. ,	
Water Marks (B1)		Presence of Reduce	* *	ļ		Dry Season Wate		
Sediment Deposits (B2)			tion in Tilled Soils (C6)	J		Crayfish Burrows	` '	
Drift deposits (B3)		☐ Thin Muck Surface		l I			e on Aerial Imag	ery (C9)
Algal Mat or Crust (B4)		U Other (Explain in R	lemarks)	l I		Stunted or Stress	. ,	
Iron Deposits (B5)	, (D7)			l I		Geomorphic Posi	. ,	
☐ Inundation Visible on Aerial Imagery ✓ Water-Stained Leaves (B9)	(67)			ا [Shallow Aquitard		
				ا [Microtopographic		
Aquatic Fauna (B13)				L	V	FAC-neutral Test	(D5)	
Field Observations: Surface Water Present? Yes	No O	Depth (inches):	5					
Water Table Present? Yes								
		Depth (inches):	Wetla	and Hydro	ology	y Present?	Yes No	\circ
(includes capillary fringe) Yes		Depth (inches):	0					
Describe Recorded Data (stream gai	uge, monito	oring well, aerial photo	s, previous inspections)), if availa	ible:			
_								
Remarks:		_						
Source of hydrology is spring seeps	and stream	flow.						

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

Absolute % Cover	-Species? Indicator	Dominance Test worksheet:
	Cover Status	
0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
		inat are obt, facw, of fac.
		Total Number of Dominant
		Species Across All Strata:
	0.0%	Percent of dominant Species
	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 0 x 1 = 0
)		FACW species <u>25</u> x 2 = <u>50</u>
0		FAC species $0 \times 3 = 0$
0	0.0%	<u> </u>
0		
	0.0%	l ·
0	0.0%	Column Totals: 25 (A) 50 (B)
		Prevalence Index = $B/A = \underline{2.000}$
		Hydrophytic Vegetation Indicators:
		✓ Rapid Test for Hydrophytic Vegetation
0_		✓ Dominance Test is > 50%
0	0.0%	✓ Prevalence Index is ≤3.0 ¹
0 :	= Total Cover	Morphological Adaptations ¹ (Provide supporting
0	0.0%	data in Remarks or on a separate sheet)
	0.0%	Problematic Hydrophytic Vegetation 1 (Explain)
0	0.0%	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%	Four Vegetation Strata:
0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
0 :	= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
25	✓ 100.0% FACW	Sapling/shrub stratum – Consists of woody plants, excluding
		vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
		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 in height.
		Five Vegetation Strata:
		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
		diameter at breast height (DBH).
		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
		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
	0.0%	3 ft (1 m) in height.
		Woody vines – Consists of all woody vines, regardless of
0		height.
0		Hydrophytic
0		Vegetation Var A Na C
0	= Total Cover	Present? Yes No V
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers

Soil Sampling Point: W-MRK-021919-012 PEM

Depth	Matrix		Re	dox Featu				
(inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks
0-16	10YR 5/2	80	10YR 5/8	20	C	M,PL	Silty Clay Loam	10% oxidized rhizospheres
	-							
							-	
vne: C=Con	centration D=Denleti	on RM=Red	iced Matrix CS=Cove	red or Coat	ed Sand Gr	ains 21 oc	ation: PL=Pore Lining. I	M=Matrix
		on. Kin-Keu	ded Matrix, C3=Cove	red or coat	.eu Sanu Gre	all 15 -LOC		
Histosol (Indicators:		Dark Surface	(C7)			Indicators for Pro	oblematic Hydric Soils ³ :
`	pedon (A2)		Polyvalue Belo		/C0\ /MI D A	147 140)	2 cm Muck (A	10) (MLRA 147)
Black Hist			Thin Dark Sur				Coast Prairie F	
_	Sulfide (A4)		Loamy Gleyed			.40)	(MLRA 147,14	•
_	Layers (A5)		✓ Depleted Matr)			odplain Soils (F19)
_	k (A10) (LRR N)		Redox Dark Si				(MLRA 136, 1	•
-		A44)	Depleted Dark		:7)			Dark Surface (TF12)
	Below Dark Surface (A	AII)	Redox Depres		/)		Other (Explain	n in Remarks)
_	k Surface (A12)		☐ Iron-Mangane		(F12) (LDD L	N		
J Sandy Mu MLRA 147	uck Mineral (S1) (LRR 7, 148)	N,	MLRA 136)	3C 11033C3 ((1 12) (LIXIX I	ν,		
_	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	.2)		
Sandy Re			Piedmont Floo	dplain Soils	s (F19) (MLI	RA 148)	³ Indicators	of hydrophytic vegetation and
_	Matrix (S6)		Red Parent Ma					hydrology must be present, s disturbed or problematic.
						, ,		*
estrictive L	ayer (if observed):							
Type:							Hydric Soil Present	:? Yes • No O
Depth (inc	:hes):						nyuric Soil Present	.f fes © No C
emarks:								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Harrison	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	ion Compan	у	State: OH Samplin	g Point: W-MRK-012 UPL
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range: S	36 T 9N R 3W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (concave, convex, n	one): convex Slope: 2.0% / 1.1 °
Subregion (LRR or MLRA): LRR N		Lat.:	40.375464 Lon	g.: -80.863221 Datum: NAD83
Soil Map Unit Name: BmD-Berks-Gu	ernsey con	nplex, 15 to 25 percent	t slopes NWI	classification: N/A
Are climatic/hydrologic conditions on	the site ty	pical for this time of ye	ear? Yes • No O (If no,	explain in Remarks.)
	, or Hydrol			Circumstances" present? Yes ● No ○
Are Vegetation, Soil	, or Hydrol	ogy 🗌 naturally p	roblematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Att	ach site	e 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	
Wetland Hydrology Present?	Yes O	No •	within a Wetland?	Yes ○ No •
Upland data point for W-MRK-012.	Surroundin	g land use is forest and	d right-of-way.	
Hydrology				
Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	required;			Surface Soil Cracks (B6)
Surface Water (A1)		☐ True Aquatic Plants		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)☐ Sediment Deposits (B2)		Presence of Reduc	• •	Dry Season Water Table (C2)
Drift deposits (B3)			tion 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)		Other (Explain in R	Remarks)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery	(B7)			Shallow Aquitard (D3)
Water-Stained Leaves (B9)	,			Microtopographic Relief (D4)
Aquatic Fauna (B13)				FAC-neutral Test (D5)
Field Observations:				
Surface Water Present? Yes	No 💿	Depth (inches):		
Water Table Present? Yes	No •	Depth (inches):		
Saturation Present? (includes capillary fringe) Yes	No 💿	Depth (inches):	Wetland Hydi	ology Present? Yes O No 💿
Describe Recorded Data (stream gau	ıge, monito	oring well, aerial photo	s, previous inspections), if avail	able:
Remarks:				
No source of hydrology.				

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

	Domina	•	Sampling Point: W-MRK-012 UPL
Absolute % Cover		t. Indica	30
0	0.00	/ ₀	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
	0.0	/ ₀	
	0.09	/ ₀	Total Number of Dominant
	0.00	/o	Species Across All Strata: 3 (B)
			Percent of dominant Species
			That Are OBL, FACW, or FAC: 0.0% (A/B)
			Prevalence Index worksheet:
	\neg		Total % Cover of: Multiply by:
			OBL species 0 x 1 = 0
)	- rotar co	, vei	
0	0.0	%	· — —
	0.0	%	FAC species $0 \times 3 = 0$
	0.0	%	FACU species $\frac{120}{}$ x 4 = $\frac{480}{}$
	0.0	%	UPL species $\frac{5}{}$ x 5 = $\frac{25}{}$
	0.0	%	Column Totals: <u>125</u> (A) <u>505</u> (B)
0	0.0	%	Prevalence Index = B/A = 4,040
0	0.0	%	
	0.0	/ ₆	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
	0.0	/ ₀	
	0.0	/ ₆	Dominance Test is > 50%
			Prevalence Index is ≤3.0 ¹
	_		Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
	\neg		Problematic Hydrophytic Vegetation ¹ (Explain)
	\neg		- _
			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0.09	<u>//</u>	_
	0.09	<u>/</u>	Definition of Vegetation Strata:
0	0.09	<u>/</u>	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),
10 =	= Total Co	over	regardless of height.
50	✓ 43.5	% FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
	34.8	% FACU	Herb stratum – Consists of all herbaceous (non-woody)
10	8.79	% FACU	plants, regardless of size, and all other plants less than 3.28
10	8.79	% FACU	ft tall Woody vines – Consists of all woody vines greater than 3.28
	4.39	% UPL	ft in height.
	0.00	/ ₆	
	0.00	/o	Five Vegetation Strata:
	\neg		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
	\neg		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
			vines, approximately 3 to 20 ft (1 to 6 m) in height.
			Herb stratum – Consists of all herbaceous (non-woody)
		<u>/</u>	plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
		<u>/</u>	3 ft (1 m) in height.
0	0.0	<u>/</u>	Woody vines – Consists of all woody vines, regardless of
0	0.0	/o	height.
0	0.0	/o	- Under a house
0	0.0	/ ₀	Hydrophytic Vegetation Present? Yes No
			Present? Yes No •
	% Cover 0 </td <td>Absolute % Cover 0</td> <td>% Cover Cover Status 0 0.0% 0 0 0.0%</td>	Absolute % Cover 0	% Cover Cover Status 0 0.0% 0 0 0.0%

Soil Sampling Point: W-MRK-012 UPL

Depth -	Matrix		Red	lox Features	- , ———		
(inches)	Color (moist)	%	Color (moist)	% Type	Loc²	Texture	Remarks
0-16	2.5Y 5/4	100				Silty Clay Loam	
							_
pe: C=Conce	entration. D=Depletion	on. RM=Redu	iced Matrix, CS=Covere	ed or Coated Sand	d Grains ² Loc	ation: PL=Pore Lining. M=	-Matrix
dric Soil In			, , , , , , , , , , , , , , , , , , , ,				
Histosol (A:			☐ Dark Surface (S	57)			lematic Hydric Soils ³ :
Histic Epipe	,			v Surface (S8) (M	LRA 147,148)	2 cm Muck (A10	
Black Histic				ice (S9) (MLRA 14		Coast Prairie Rec	
	Sulfide (A4)		Loamy Gleyed N		•	(MLRA 147,148)	
Stratified La			Depleted Matrix			Piedmont Floodr (MLRA 136, 147	
2 cm Muck	(A10) (LRR N)		Redox Dark Sur	face (F6)		_ ` _ `	rk Surface (TF12)
	elow Dark Surface (A	A11)	Depleted Dark S	Surface (F7)		Other (Explain in	
Thick Dark	Surface (A12)		Redox Depressi	ons (F8)		outer (Explain ii	
Sandy Mucl MLRA 147,	k Mineral (S1) (LRR N 148)	Ν,	Iron-Manganese MLRA 136)	e Masses (F12) (L	RR N,		
	red Matrix (S4)		Umbric Surface	(F13) (MLRA 136	, 122)	2	
				Iplain Soils (F19)	(MLRA 148)	³ Indicators of	f hydrophytic vegetation and
Sandy Redo	ox (S5)			ipiaiii 50ii5 (i 15)	` ',	wetland by	idrology must be present
,				erial (F21) (MLRA		wetland hy	drology must be present, listurbed or problematic.
Sandy Redo	atrix (S6)					wetland hy	
Sandy Redo Stripped Ma						wetland hy	
Sandy Redo Stripped Ma strictive Lay Type:	atrix (S6) yer (if observed):					wetland hy	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type:	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.
Sandy Redo Stripped Ma strictive Lay Type: Depth (inche	atrix (S6) yer (if observed):					wetland hy unless d	listurbed or problematic.

Wetland 76

Site: AEP Carrolltor	n-Gable	Rater(s): M.R.Kline	, R.C.Ma	assa		Date:	2/19/2019
			Fi	eld ld:			
0	0 Metric 1. Wetla	nd Area (size).	W	-MRK-021919-	012 PEN	1	
max 6 pts subtotal	Select one size class a	pts) <20.2ha) (5 pts) 0.1ha) (4 pts) 4ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)		0.01	acres		
5	5 Metric 2. Uplan	d buffers and surro	unding	land use.			
max 14 pts. subtotal	WIDE. Buffers average MEDIUM. Buffers average X NARROW. Buffers aver VERY NARROW. Buffe 2b. Intensity of surrou VERY LOW. 2nd growt X LOW. Old field (>10 yea X MODERATELY HIGH. I	buffer width. Select only one at 50m (164ft) or more around wet ge 25m to <50m (82 to <164ft); ge 25m (32ft to <82ft); as average <10m (<32ft) around nding land use. Select one or n or older forest, prairie, savanna (rs), shrubland, young second gresidential, fenced pasture, parl open pasture, row cropping, mi	cland perime around weth around we around we wetland pe double che ah, wildlife a rowth forest c, conservat	ter (7) and perimeter (4) tland perimeter (1) rimeter (0) beck and average. rea, etc. (7) (5) ion tillage, new fallow f			
8.0 13.0			9,	(-)			
max 30 pts. subtotal	None or none apparent Recovered (7) X Recovering (3) X Recent or no recovery (urface water (3) (lake or stream) (5) pth. Select one. Sin) (2) atural hydrologic regime. Scot	100 Bee Pa Pa 3d See Ree See Per one or ditte title!	mi- to permanently inui gularly inundated/satur asonally inundated (2) asonally saturated in u ouble check and aver eck all disturbances ch	other human .g. forest), cor corridor (1) //saturation. 3 ndated/satura ated (3) pper 30cm (1: rage. observed point sc x filling/gi	use (1) mplex (1) Score one or dbl check ted (4) 2in) (1) burce (nonstormwater) rading dd/RR track	i.
max 20 pts. subtotal 17.: subtotal th	None or none apparent Recovered (3) X Recovering (2) X Recent or no recovery (4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. None or none apparent Recovered (6) X Recovering (3) X Recent or no recovery (nt. Select only one and assign Score one or double check an (9)	n score. Id average. Ch X m Grace Id cle Sel Woo	eck all disturbances of wing zing arcutting ective cutting ody debris removal ic pollutants	x shrub/s herbace x sedime dredgin farming	g	al

wetland 76 | test_Field 3/8/2019

Site: AEP Carrollton-Gable	Rater(s): M.R.Kline	e, R.C.	Massa	Date:	2/19/2019
			Field Id:		
17.5			W-MRK-021919-012 PEN	Л	
subtotal this page					
0 17.5 Metric 5. Sp	ecial Wetlands.				
max 10 pts. subtotal Check all that	apply and score as indica-	ted.			
Bog (10)					
Fen (10)	40)				
Old growth forest (Mature forested w					
	ributary wetland-unrestricted hydrol	oav (10)			
	ributary wetland-restricted hydrology				
	rairies (Oak Openings) (10)				
Relict Wet Praires					
	state/federal threatened or endang ry songbird/water fowl habitat or usa		cies (10)		
	d. See Question 5 Qualitative Ratin				
0 17.5 Metric 6. Pla	ant communities, inter	spers	ion, microtopography.		
max 20pts. subtotal 6a. Wetland V	egetation Communities.		Vegetation Community Cove	er Scale	
Score all present u	sing 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
Aquatic bed		1	Present and either comprises small pa		
1 Emergent Shrub			vegetation and is of moderate quality,	or comprises a	
Forest		2	significant part but is of low quality Present and either comprises significa	nt nart of wetland's 2	
Mudflats		_	vegetation and is of moderate quality of		
Open water			part and is of high quality	·	
Other	 -	3	Present and comprises significant part	, or more, of wetland's 3	
6b. horizontal (pi: Select only one.	an view) Interspersion.		vegetation and is of high quality		
High (5)			Narrative Description of Vegetation	Quality	
Moderately high(4)			Low spp diversity and/or predominance		
Moderate (3)			disturbance tolerant native species		
Moderately low (2)			Native spp are dominant component o		
Low (1) x None (0)			although nonnative and/or disturbance can also be present, and species divel		
	nvasive plants. Refer		moderately high, but generallyw/o pres		
Table 1 ORAM Ion			threatened or endangered spp to		
or deduct points fo			A predominance of native species, with		
Extensive >75% co			and/or disturbance tolerant native spp		
Moderate 25-75% x Sparse 5-25% cov			absent, and high spp diversity and often the presence of rare, threatened, or er		
Nearly absent <5%			are precented or rare, amedicinea, or or	idangered opp	
Absent (1)			Mudflat and Open Water Class Qual	ity	
6d. Microtopogra			Absent <0.1ha (0.247 acres)		
Score all present u			Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acre	0)	
Coarse woody deb			High 4ha (9.88 acres) or more	5)	
Standing dead >25			,		
Amphibian breedin	g pools		Microtopography Cover Scale		
			Absent		
		1	Present very small amounts or if more of marginal quality	common	
		2	Present in moderate amounts, but not	of highest	
Category 1			quality or in small amounts of highest o		
17.5 GRAND TOTAL(max 100 p	ots)	3	Present in moderate or greater amoun	ts	
			and of highest quality		

wetland 76 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 76

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 76

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 76

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 76

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 76

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 77

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project	City/County: Jefferson	Saı	mpling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmiss	sion Company	State: OH Samplin	Point: W-M	IRK-021919-013 PEM
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	36 T 9N	R 3W
Landform (hillslope, terrace, etc.):	Swale	Local relief (concave, convex, n	one): concave	Slope: 1.0% / 0.6 °
Subregion (LRR or MLRA): LRR N	Lat.:	40.374494 Lon	-80.862440	Datum: NAD83
Soil Map Unit Name: BmD-Berks-Gu			lassification: N/A	Dutum 10.000
· —	, , , , , , , , , , , , , , , , , , , ,	<u> </u>		
Are climatic/hydrologic conditions on			explain in Remarks.)	v
Are Vegetation, Soil	, or Hydrology significant	tly disturbed? Are "Normal	Circumstances" pres	ent? Yes • No O
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology 🗌 naturally រុ	oroblematic? (If needed, e	xplain any answers i	n Remarks.)
Summary of Findings - Att	tach site map showing	sampling point location	s, transects, ir	nportant 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?	tes © No C	
This PEM wetland begins at the edginto the forest on the opposite side of				inues across the ROW and
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	e required; check all that apply)		Surface Soil Cracks	s (B6)
Surface Water (A1)	True Aquatic Plant	ts (B14)	Sparsely Vegetated	l Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	, ,	Drainage Patterns	(B10)
Saturation (A3)	Oxidized Rhizosph	eres along Living Roots (C3)	Moss Trim Lines (B	16)
Water Marks (B1)	Presence of Reduc	ced Iron (C4)	Dry Season Water	
Sediment Deposits (B2)	Recent Iron Redu	ction in Tilled Soils (C6)	Crayfish Burrows (
Drift deposits (B3)	Thin Muck Surface	e (C7)		on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in	Remarks)	Stunted or Stresse	,
☐ Iron Deposits (B5)			Geomorphic Position	• ,
Inundation Visible on Aerial Imagery	y (B7)		Shallow Aquitard (I	•
Water-Stained Leaves (B9)			Microtopographic F	. ,
Aquatic Fauna (B13)			FAC-neutral Test (I	D5)
Field Observations:	• •			
Surface Water Present? Yes O	, , ,	1		
Water Table Present? Yes •	-1- (/	0Wotland Hydr	ology Present? Y	'es ● No ○
Saturation Present? (includes capillary fringe) Yes	No O Depth (inches):		Diogy Fresent:	C5 © 110 ©
Describe Recorded Data (stream gau	uge, monitoring well, aerial photo	os, previous inspections), if avail	able:	
Remarks:				
Source of hydrology is spring seeps	and stream flow.			
i e				

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

		Dominant Species 2	Sampling Point: W-MRK-021919-013 PEM
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Cover Indicator Status	Dominance Test worksheet:
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2.		0.0%	mature obe, racw, or rac.
3		0.0%	Total Number of Dominant
1		0.0%	Species Across All Strata:(B)
5		0.0%	Percent of dominant Species
5		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
7		0.0%	Prevalence Index worksheet:
3	0	0.0%	Total % Cover of: Multiply by:
	0 =	Total Cover	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species 95 x 2 = 190
			FAC species 0 x 3 = 0
2			FACU species $10 \times 4 = 40$
3			
·			
5			Corumn rocars: (A)
). ,			Prevalence Index = $B/A = \underline{2.190}$
7			Hydrophytic Vegetation Indicators:
3			✓ Rapid Test for Hydrophytic Vegetation
)			✓ Dominance Test is > 50%
)			✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		Total Cover	Morphological Adaptations ¹ (Provide supporting
	0	0.0%	data in Remarks or on a separate sheet)
2.	0	0.0%	Problematic Hydrophytic Vegetation (Explain)
3	0	0.0%	¹ Indicators of hydric soil and wetland hydrology must
·		0.0%	be present, unless disturbed or problematic.
5		0.0%	Definition of Vegetation Strata:
)		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),
lerb Stratum (Plot size: _5' radius)	=	Total Cover	regardless of height.
. Phalaris arundinacea	50	✓ 47.6% FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Onoclea sensibilis	20	✓ 19.0% FACW	Herb stratum – Consists of all herbaceous (non-woody)
B. Eupatorium perfoliatum	15	14.3%FACW	plants, regardless of size, and all other plants less than 3.28 ft tall.
. Juncus effusus	10	9.5% FACW	ft tall woody vines – Consists of all woody vines greater than 3.28 ft in height.
_ Dipsacus fullonum	10	9.5% FACU	
S			Five Vegetation Strata:
'	0		Tree - Woody plants, excluding woody vines, approximately
3	0		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
)			Sapling stratum – Consists of woody plants, excluding
)			woody vines, approximately 20 ft (6 m) or more in height and
	0		less than 3 in. (7.6 cm) DBH.
) <u> </u>	0		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Voody Vine Stratum (Plot size:)	105 =	Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
I		0.0%	plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
)	0	0.0%	3 ft (1 m) in height.
3	0	0.0%	Woody vines – Consists of all woody vines, regardless of
l			height.
j. ,	0		Hydrophytic
	0	0.0%	Vegetation Present? Yes No
5			Present? Yes No V

Soil Sampling Point: W-MRK-021919-013 PEM

(inches)	Matrix			dox Featur				
	Color (moist)	<u>%</u>	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0-16	10YR 4/2	80	10YR 5/8	_ 20	C	M	Silty Clay Loam	
e. C=Cond	rentration D=Depletion	n RM=Redu	ced Matrix CS=Cove	ed or Coate	d Sand Gra	ins 21 oca	ation: PL=Pore Lining. M=	Matrix
	ndicators:	II. KIII–Kedu	ccu Matrix, C5=Cover	cu or coate	a Sana Gre	1113 LOCE		
			Dark Surface (C7)			Indicators for Probl	ematic Hydric Soils ³ :
Histosol (<i>F</i>	edon (A2)		Polyvalue Belo	-	S8) (MI D A	147 148\	2 cm Muck (A10)	(MLRA 147)
ilsuc Epip Black Histi			Thin Dark Surf				Coast Prairie Red	ox (A16)
	Sulfide (A4)		Loamy Gleyed		LIVA 17/, I	.5)	(MLRA 147,148)	
	Layers (A5)		✓ Depleted Matri				Piedmont Floodp	
	(A10) (LRR N)		Redox Dark Su				(MLRA 136, 147)	
	Below Dark Surface (A:	11\	Depleted Dark	. ,)		_	k Surface (TF12)
•	selow Dark Surface (A. s Surface (A12)	11)	Redox Depress		,		Other (Explain in	Remarks)
	ck Mineral (S1) (LRR N		☐ Iron-Manganes		12) (I RR N	J.		
MLRA 147	ck Minerai (S1) (LRR N ', 148)	,	MLRA 136)) c 1 lasses	12) (LITT	•,		
	yed Matrix (S4)		Umbric Surfac	e (F13) (MLI	RA 136, 12	2)		
Sandy Red			Piedmont Floo	dplain Soils	(F19) (MLF	A 148)	³ Indicators of	hydrophytic vegetation and drology must be present,
	1atrix (S6)		Red Parent Ma	iterial (F21)	(MLRA 127	', 147)	unless di	sturbed or problematic.
	yer (if observed):							
ype:							Hydric Soil Present?	Yes No
epth (inch	nes):						Tryunc Son Tresent:	165 🔾 110 🔾
marks:								
arks:								
marks:								
narks:								
narks:								
arks:								
narks:								
narks:								
marks:								
arks:								
narks:								
narks:								
arks:								
arks:								
narks:								
marks:								
narks:								
narks:								
narks:								

Upland 77

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project/	oject	City/County: Jefferson	Sampling Date: 19-Feb-19
Applicant/Owner: AEP Ohio Transmissio	on Company	State: OH Samplin	g Point: W-MRK-013 UPL
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	36 T 9N R 3W
	Hillside	Local relief (concave, convex, n	
Subregion (LRR or MLRA): LRR N	Lat.:	40.374349 Lon	g.: -80.862408
Soil Map Unit Name: BmD-Berks-Guer			classification: N/A
Are climatic/hydrologic conditions on the			explain in Remarks.)
			v (a) N (
	or Hydrology	-	en cumstances present.
		(explain any answers in Remarks.)
	Yes No No No No No No No No	ampling point location	s, transects, important features, etc.
	Yes O No O	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present?	Yes O No O	widiiii a wedana:	
Remarks: Upland data point for W-MRK-013. Su	urrounding land use is forest and	l right-of-way.	
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one r	required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants	s (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide O	` '	Drainage Patterns (B10)
Saturation (A3)		eres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduce	• •	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduct	tion in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface	(C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in R	emarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)			Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:	(2)		
Surface Water Present? Yes	No Depth (inches):		
Water Table Present? Yes	No Depth (inches):	Watland Hade	ology Present? Yes No •
(includes capillary ininge)	No Depth (inches):		
Describe Recorded Data (stream gaug	e, monitoring well, aerial photos	s, previous inspections), if avail	able:
Remarks:			
No source of hydrology.			

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

		Dominant Species 2		Sampling Point: W-MRK-013 UPL
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	Dominance Test worksheet:
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2		0.0%		
3.		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4		0.0%		Species Across All Strata.
5		0.0%		Percent of dominant Species
6		0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7		0.0%		Prevalence Index worksheet:
8	0	0.0%		Total % Cover of: Multiply by:
	0 =	Total Cover		OBL species
Sapling-Sapling/Shrub Stratum (Plot size:				FACW species 0 x 2 = 0
1				FAC species $0 \times 3 = 0$
2			-	FACU species $150 \times 4 = 600$
3				UPL species $0 \times 5 = 0$
4				•
5				Column Totals:150 (A)600 (B)
6				Prevalence Index = $B/A = 4.000$
7				Hydrophytic Vegetation Indicators:
8				Rapid Test for Hydrophytic Vegetation
9				☐ Dominance Test is > 50%
0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 15' radius)	=	Total Cover		Morphological Adaptations ¹ (Provide supporting
1. Rubus allegheniensis	10	✓ 100.0%	FACU	data in Remarks or on a separate sheet)
2		0.0%		Problematic Hydrophytic Vegetation (Explain)
3		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4		0.0%		be present, unless disturbed or problematic.
5		0.0%		Definition of Vegetation Strata:
6		0.0%		Four Vegetation Strata:
7	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5' radius</u>)		= Total Cover		regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Andropogon virginicus	90	64.3%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Dactylis glomerata	25	17.9%	FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Achillea millefolium	25	17.9%	FACU	plants, regardless of size, and all other plants less than 3.28 ft tall.
4	0			ft tall Woody vines – Consists of all woody vines greater than 3.28 If in height.
5				
6				Five Vegetation Strata:
7	0			Tree - Woody plants, excluding woody vines, approximately
8				20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9				diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding
0		0.0%		woody vines, approximately 20 ft (6 m) or more in height and
1	0	0.0%		less than 3 in. (7.6 cm) DBH.
2		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:)	140 =	Total Cover		Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0	0.0%		3 ft (1 m) in height.
3		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0	0.0%		height.
5.	0	0.0%		
6	0	0.0%		Hydrophytic Vegetation
o		= Total Cover		Present? Yes No •
		= Total Cover		Tresent:

Soil Sampling Point: W-MRK-013 UPL

Profile Descr	iption: (Describe to	the depth	needed to document	t the indi	cator or co	nfirm the	absence of indicators.)	
Depth	Matrix			dox Featu	ires		_	
(inches)	Color (moist)		Color (moist)	%	Tvpe 1	Loc ²	<u>Texture</u>	Remarks
0-8	10YR 4/3						Silt Loam	
8-16	10YR 4/6	100					Silty Clay Loam	
							•	
							,	
¹ Type: C=Con	centration. D=Depletion	on. RM=Red	uced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=N	1atrix
Hydric Soil I	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :
Histosol (A1)		Dark Surface (•			2 cm Muck (A10)	-
	pedon (A2)		Polyvalue Belov				Coast Prairie Redo	
Black Hist			Thin Dark Surfa			L48)	(MLRA 147,148)	DY (WIO)
	Sulfide (A4)		Loamy Gleyed)		Piedmont Floodpl	ain Soils (F19)
	Layers (A5)		Depleted Matri				(MLRA 136, 147)	,
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	. ,			Very Shallow Dark	< Surface (TF12)
	Below Dark Surface (A	A11)	Depleted Dark		7)		Other (Explain in	Remarks)
	k Surface (A12)		Redox Depress		(E43) (LDD			
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR 7, 148)	N,	Iron-Manganes MLRA 136)					
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3 7	
Sandy Re	dox (S5)		Piedmont Floo	dplain Soils	s (F19) (ML	RA 148)	wetland hyd	hydrophytic vegetation and Irology must be present,
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)		sturbed or problematic.
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	hes):						Hydric Soil Present?	Yes O No 💿
Remarks:								

Site: AE	P Carrollton-Gable	Rater(s): M.R.Kl	ine, R.C.Massa	Date:	2/19/2019
	<u> </u>		Field Id:		
	1 1 Metric 1. W	etland Area (size).	W-MRK-021919-01	13 PEM	
max 6 pts	>50 acres (>20.2 25 to <50 acres (10 to <25 acres (3 to <10 acres (1 0.3 to <3 acres (t	10.1 to <20.2ha) (5 pts) 4 to <10.1ha) (4 pts) 2 to <4ha) (3 pts) .12 to <1.2ha) (2pts) (0.04 to <0.12ha) (1 pt)	0.06 ac extends outside survey corrid	ores dor	
		pland buffers and su	rrounding land use.		
max 14 pts.	WIDE. Buffers av MEDIUM. Buffers x NARROW. Buffer VERY NARROW	erage 50m (164ft) or more aroun average 25m to <50m (82 to <1) s average 10m to <25m (32ft to Buffers average <10m (<32ft) an	64ft) around wetland perimeter (4) <82ft) around wetland perimeter (1)	neck.	
	VERY LOW. 2nd x LOW. Old field (> x MODERATELY H	growth or older forest, prairie, sa 10 years), shrubland, young seco	vannah, wildlife area, etc. (7) ond growth forest. (5) e, park, conservation tillage, new fallow field	I. (3)	
	8.0 14.0 Metric 3. H	ydrology.			
max 30 pts.	High pH groundwat x Other groundwat x Precipitation (1) Seasonal/Intermit Perennial surface 3c. Maximum wx >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 x <0.4m (<15.7in) (3) 8e. Modification None or none ap Recovered (7) x Recovering (3) x Recent or no reco	tent surface water (3) water (lake or stream) (5) ter depth. Select one. to 27.6in) (2) 1) s to natural hydrologic regime. arent (12) every (1)	dike weir stormwater input	ner human use (1) forest), complex (1) ridor (1) turation. Score one or dbl ted/saturated (4) d (3) er 30cm (12in) (1) e.	
		abitat Alteration and	•		
max 20 pts.	None or none app Recovering (2) X Recovering (2) X Recent or no recc 4b. Habitat deve Excellent (7) Very good (6) Good (5) Moderately good Fair (3) Poor to fair (2) X Poor (1)	every (1) opment. Select only one and a (4) (4) (tion. Score one or double checkers)	ck and average. Check all disturbances obser x mowing grazing	rved shrub/sapling removal herbaceous/aquatic bed is sedimentation dredging farming nutrient enrichment	removal

wetland 77 | test_Field 3/8/2019

Site: AEP Carrollton-Gable	Rater(s): M.R.Klin	e, R.C.	Massa	Date:	2/19/2019
			Field Id:		
18.5			W-MRK-021919-013 PE	Л	
subtotal this page					
0 18.5 Metric 5. Sp	ecial Wetlands.				
max 10 pts. subtotal Check all that	apply and score as indica	ated.			
Bog (10)					
Fen (10)	40)				
Old growth forest (Mature forested we					
	ributary wetland-unrestricted hydro	logy (10)			
	ributary wetland-restricted hydrolog				
	rairies (Oak Openings) (10)				
Relict Wet Praires					
	state/federal threatened or endang y songbird/water fowl habitat or us		cies (10)		
	d. See Question 5 Qualitative Ratio				
-2 16.5 Metric 6. Pla	ant communities, inte	rspers	ion, microtopography.		
max 20pts. subtotal 6a. Wetland V	egetation Communities.		Vegetation Community Cov	er Scale	
Score all present u	sing 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
Aquatic bed		1	Present and either comprises small pa		
1 Emergent Shrub			vegetation and is of moderate quality, significant part but is of low quality	or comprises a	
Forest		2	Present and either comprises significa	nt part of wetland's 2	
Mudflats		_	vegetation and is of moderate quality of		
Open water			part and is of high quality		
Other		3	Present and comprises significant part	, or more, of wetland's 3	
Select only one.	an view) Interspersion.		vegetation and is of high quality		
High (5)			Narrative Description of Vegetation	Quality	
Moderately high(4)			Low spp diversity and/or predominanc		
Moderate (3)			disturbance tolerant native species		
Moderately low (2)			Native spp are dominant component o		
Low (1) x None (0)			although nonnative and/or disturbance can also be present, and species dive		
	nvasive plants. Refer		moderately high, but generallyw/o pres		
Table 1 ORAM Ion			threatened or endangered spp to		
or deduct points fo			A predominance of native species, wit		
Extensive >75% co			and/or disturbance tolerant native spp		
x Moderate 25-75% Sparse 5-25% cov			absent, and high spp diversity and often the presence of rare, threatened, or en		
Nearly absent <5%			are presented or rare, an eateriou, er or	idangered opp	
Absent (1)			Mudflat and Open Water Class Qua	ity	
6d. Microtopogra			Absent <0.1ha (0.247 acres)		
Score all present u			Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acre	0)	
Coarse woody deb			High 4ha (9.88 acres) or more	5)	
Standing dead >25			,		
Amphibian breedin	g pools		Microtopography Cover Scale		
			Absent	o a mm o n	
		1	Present very small amounts or if more of marginal quality	COMMON	
		2	Present in moderate amounts, but not	of highest	
Category 1		_	quality or in small amounts of highest of		
16.5 GRAND TOTAL(max 100 p	ots)	3	Present in moderate or greater amoun	ts	
			and of highest quality		

wetland 77 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 77

Date:

February 19, 2019

Description:

PEM

Category 1

Facing North



Wetland 77

Date:

February 19, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 77

Date:

February 19, 2019

Description:

PEM

Category 1

Facing South



Wetland 77

Date:

February 19, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 77

Date:

February 19, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 78a

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County:	Jefferson	Sampling Da	ate: 14-Feb-19
Applicant/Owner: AEP			State: OH	Sampling Point:	W-CMS-01A
Investigator(s): CMS, RM		Section, Town	ship, Range: S 36	T 19N	R 3W
Landform (hillslope, terrace, etc	:.): Floodplain	Local relief (con	cave, convex, none):	hummocky Slop	e: _ 2.0%_ / _ 1.1 °
Subregion (LRR or MLRA): N	124	 Lat.: 40.372309	Long.: -8(0.860822	Datum: NAD83
Soil Map Unit Name: BmD - Be	, , ,	to 25 percent slopes	N N	WI classification: NA	
Are climatic/hydrologic conditio	ns on the site typical for thi	s time of year? Yes $lacktriangle$ N	o 🤍 (If no, explair	n in Remarks.)	
Are Vegetation 🗸 , Soil 🗌		significantly disturbed?	Are "Normal Circum	stances" present?	Yes O No 💿
Are Vegetation , Soil	, or Hydrology	naturally problematic?	(If needed, explain	any answers in Remark	ks.)
Summary of Findings -		owing sampling po	int locations, tra	ansects, importa	nt features, etc.
Hydrophytic Vegetation Presen					
Hydric Soil Present?	Yes No		ampled Area Yes	No O	
Wetland Hydrology Present?	Yes No	within a	a Wetland?		
Remarks: Maintained transmission line F	ROW. PEM wetland associate	ed with stream HHEI-CMS-0	1. Snow melt and hea	vy rain contributed to h	nydrology indicators.
Hydrology					
Wetland Hydrology Indicators:	 :		Second	dary Indicators (minimum	of two required)
Primary Indicators (minimum		nat apply)		rface Soil Cracks (B6)	or two required)
Surface Water (A1)	True A	Aquatic Plants (B14)		arsely Vegetated Concave	Surface (B8)
✓ High Water Table (A2)	Hydro	gen Sulfide Odor (C1)	✓ Dra	ainage Patterns (B10)	
Saturation (A3)	✓ Oxidize	ed Rhizospheres along Living R	oots (C3)	ss Trim Lines (B16)	
Water Marks (B1)	Preser	nce of Reduced Iron (C4)	Dry	y Season Water Table (C2))
Sediment Deposits (B2)	Recent	t Iron Reduction in Tilled Soils	(C6)	ayfish Burrows (C8)	
Drift deposits (B3)	☐ Thin M	luck Surface (C7)	Sat	turation Visible on Aerial I	magery (C9)
Algal Mat or Crust (B4)	Other	(Explain in Remarks)	Stu	unted or Stressed Plants (D	01)
Iron Deposits (B5)				omorphic Position (D2)	
Inundation Visible on Aerial Ir	nagery (B7)			allow Aquitard (D3)	
Water-Stained Leaves (B9)				crotopographic Relief (D4)	
Aquatic Fauna (B13)			✓ FAC	C-neutral Test (D5)	
Field Observations:	es No Dept	de (inches).			
		th (inches): 0.5			
	es No Dept	th (inches): 8	Wetland Hydrology P	Present? Yes	No O
Saturation Present? (includes capillary fringe) Ye	es No Dept	th (inches):6	Wedana Hydrology F	resent: 100 o	
Describe Recorded Data (stream	m gauge, monitoring well, a	nerial photos, previous inspe	ctions), if available:		
Remarks:					
Precipitation, ground water dis	charge and snow melt contr	ibuted to bydrology eviden	t at time of campling		
rrecipitation, ground water dis	charge and show mer cond	ibuted to flydrology eviden	, at time or sampling.		

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

		Dominant -Species?		Sampling Point: W-CMS-01A
Tree Stratum (Plot size:)	Absolute % Cover	Rel Strat	Indicator Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC:4(A)
2	0	0.0%_		T. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3	0	0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4	0	0.0%		
5		0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)
6		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0	0.0%_		Prevalence Index worksheet:
8	0	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:	, _ 0 =	= Total Cove	er	OBL species <u>40</u> x 1 = <u>40</u>
		0.0%		FACW species55 x 2 =110
1		0.0%		FAC species $0 \times 3 = 0$
2 3		0.0%		FACU species $5 \times 4 = 20$
		0.0%		UPL species $0 \times 5 = 0$
4		0.0%		Column Totals: 100 (A) 170 (B)
5 6		0.0%		
		0.0%		Prevalence Index = B/A = 1.700
7		0.0%		Hydrophytic Vegetation Indicators:
8 9		0.0%		✓ Rapid Test for Hydrophytic Vegetation
9 0		0.0%		✓ Dominance Test is > 50%
		= Total Cove		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)			: 1	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		0.0%		Problematic Hydrophytic Vegetation (Explain)
2		0.0%		
3		0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0.0%		
5		0.0%		Definition of Vegetation Strata: Four Vegetation Strata:
6		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
7				in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5'</u>)				Sapling/shrub stratum – Consists of woody plants, excluding
1. Poa palustris		35.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Typha angustifolia		20.0%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Carex lurida		20.0%	OBL	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height
4. Phalaris arundinacea		20.0%		ft in height.
5. <u>Dipsacus fullonum</u>		5.0%	FACU	
6	0	0.0%		Five Vegetation Strata:
7		0.0%		Tree - Woody plants, excluding woody vines, approximately
8		0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9				Sapling stratum – Consists of woody plants, excluding
0		0.0%		woody vines, approximately 20 ft (6 m) or more in height and
1				less than 3 in. (7.6 cm) DBH. Shrub stratum – Consists of woody plants, excluding woody
2	0			vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	100 =	= Total Cove	er	Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%_		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0			3 ft (1 m) in height.
3	0	0.0%_		Woody vines - Consists of all woody vines, regardless of
4		0.0%		height.
5	0	0.0%		Hydronhytic
6	0	0.0%		Hydrophytic Vegetation
	0	= Total Cov		Present? Yes No
		- Total Cov	C1	

Soil Sampling Point: W-CMS-01A

Profile Descr	ription: (Describe to	the depth	needed to docun			onfirm the	absence of indicators.)	
Depth	Matrix			Redox Feat	ures			
(inches) 0-6	Color (moist) 10YR 4/1	 90	Color (moist) <u>%</u> 10	Tvpe 1	<u>Loc²</u> M	Sandy Clay Loam	Remarks
-			10YR 4/6				Sandy Clay Loam	
6-18	10YR 5/1	_ 80	7.5YR 5/6		_ <u>C</u>	M	Sandy Clay Loam	
1 Type: C=Cen	contration D-Donlotic	on DM-Dod	used Matrix CS=Co	word or Coa	stad Sand Cr	nine 21 oc	cation: DI - Doro Lining M-I	Matrix
		on. RM=Red	uced Matrix, CS=C	overed or Coa	itea Sana Gr	ains ²Loc	cation: PL=Pore Lining. M=I	
Hydric Soil 1			☐ Dark Surfa	co (C7)			Indicators for Proble	ematic Hydric Soils ³ :
l — `	pedon (A2)			ce (57) Below Surface	(S8) (MI DA	147 148)	2 cm Muck (A10)	(MLRA 147)
Black His				Surface (S9) (Coast Prairie Red	ox (A16)
	n Sulfide (A4)			yed Matrix (F2		,	(MLRA 147,148)	
	Layers (A5)		✓ Depleted M		,		Piedmont Floodpl (MLRA 136, 147)	aın Soils (F19)
	k (A10) (LRR N)			Surface (F6))		Very Shallow Dar	k Surface (TF12)
	Below Dark Surface (A	A11)	☐ Depleted D	ark Surface (F7)		Other (Explain in	
☐ Thick Dar	k Surface (A12)		Redox Dep	ressions (F8)			outer (Explain in	remarkey
Sandy Mu MLRA 14	uck Mineral (S1) (LRR 7, 148)	N,	Iron-Manga MLRA 136)	anese Masses	(F12) (LRR	N,		
	eyed Matrix (S4)		Umbric Su	face (F13) (M	1LRA 136, 12	22)	2	
Sandy Re			Piedmont I	loodplain Soi	ls (F19) (ML	RA 148)	³ Indicators of	hydrophytic vegetation and drology must be present,
Stripped	Matrix (S6)		Red Parent	Material (F2	1) (MLRA 12	7, 147)		sturbed or problematic.
Doetrietivo I	aver (if absorred).							
Type:	ayer (if observed):							
Depth (inc	hes).						Hydric Soil Present?	Yes No
Remarks:								

Wetland 78b

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County: Jefferson	Sampling Date: 14-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: W-CMS-01B
Investigator(s): CMS, RM		Section, Township, Range: S	3 6 T 19N R 3W
Landform (hillslope, terrace, etc	:.): Floodplain	Local relief (concave, convex, r	none): hummocky Slope : 5.0% / 2.9 °
Subregion (LRR or MLRA): N	124	Lat.: 40.371478 Lor	ng.: -80.859958
Soil Map Unit Name: BmD - Be		5 percent slopes	NWI classification: NA
Are climatic/hydrologic conditio	ons on the site typical for this ti	me of year? Yes $lacktriangle$ No $lacktriangle$ (If no	, explain in Remarks.)
Are Vegetation, Soil			l Circumstances" present? Yes ○ No •
Are Vegetation , Soil	, or Hydrology 🗹 nat	turally problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings -		ving sampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Presen			
Hydric Soil Present?	Yes No	Is the Sampled Area	Yes ● No ○
Wetland Hydrology Present?	Yes No	within a Wetland?	
Remarks:			
Too reciand associated many		elt and heavy rain contributed to hydrol	ogy malectors:
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one required; check all that	apply)	Surface Soil Cracks (B6)
Surface Water (A1)		atic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)	✓ Drainage Patterns (B10)
Saturation (A3)		Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)		of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)		on Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)		Surface (C7)	Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5)	☐ Other (Ex	plain in Remarks)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial In	mageny (R7)		✓ Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	nagery (D7)		✓ Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations:			In the head at rest (23)
	es No Depth (i	nches):0.5	
Water Table Present? Ye	es O No O Depth (i	nches):	
Saturation Present?	es O No O Depth (i	Wetland Hyd	rology Present? Yes No
(includes capillary fringe)		al photos, previous inspections), if avai	lable:
Remarks:			
Precipitation, ground water dis	charge and snow melt contribu	ted to hydrology evident at time of sar	npling.

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

		Dominant -Species?		Sampling Point: W-CMS-01B
Tree Stratum (Plot size:)	Absolute % Cover	Rel Strat	Indicator Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC:
2	0	0.0%		Tatal Name of Description
3		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4	0	0.0%_		
5		0.0%		Percent of dominant Species That Are OBL FACW or FAC: 66.7% (A/B)
6	_	0.0%_		That Are OBL, FACW, or FAC: 66.7% (A/B)
7	0	0.0%		Prevalence Index worksheet:
8	0	0.0%		Total % Cover of: Multiply by:
Plot size:	, _ 0 =	= Total Cove	er	OBL species <u>20</u> x 1 = <u>20</u>
Sapling-Sapling/Shrub Stratum (Plot size:		0.0%		FACW species 90 x 2 = 180
1		0.0%		FAC species $10 \times 3 = 30$
2		0.0%		FACU species $25 \times 4 = 100$
3		0.0%		UPL species $\frac{5}{}$ x 5 = $\frac{25}{}$
4		0.0%		Column Totals: 150 (A) 355 (B)
5		0.0%		(A)
6		0.0%		Prevalence Index = B/A = 2.367
7		0.0%		Hydrophytic Vegetation Indicators:
8		0.0%		Rapid Test for Hydrophytic Vegetation
9		0.0%		✓ Dominance Test is > 50%
0				✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 15')		= Total Cove		Morphological Adaptations ¹ (Provide supporting
1. Crataegus crus-galli		55.6%	FACU	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2. Cornus amomum		44.4%	FACW	
3				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
5				Definition of Vegetation Strata:
6				Four Vegetation Strata:
7		0.0%_		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5')	45=	= Total Cove	er	regardless of height.
1. Poa palustris	70	66.7%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Cardamine pensylvanica	20	19.0%	OBL	Herb stratum – Consists of all herbaceous (non-woody)
3. Geum aleppicum	10	9.5%	FAC	plants, regardless of size, and all other plants less than 3.28
4. Rubus occidentalis	5	4.8%	UPL	ft tall Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0			it in neight.
6	0	0.0%_		Five Vegetation Strata:
7	0			Tree - Woody plants, excluding woody vines, approximately
8	0			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0			diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding
0		0.0%_		woody vines, approximately 20 ft (6 m) or more in height and
1		0.0%		less than 3 in. (7.6 cm) DBH.
2	0	0.0%_		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	105 =	= Total Cove	er	Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%		plants, including herbaceous vines, regardless of size, and
2	0	0.0%		woody 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
4		0.0%		height.
5		0.0%		
5 6	0	0.0%		Hydrophytic Vegetation
· .	0 :	= Total Cov	er	Present? Yes No V

Soil Sampling Point: W-CMS-01B

Depth (inches) Color (moist) % 0-6 10YR 4/3 100 6-18 2.5Y 4/2 90 Type: C=Concentration. D=Depletion. RM=Redu Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Color (moist) % Type 1 Loc2 2.5Y 4/6 10 C M ced Matrix, CS=Covered or Coated Sand Grains 2Loc □ Dark Surface (S7) □ Polyvalue Below Surface (S8) (MLRA 147,148) □ Thin Dark Surface (S9) (MLRA 147, 148) □ Loamy Gleyed Matrix (F2) ✓ Depleted Matrix (F3)	Texture Remarks Silty Clay Loam Silty Clay Loam Silty Clay Loam Silty Clay Loam Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147,148)
Type: C=Concentration. D=Depletion. RM=Redu Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	ced Matrix, CS=Covered or Coated Sand Grains ² Loc Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Silty Clay Loam Silty Clay Loam Silty Clay Loam Silty Clay Loam Tation: PL=Pore Lining. M=Matrix Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Type: C=Concentration. D=Depletion. RM=Redu Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	ced Matrix, CS=Covered or Coated Sand Grains ² Loc Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2)	Coast Prairie Redox (A16)
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	
Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)		(112101117/110)
2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11)	▼ Depieted Matrix (F3)	Piedmont Floodplain Soils (F19)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	(MLRA 136, 147) Very Shallow Dark Surface (TF12)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	Redox Depressions (F8)	Uniei (Explain in Remarks)
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
estrictive Layer (if observed):		
Type: Depth (inches):		Hydric Soil Present? Yes ● No ○
emarks:		

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable	City/County: Jefferson Sampling Date: 14-Feb-19
Applicant/Owner: AEP	State: OH Sampling Point: UPL-W-CMS-01
Investigator(s): CMS, RM	Section, Township, Range: S 36 T 9N R 3W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): flat Slope: _30.0%_ / _16.7 °
Subregion (LRR or MLRA): N 124 Lat.:	40.371644 Long.: -80.860491 Datum: NAD83
Soil Map Unit Name: BmD - Berks-Guernsey complex, 15 to 25 perce	
Are climatic/hydrologic conditions on the site typical for this time of y	rear? Yes No (If no, explain in Remarks.)
	tly disturbed? Are "Normal Circumstances" present? Yes O No 💿
Are Vegetation , Soil , or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	, , , , , , , , , , , , , , , , , , , ,
Hydric Soil Present? Yes No •	Is the Sampled Area Voc No No
Ves O No A	Is the Sampled Area Yes ○ No within a Wetland?
Wetland Hydrology Present?	
Maintained transmission line ROW.	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	ts (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide	
	neres along Living Roots (C3)
Water Marks (B1) Presence of Redu	
	ction in Tilled Soils (C6) Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Surface ☐ Algal Mat or Crust (B4) ☐ Other (Explain in	
☐ Algal Mat or Crust (B4) ☐ Other (Explain in Iron Deposits (B5)	Remarks) Stuffled of Stressed Plants (D1) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes O No Depth (inches):	
Water Table Present? Yes No • Depth (inches):	
Saturation Present? (includes capillary frings) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ●
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photometric production)	
best like Necorded Bata (Stream gauge, monitoring weil, dental prior	so, previous inspections), in divaliables
Remarks:	

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

			mınant ecies? —		Sampling Point: <u>UPL-W-CMS-01</u>			
Tree Stratum (Plot size:)	Absolute % Cover	Re	I Strat	Indicator Status				
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:			
2	0		0.0%		Total Number of Descinant			
3	0		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)			
4	0		0.0%					
5			0.0%		Percent of dominant Species That Are OBL FACW or FAC: 50.0% (A/B)			
6			0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)			
7	0		0.0%		Prevalence Index worksheet:			
8	0		0.0%		Total % Cover of: Multiply by:			
Sapling-Sapling/Shrub Stratum (Plot size:	,0 =	= To	tal Cover		OBL species 0 x 1 = 0			
			0.0%		FACW species $70 \times 2 = 140$			
1		\Box	0.0%		FAC species $0 \times 3 = 0$			
2		\Box	0.0%		FACU species $10 \times 4 = 40$			
3		\Box	0.0%		UPL species $\frac{20}{x}$ $x = \frac{100}{x}$			
4		\Box	0.0%		Column Totals: 100 (A) 280 (B)			
5		\Box	0.0%					
6			0.0%		Prevalence Index = B/A = 2.800			
7		_	0.0%		Hydrophytic Vegetation Indicators:			
8 9		Π-	0.0%		Rapid Test for Hydrophytic Vegetation			
· ·		Π-	0.0%		Dominance Test is > 50%			
0		ш <u>.</u>			✓ Prevalence Index is ≤3.0 ¹			
Shrub Stratum (Plot size:)		= 10	tal Cover		Morphological Adaptations ¹ (Provide supporting			
1		Н.	0.0%		data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)			
2	0	Н.	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		닏.	0.0%		Definition of Vegetation Strata:			
6	0	\sqcup	0.0%		Four Vegetation Strata:			
7	0	\square	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),			
Herb Stratum (Plot size: _5')	=	= To	tal Cover		regardless of height.			
1. Phalaris arundinacea	70	V _	70.0%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
2. Daucus carota	20	V _	20.0%	UPL	Herb stratum – Consists of all herbaceous (non-woody)			
3. Solidago canadensis	5		5.0%	FACU	plants, regardless of size, and all other plants less than 3.28 ft tall.			
4. Schizachyrium scoparium	5	\sqsubseteq	5.0%	FACU	ft tall Woody vines – Consists of all woody vines greater than 3.28 If in height.			
5	0	\sqsubseteq	0.0%		in morgini			
6	0	\square	0.0%		Five Vegetation Strata:			
7	0	\sqcup	0.0%		Tree - Woody plants, excluding woody vines, approximately			
8	0	\sqcup	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in			
9	0	Ц.	0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding			
0		Ц.	0.0%		woody vines, approximately 20 ft (6 m) or more in height and			
1	0	Ц.	0.0%		less than 3 in. (7.6 cm) DBH.			
2	0	Ш.	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.			
Woody Vine Stratum (Plot size:)	100 =	= To	tal Cover		Herb stratum – Consists of all herbaceous (non-woody)			
1	0		0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately			
2	0		0.0%		3 ft (1 m) in height.			
3.			0.0%		Woody vines – Consists of all woody vines, regardless of			
4			0.0%		height.			
5			0.0%		H. danskatta			
6	0		0.0%		Hydrophytic Vegetation			
					Present? Yes No			
	0	= Tc	otal Cover		Tresent:			

Soil Sampling Point: UPL-W-CMS-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	<u>Matrix</u>			lox Featu	1					
(inches)	Color (moist)	<u>%</u>	Color (moist)		Tvpe 1	Loc ²	Texture	Remarks		
0-5	10YR 5/3	100					Clay Loam			
5-10	2.5Y 6/4	100					Clay Loam			
1										
**		on. RM=Red	uced Matrix, CS=Cover	ed or Coate	ed Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=1	Matrix		
Hydric Soil I							Indicators for Proble	ematic Hydric Soils ³ :		
Histosol (•		Dark Surface (-	CO) (AU D A	4.47.4.40\	2 cm Muck (A10)	(MLRA 147)		
☐ Histic Epip☐ Black Hist	pedon (A2)		Polyvalue Belov	-			Coast Prairie Redo	ox (A16)		
	iic (A3) i Sulfide (A4)		☐ Thin Dark Surfa			148)	(MLRA 147,148)	,		
	Layers (A5)		Loamy Gleyed Depleted Matri:				Piedmont Floodpl	ain Soils (F19)		
	k (A10) (LRR N)		Redox Dark Su				(MLRA 136, 147)	C ((TT42)		
	Below Dark Surface (A	\11\	Depleted Dark	` ,	7)		Very Shallow Dar			
	k Surface (A12)	(11)	Redox Depress		,		Other (Explain in	Remarks)		
	ıck Mineral (S1) (LRR I	N	☐ Iron-Manganes	. ,	F12) (LRR	N,				
MLRA 147	7, 148)	٧,	MLRA 136)	,	, (•				
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (ML	RA 136, 12	22)	3			
☐ Sandy Re	dox (S5)		Piedmont Floor	dplain Soils	(F19) (ML	RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21)	(MLRA 12	7, 147)	unless disturbed or problematic.			
Restrictive I	ayer (if observed):									
Type: <u>fr</u>										
Depth (inc							Hydric Soil Present?	Yes O No 💿		
Remarks:										
Nemarks.										
i										

		Rater(s): C.STALLO	NE, R. MASSA	Date:	2/14/2019
max 6 pts	2 2 subtotal	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	W-CMS-021419-01 PE		
max 14 pts.	12 14 subtotal	Metric 2. Upland buffers and surr 2a. Calculate average buffer width. Select only on X WIDE. Buffers average 50m (164ft) or more around v MEDIUM. Buffers average 25m to <50m (82 to <164f NARROW. Buffers average 10m to <25m (32ft to <82 VERY NARROW. Buffers average <10m (<32ft) arou 2b. Intensity of surrounding land use. Select one VERY LOW. 2nd growth or older forest, prairie, sava LOW. Old field (>10 years), shrubland, young second MODERATELY HIGH. Residential, tenced pasture, p HIGH. Urban, industrial, open pasture, row cropping,	e and assign score. Do not double che vetland perimeter (7) t) around wetland perimeter (4) tft) around wetland perimeter (1) nd wetland perimeter (0) or double check and average. nnah, wildlife area, etc. (7) d growth forest. (5) ark, conservation tillage, new fallow field.		
max 30 pts.	subtotal	Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) x Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. > 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. So None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observe	iman use (1) i), complex (1) (1) on. Score one or dbl checaturated (4)	k.
max 20 pts.	subtotal	Metric 4. Habitat Alteration and D 4a. Substrate disturbance. Score one or double of the color	ign score. and average. Check all disturbances observed mowing sh grazing he x clearcutting se selective cuttin shoody debris removal x far	rub/sapling removal rbaceous/aquatic bed remov dimentation edging ming trient enrichment	/al

Site: W-Cl	MS-021419	9-01 PEM	Rater(s):	C.STALLONI	Ξ,	R. MASSA	Date:	2/14/2019
	47]				W-CMS-021419-01 PEM		
	subtotal this		:-! \\/-4					
	0 47	Metric 5. Sp	eciai weti	anas.				
max 10 pts.	subtotal	Bog (10) Fen (10) Old growth forest (Mature forested we Lake Erie coastal/t	10) etland (5) ributary wetland ributary wetland	-unrestricted hydrology	ду (10)		
		Relict Wet Praires Known occurrence	(10) state/federal th	reatened or endanger er fowl habitat or usag				
				n 5 Qualitative Rating				
	8 55	Metric 6. Pla	ant comm	unities. inters	pe	ersion, microtopography.		
max 20pts.	subtotal	6a. Wetland V		•	•	Vegetation Community Cove	er Scale	
пах 20різ.	Subtotal	Score all present u	-		0	Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed	oning o to o occan	-		Present and either comprises small pa		
		1 Emergent				vegetation and is of moderate quality,		
		2 Shrub		_		significant part but is of low quality		
		Forest			2	Present and either comprises significa		
		Mudflats				vegetation and is of moderate quality of	r comprises a small	
		Open water Other		_	3	part and is of high quality Present and comprises significant part	or more of wetland's 3	
		6b. horizontal (pla	n view) Intersi	ersion.	0	vegetation and is of high quality	or more, or welland 5 o	
		Select only one.	,,			3 1 7		
		High (5)				Narrative Description of Vegetation		
		Moderately high(4)				Low spp diversity and/or predominance	e of nonnative or low	
		Moderate (3)				disturbance tolerant native species	0 (2	
		x Moderately low (2) Low (1)				Native spp are dominant component of although nonnative and/or disturbance		
		None (0)				can also be present, and species diver		
		6c. Coverage of ir	vasive plants.	Refer		moderately high, but generallyw/o pres		
		Table 1 ORAM long				threatened or endangered spp to		
		or deduct points for				A predominance of native species, with		
		Extensive >75% co				and/or disturbance tolerant native spp		
		Moderate 25-75% ox Sparse 5-25% cove		T. angustifolia		absent, and high spp diversity and ofte the presence of rare, threatened, or en		
		Nearly absent <5%		r. angustiiona		the presence of fare, threatened, or en	dangered spp	
		Absent (1)	(-)			Mudflat and Open Water Class Quali	ty	
		6d. Microtopograp		_		Absent <0.1ha (0.247 acres)		
		Score all present u		e		Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummud Coarse woody deb		-		Moderate 1 to <4ha (2.47 to 9.88 acres High 4ha (9.88 acres) or more	5)	
		1 Standing dead >25			3	rigit 4tta (9.88 acres) of filore		
		Amphibian breedin				Microtopography Cover Scale		
				_		Absent		
				_	1	Present very small amounts or if more	common	
				_	2	of marginal quality	of highoot	
Category 2					2	Present in moderate amounts, but not quality or in small amounts of highest of		
Catogory 2	EE CDANE	TOTAL(max 100 p	ate)	-	3	* * * * * * * * * * * * * * * * * * * *	•	
	55 GRANL	TOTAL(max 100 p	J (ອ)		5	Present in moderate or greater amount	S	
						and of highest quality		



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 78a

Date:

February 14, 2019

Description:

PEM

Category 2

Facing North



Wetland 78a

Date:

February 14, 2019

Description:

PEM

Category 2

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 78a

Date:

February 14, 2019

Description:

PEM

Category 2

Facing South



Wetland 78a

Date:

February 14, 2019

Description:

PEM

Category 2

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 78a

Date:

February 14, 2019

Description:

PEM

Category 2

Soil Pit



Wetland 78b

Date:

February 14, 2019

Description:

PSS

Category 2

Facing North





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 78b

Date:

February 14, 2019

Description:

PSS

Category 2

Facing East



Wetland 78b

Date:

February 14, 2019

Description:

PSS

Category 2

Facing South





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 78b

Date:

February 14, 2019

Description:

PSS

Category 2

Facing West



Wetland 78b

Date:

February 14, 2019

Description:

PSS

Category 2

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County: Jeffers	son	Sampling D	ate: 14-Feb-19
Applicant/Owner: AEP			State: OH	Sampling Point:	W-CMS-02
Investigator(s): CMS, RM		Section, Township,	Range: S 36	T 19N	R 3W
Landform (hillslope, terrace, etc.	.): Floodplain	Local relief (concave,	convex, none):	hummocky Slo r	oe: _15.0%_ / 8.5 °
Subregion (LRR or MLRA): N	124	Lat.: 40.371055	Long.: -80		Datum: NAD83
Soil Map Unit Name: BmD - Bei		25 percent slopes	N	WI classification: NA	
Are climatic/hydrologic condition	ns on the site typical for this	time of year? Yes $lacktriangle$ No $lacktriangle$	(If no, explain	in Remarks.)	
Are Vegetation \checkmark , Soil \Box	, or Hydrology 🗌 🤱	significantly disturbed? Are	e "Normal Circums	stances" present?	Yes O No 💿
Are Vegetation , Soil	, or Hydrology 🗸 ı	naturally problematic? (If	needed, explain a	any answers in Remar	ks.)
Summary of Findings -		owing sampling point l	ocations, tra	insects, importa	int features, etc.
Hydrophytic Vegetation Present					
Hydric Soil Present?	Yes No	Is the Sampl		No O	
Wetland Hydrology Present?	Yes No	within a Wet	lanur		
Maintained transmission line R	OW. PEM wetland associate	d with stream HHEI-CMS-03. Sn	ow melt and heav	y rain contributed to I	nydrology indicators.
Hydrology					
Wetland Hydrology Indicators:			Seconda	ary Indicators (minimum	of two required)
Primary Indicators (minimum o			_	face Soil Cracks (B6)	
Surface Water (A1)		quatic Plants (B14)		rsely Vegetated Concave	Surface (B8)
☐ High Water Table (A2) ☐ Saturation (A3)		en Sulfide Odor (C1) d Rhizospheres along Living Roots (inage Patterns (B10)	
Water Marks (B1)		ce of Reduced Iron (C4)		ss Trim Lines (B16) Season Water Table (C2	1
Sediment Deposits (B2)		Iron Reduction in Tilled Soils (C6)	_ `	yfish Burrows (C8))
Drift deposits (B3)		uck Surface (C7)		uration Visible on Aerial I	magery (C9)
☐ Algal Mat or Crust (B4)		Explain in Remarks)	Stur	nted or Stressed Plants (I	01)
Iron Deposits (B5)		,	✓ Geo	omorphic Position (D2)	
Inundation Visible on Aerial Im	nagery (B7)			Illow Aquitard (D3)	
Water-Stained Leaves (B9)				rotopographic Relief (D4)	
Aquatic Fauna (B13)			✓ FAC	C-neutral Test (D5)	
Field Observations: Surface Water Present? Yes	s • No O Depth	n (inches): 0.5			
		n (inches): Wet	tland Hydrology P	resent? Yes	No O
(includes capillary fringe)		n (inches):			
Describe Recorded Data (stream	n gauge, monitoring well, a	erial photos, previous inspection	s), if available:		
Remarks:					
	charge and snow melt contri	buted to hydrology evident at ti	me of sampling.		
	g				

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

	41 1 .		ecies? –		
Tree Stratum (Plot size:)	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC:
2	0		0.0%		Total Number of Dominant
3	0		0.0%		Species Across All Strata:2(B)
4	0		0.0%		
5			0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)
6	_		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:) :	= To	otal Cover		OBL species x 1 =10
1.			0.0%		FACW species 90 x 2 = 180
2.			0.0%		FAC species $0 \times 3 = 0$
3		\Box	0.0%		FACU species $0 \times 4 = 0$
3 4		\Box	0.0%		UPL species $0 \times 5 = 0$
5			0.0%		Column Totals:100 (A)190 (B)
6			0.0%		Prevalence Index = B/A = 1.900
7			0.0%		·
8			0.0%		Hydrophytic Vegetation Indicators:
9			0.0%		✓ Rapid Test for Hydrophytic Vegetation
0			0.0%		✓ Dominance Test is > 50%
		= To	otal Cover		✓ 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			0.0%		¹ Indicators of hydric soil and wetland hydrology must
3			0.0%		be present, unless disturbed or problematic.
4			0.0%		Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
7		. ⊥. • Ta	otal Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: _5')					Sapling/shrub stratum – Consists of woody plants, excluding
1. Phalaris arundinacea		V	70.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Persicaria pensylvanica			20.0%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Alisma subcordatum			10.0%	OBL	ft tall. Woody vines – Consists of all woody vines greater than 3.28
4	0		0.0%		ft in height.
5			0.0%		
6	0		0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately
8			0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		\square	0.0%		Sapling stratum – Consists of woody plants, excluding
0			0.0%		woody vines, approximately 20 ft (6 m) or more in height and
1		\square	0.0%		less than 3 in. (7.6 cm) DBH. Shrub stratum – Consists of woody plants, excluding woody
2	0	Щ,	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	100 :	= 10	otal Cover		Herb stratum – Consists of all herbaceous (non-woody)
1	0	Ш	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2			0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4			0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation Vac (a) Na (
	0	-	otal Cove		Present? Yes No V

Soil Sampling Point: W-CMS-02

Depth	Matrix		Re	dox Features			
(inches)	Color (moist)	<u>%</u>	Color (moist)		Loc2	<u>Texture</u>	Remarks
0-5	10YR 5/1	100				Clay Loam	
5-18	10YR 5/1	90	10YR 4/6	C	M	Clay Loam	
				-			
				-			
/pe: C=Cond	centration. D=Depletic	n. RM=Red	uced Matrix, CS=Cover	ed or Coated Sand G	ains ² Loc	ation: PL=Pore Lining. M=Mat	rix
	indicators:		David Sunface (67)		Indicators for Problem	atic Hydric Soils ³ :
Histosol (/	A1) pedon (A2)		Dark Surface (S/) w Surface (S8) (MLR/	147 149)	2 cm Muck (A10) (M	LRA 147)
Black Hist				w Surface (S6) (MLRA ace (S9) (MLRA 147,		Coast Prairie Redox (MLRA 147,148)	(A16)
	Sulfide (A4)		Loamy Gleyed			Piedmont Floodplain	Soils (F19)
1	Layers (A5)		✓ Depleted Matri: Redox Dark Su			(MLRA 136, 147)	
	k (A10) (LRR N)	(11)	Depleted Dark	. ,		☐ Very Shallow Dark S	
	Below Dark Surface (A k Surface (A12)	111)	Redox Depress			Other (Explain in Re	marks)
Sandy Mu	ick Mineral (S1) (LRR N	٧,		e Masses (F12) (LRR	N,		
MLRA 147 Sandy Gle	7, 148) eyed Matrix (S4)			e (F13) (MLRA 136, 1	22)		
Sandy Red				dplain Soils (F19) (MI		³ Indicators of hyd	Irophytic vegetation and
1	Matrix (S6)			terial (F21) (MLRA 12			ogy must be present, bed or problematic.
estrictive La	ayer (if observed):						
Type:						Hydric Soil Present?	Yes ● No ○
Depth (incl	nes):					riyuric 3011 Present:	TES © NO C
emarks:							

Upland 79, 80

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable	City/County: Jefferson Sampling Date: 14-Feb-19
Applicant/Owner: AEP	State: OH Sampling Point: UPL-W-CMS-02&3
Investigator(s): CMS, RM	Section, Township, Range: S 36 T 9N R 3W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): flat Slope: 25.0% / 14.0 °
Subregion (LRR or MLRA): N 124	at.: 40.370898
Soil Map Unit Name: BmD - Berks-Guernsey complex, 15 to 25 pe	
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes No (If no, explain in Remarks.)
	antly disturbed? Are "Normal Circumstances" present? Yes O No
Are Vegetation , Soil , or Hydrology natural	lly problematic? (If needed, explain any answers in Remarks.)
	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No •	
Hydric Soil Present? Yes No •	To the Commission Co.
Yes O No O	Is the Sampled Area Yes O No within a Wetland?
Remarks: Maintained transmission line ROW.	
Hydrology	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic P	
High Water Table (A2) Hydrogen Sulfi	
	spheres along Living Roots (C3) Moss Trim Lines (B16)
	educed Iron (C4) Dry Season Water Table (C2)
	eduction in Tilled Soils (C6) Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Surf	
Algal Mat or Crust (B4) Other (Explain	
☐ Iron Deposits (B5)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
	s):
Water Table Present? Yes O No Depth (inche	SS: Wetland Hydrology Present? Yes O No •
Saturation Present? (includes capillary fringe) Yes No Depth (inche	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), if available:
Remarks:	
1	

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

		-Species?	Sampling Point: UPL-W-CMS-02&3
	Absolute	Rel.Strat. Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Cover Status	Number of Deminant Charies
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2.		0.0%	
		0.0%	Total Number of Dominant
3			Species Across All Strata:
4			Daysant of daysinant Cassina
5	0		Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
6	0		That Are Obe, FACW, of FAC.
7		0.0%	Prevalence Index worksheet:
8		0.0%	Total % Cover of: Multiply by:
	0 -	= Total Cover	OBL species
Sapling-Sapling/Shrub Stratum (Plot size:)		<u> </u>
1	0	0.0%	FACW species $0 \times 2 = 0$
2		0.0%	FAC species $0 \times 3 = 0$
		0.0%	FACU species $80 \times 4 = 320$
3			UPL species $\frac{15}{}$ x 5 = $\frac{75}{}$
4			
5	0		Column Totals: 95 (A) 395 (B)
6	0		Prevalence Index = $B/A = 4.158$
7	0	0.0%	Hydrophytic Vogotation Indicators
8		0.0%	Hydrophytic Vegetation Indicators:
9	_	0.0%	Rapid Test for Hydrophytic Vegetation
			☐ 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%	Problematic Hydrophytic Vegetation 1 (Explain)
		0.0%	¹ Indicators of hydric soil and wetland hydrology must
3			be present, unless disturbed or problematic.
4			
5	0		Definition of Vegetation Strata:
6	0		Four Vegetation Strata:
7		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5')		= Total Cover	regardless of height.
			Sapling/shrub stratum – Consists of woody plants, excluding
1. Poa annua		✓ 73.7% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Daucus carota	10	10.5% UPL	Herb stratum – Consists of all herbaceous (non-woody)
3. Schizachyrium scoparium	10	10.5%FACU	plants, regardless of size, and all other plants less than 3.28
4 Plantago lanceolata	5	5.3% UPL	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%	ft in height.
6		0.0%	
			Five Vegetation Strata:
7			Tree - Woody plants, excluding woody vines, approximately
8			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		
0			Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1	0	0.0%	less than 3 in. (7.6 cm) DBH.
2		0.0%	Shrub stratum - Consists of woody plants, excluding woody
		= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)			Herb stratum – Consists of all herbaceous (non-woody)
1	0		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0	0.0%	3 ft (1 m) in height.
3.		0.0%	Woody vines – Consists of all woody vines, regardless of
4.		0.0%	height.
5			Hydrophytic
6	0		Vegetation No. 20
	0	= Total Cover	Present? Yes V No S
Damada (Taalada ahata aasata a	ah a at `		
Remarks: (Include photo numbers here or on a separate	sneet.)		

Soil Sampling Point: UPL-W-CMS-02&3

	Matrix			dox Featu			absence of indicators.)		
Depth (inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc2	Texture	Remarks	
0-5	10YR 5/3	100					Clay Loam		
5-10	10YR 6/6	100	-				Clay Loam		
							,		
				-					
							,		
				-			· · · · · · · · · · · · · · · · · · ·		
ype: C=Cor	ncentration. D=Depletion	on. RM=Red	uced Matrix, CS=Cover	ed or Coat	ted Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=N	1atrix	
-	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :	
│ Histosol (,		Dark Surface (,	(CO) /M! D *	147 140	2 cm Muck (A10)	(MLRA 147)	
J Histic Epi ☐ Black His	ipedon (A2)		Polyvalue Below				Coast Prairie Redo	ox (A16)	
_	n Sulfide (A4)		Loamy Gleyed			170)	(MLRA 147,148)		
	Layers (A5)		Depleted Matri		,		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)	
_	ck (A10) (LRR N)			Redox Dark Surface (F6) Depleted Dark Surface (F7)			Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
_	Below Dark Surface (A	A11)	Depleted Dark						
Thick Da	rk Surface (A12)		Redox Depressions (F8)						
Sandy Mu MLRA 14	uck Mineral (S1) (LRR 7, 148)	N,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR	N,			
Sandy Gl	eyed Matrix (S4)		☐ Umbric Surface (F13) (MLRA 136, 122) ☐ Piedmont Floodplain Soils (F19) (MLRA 148)			22)	³ Indicators of hydrophytic vegetation and		
Sandy Re	edox (S5)					wetland hydrology must be present,			
Stripped	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless dis	sturbed or problematic.	
estrictive L	.ayer (if observed):								
Type: <u>fr</u>	radinan						Hardala Call Burnania	Yes ○ No •	
Depth (inc	ches): 10						Hydric Soil Present?	Yes O No 💿	
Remarks:									

vvetland 79		Rater(s): C.STALLOI	NE, R. MASSA	Date:	2/14/201
0	0	Metric 1. Wetland Area (size).	W-CMS-002 PEM		
max 6 pts st		Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <52 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.018 acres on-s	ite	
3	3	Metric 2. Upland buffers and surr	ounding land use.		
max 14 pts. s	x	2a. Calculate average buffer width. Select only on WIDE. Buffers average 50m (164ft) or more around w MEDIUM. Buffers average 25m to <50m (82 to <164ft NARROW. Buffers average 10m to <25m (32ft to <82 VERY NARROW. Buffers average <10m (<32ft) arou 2b. Intensity of surrounding land use. Select one of VERY LOW. 2nd growth or older forest, prairie, saval LOW. Old field (>10 years), shrubland, young second MODERATELY HIGH. Residential, fenced pasture, p HIGH. Urban, industrial, open pasture, row cropping,	vetland perimeter (7) t) around wetland perimeter (4) £th around wetland perimeter (1) nd wetland perimeter (0) or double check and average. nnah, wildlife area, etc. (7) d growth forest. (5) ark, conservation tillage, new fallow field. (3)		
20.0	23	Metric 3. Hydrology.			
	x x x x x x x x x x x x x x x x x x x	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Scone or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch point tile filling dike road weir dredg stormwater input Other	an use (1) complex (1) Score one or dbl check. rated (4) (12in) (1) source (nonstormwater) grading bed/RR track jing	
7	30	Metric 4. Habitat Alteration and D	•		
max 20 pts. s	x	4a. Substrate disturbance. Score one or double cl None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and ass Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	and average. Check all disturbances observed x mowing shrub grazing herbe x clearcutting sedin selective cutting dredg woody debris removal x farmli		
sı		ORAM v. 5.0 Field Form Quantitative Rating			

wetland 79 | W-CMS-002 PEM_Field 3/8/2019

Site: W-CMS	S-002 PE	M Rater(s): C.STALLON	ΝE,	R. MASSA	Date:	2/14/2019
	30			W-CMS-002 PEM		
	subtotal this	Metric 5. Special Wetlands.				
max 10 pts.	subtotal	Check all that apply and score as indica Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrolog Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Praires (10) Known occurrence state/federal threatened or endang Significant migratory songbird/water fowl habitat or us	logy (gy (5) gered	species (10)		
		Category 1 Wetland. See Question 5 Qualitative Ratio				
-:	3 27	Metric 6. Plant communities, inter	rspe	ersion, microtopography.	•	
max 20pts.	subtotal	6a. Wetland Vegetation Communities.		Vegetation Community Cove		
		Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed 1 Emergent	1	Present and either comprises small pa vegetation and is of moderate quality,		
		Shrub		significant part but is of low quality	or comprises a	
		Forest	2	Present and either comprises significa	nt part of wetland's 2	
		Mudflats		vegetation and is of moderate quality of	or comprises a small	
		Open water	_	part and is of high quality		
		Other6b. horizontal (plan view) Interspersion.	3	Present and comprises significant part vegetation and is of high quality	, or more, of wetland's 3	
		Select only one.		vegetation and is of high quality		
		High (5)		Narrative Description of Vegetation	Quality	
		Moderately high(4)		Low spp diversity and/or predominance		
		Moderate (3)		disturbance tolerant native species		
		Moderately low (2)		Native spp are dominant component of		
		Low (1)		although nonnative and/or disturbance		
		None (0) 6c. Coverage of invasive plants. Refer		can also be present, and species diver moderately high, but generallyw/o pres		
		Table 1 ORAM long form for list. Add		threatened or endangered spp to	ocitice of faire	
		or deduct points for coverage		A predominance of native species, with	n nonnative spp high	
		x Extensive >75% cover (-5) P. arundinacea		and/or disturbance tolerant native spp		
		Moderate 25-75% cover (-3)		absent, and high spp diversity and often		
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or en	dangered spp	
		Nearly absent <5% cover (0) Absent (1)		Mudflat and Open Water Class Qual	itv	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	ity	
		Score all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 acres	5)	
		Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more		
		Standing dead >25cm (10in) dbh Amphibian breeding pools		Microtopography Cover Scale		
		Amphibian breeding pools	0	Absent		
			1	Present very small amounts or if more	common	
				of marginal quality		
			2	Present in moderate amounts, but not		
Category 1			_	quality or in small amounts of highest	quality	
2	7 GRANE	TOTAL(max 100 pts)	3	Present in moderate or greater amoun	ts	
				and of highest quality		

wetland 79 | W-CMS-002 PEM_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 79

Date:

February 14, 2019

Description:

PEM

Category 1

Facing North



Wetland 79

Date:

February 14, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 79

Date:

February 14, 2019

Description:

PEM

Category 1

Facing South



Wetland 79

Date:

February 14, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 80a

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County: Jefferson	Sampling Date: 14-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: W-CMS-03A
Investigator(s): CMS, RM		Section, Township, Range: S	T 19N R 3W
Landform (hillslope, terrace, etc.)	: Swale	Local relief (concave, convex, ı	none): hummocky Slope: 25.0% / 14.0 °
Subregion (LRR or MLRA): N 1	24	Lat.: 40.369900 Lor	ng.: -80.859282
Soil Map Unit Name: BmD - Berl	, , ,	25 percent slopes	NWI classification: NA
Are climatic/hydrologic conditions	s on the site typical for this t	ime of year? Yes $lacktriangle$ No $lacktriangle$ (If no	, explain in Remarks.)
Are Vegetation $lacksquare$, Soil $lacksquare$			I Circumstances" present? Yes ○ No •
Are Vegetation . , Soil .	, or Hydrology 🗹 na	turally problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings -		wing 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: Maintained transmission line RC)W. PEM wetland associated	with stream HHEI-CMS-05. Snow melt a	and heavy rain contributed to hydrology indicators.
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	one required; check all that	apply)	Surface Soil Cracks (B6)
Surface Water (A1)		atic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)	✓ Drainage Patterns (B10)
Saturation (A3) Water Marks (B1)		Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Sediment Deposits (B2)		of Reduced Iron (C4) on Reduction in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)
Drift deposits (B3)		k Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		cplain in Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		the state of the s	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Ima	igery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			✓ Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes	No Depth (
		(inches):	
Water Table Present? Yes	O No Depth (inches):Wetland Hyd	rology Present? Yes No
Saturation Present? (includes capillary fringe) Yes	O No O Depth ((inches):	lology Present:
	gauge, monitoring well, aeri	ial photos, previous inspections), if avai	lable:
Remarks:			
	narge and snow melt contribu	uted to hydrology evident at time of sar	mpling
recipitation, ground water disci	large and show mere contribe	accu to flydrology evident at time of sair	mpinig.

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

		Domii Speci			Sampling Point: W-CMS-03A
Tree Stratum (Plot size:)	Absolute % Cover	Rel St	trat.	Indicator Status	
1	0	0	.0%		Number of Dominant Species That are OBL, FACW, or FAC:
2	0	0	.0%		Tabel Namban of Danisant
3	0	0	.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4	0	0	.0%		
5		0	.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6		0	.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0	0	.0%		Prevalence Index worksheet:
8	0	0	.0%		Total % Cover of: Multiply by:
- · · · · · · · · · · · · · · · · · · ·	, _0 =	= Total	Cover		OBL species <u>10</u> x 1 = <u>10</u>
Sapling-Sapling/Shrub Stratum (Plot size:			00/		FACW species 95 x 2 = 190
1			.0%		FAC species $0 \times 3 = 0$
2			.0%		FACU species $0 \times 4 = 0$
3		$\overline{}$.0%		UPL species $0 \times 5 = 0$
4			.0%		Column Totals: 105 (A) 200 (B)
5		$\overline{}$.0%		
6		$\overline{}$.0%		Prevalence Index = B/A = 1.905
7		$\overline{}$.0%		Hydrophytic Vegetation Indicators:
8			.0%		Rapid Test for Hydrophytic Vegetation
9		\neg	.0%		✓ Dominance Test is > 50%
0			.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%		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.
5	0	o	.0%		Definition of Vegetation Strata:
6		0	.0%		Four Vegetation Strata:
7		o	.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5')	=	= Total	Cover		regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1 . Phalaris arundinacea		=	7.1%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Poa palustris			3.8%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Carex Iurida			.5%	OBL	plants, regardless of size, and all other plants less than 3.28 ft.tall.
4. Solidago gigantea	5	4	.8%	FACW	ft tall. Woody vines – Consists of all woody vines greater than 3.28 If in height.
5. Persicaria pensylvanica	5	4	.8%	FACW	
6		0	.0%		Five Vegetation Strata:
7		0	.0%		Tree - Woody plants, excluding woody vines, approximately
8		0	.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9		0	.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding
0		0	.0%		woody vines, approximately 20 ft (6 m) or more in height and
1		0	.0%		less than 3 in. (7.6 cm) DBH.
2	0	0	.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	105 =	= Total	Cover		Herb stratum – Consists of all herbaceous (non-woody)
1	0	□ 0	.0%		plants, including herbaceous vines, regardless of size, and
2.	0		.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
3	0	$\overline{}$.0%		Woody vines – Consists of all woody vines, regardless of
4		$\overline{}$.0%		height.
5.			.0%		
6	0		.0%		Hydrophytic Vegetation
v					Present? Yes No
	0	= Total	COVE		Tresent:

Soil Sampling Point: W-CMS-03A

Color				Re	dov Eostu				
Color		~ .		pth Matrix Redox Features thes) Color (moist) % Color (moist) % Type				T	B
10YR	5/2	100	Color	(moist)	%	Tvpe 1	Loc²	Texture Clay Loam	Remarks
10YR	5/1	80	5YR	4/4	20	C	M	Clay Loam	
-		60	5YR		40	C	M	· · · · · · · · · · · · · · · · · · ·	
	-								
		on. RM=Red	uced Matrix	, CS=Cove	red or Coat	ed Sand Gra	ains ² Loc		
(A1) ipedon (A2)			Poly	value Belo	w Surface	. , .		2 cm Muck (A10) Coast Prairie Redo	(MLRA 147)
☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ 2 cm Muck (A10) (LRR N)		✓ Dep	leted Matr	ix (F3))		(MLRA 147,148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12)		
☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Muck Mineral (S1) (LRR N,		Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Maganese Masses (F12) (LRR N,					Other (Explain in	Remarks)	
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5)		Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148)					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
	served):		кес	i Parent Ma	ateriai (F21) (MLRA 12.	7, 147)	uniess dis	turbed or problematic.
	-							Hydria Sail Brosant?	Yes No
ches):								nyaric Soil Present?	Yes ♥ No ∪
	Indicators: (A1) ipedon (A2) stic (A3) n Sulfide (A4 d Layers (A5) ck (A10) (LR d Below Dark urk Surface (A uck Mineral (A7, 148) leyed Matrix edox (S5) Matrix (S6) Layer (if ob	ncentration. D=Depletic Indicators: (A1) ipedon (A2) stic (A3) in Sulfide (A4) if Layers (A5) ck (A10) (LRR N) if Below Dark Surface (A irk Surface (A12) uck Mineral (S1) (LRR N ir7, 148) leyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed):	ncentration. D=Depletion. RM=Reduce Indicators: (A1) ippedon (A2) stic (A3) in Sulfide (A4) if Layers (A5) ck (A10) (LRR N) if Below Dark Surface (A11) irk Surface (A12) uck Mineral (S1) (LRR N, 17, 148) leyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed):	10YR 5/1 60 5YR 10YR 5/1 60 5YR Incentration. D=Depletion. RM=Reduced Matrix, Indicators: (A1)	ncentration. D=Depletion. RM=Reduced Matrix, CS=Cove Indicators: (A1)	ncentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coate Indicators: (A1)	ncentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Gra Indicators: (A1)	ncentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Loc Indicators: (A1)	10YR 5/1 60 5YR 4/4 40 C M Clay Loam

Wetland 80b

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County: Jefferson	Sampling Date: 14-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: W-CMS-03B
Investigator(s): CMS, RM		Section, Township, Range: S 3	6 T 19N R 3W
Landform (hillslope, terrace, etc	c.): Floodplain	Local relief (concave, convex, none)): hummocky Slope: _20.0%_ / _11.3 °
Subregion (LRR or MLRA): N	124 L		-80.859376 Datum: NAD83
	erks-Guernsey complex, 15 to 25 p	·	NWI classification: NA
Are climatic/hydrologic condition	ons on the site typical for this time	of year? Yes $lacktriangle$ No $lacktriangle$ (If no, exp	lain in Remarks.)
Are Vegetation $\ \ \ \ \ \ \ \ \ \ $, Soil $\ \ \ \ \ \ \ \ \ \ \ \ \ $, or Hydrology signifi	cantly disturbed? Are "Normal Circ	umstances" present? Yes O No 💿
Are Vegetation, Soil _	, or Hydrology 🗸 natura	ally problematic? (If needed, expla	ain any answers in Remarks.)
Summary of Findings		ng sampling point locations,	transects, important features, etc.
Hydrophytic Vegetation Preser			
Hydric Soil Present?	Yes No	Is the Sampled Area Yes within a Wetland?	● No ○
Wetland Hydrology Present?	Yes No	within a Wetland:	
PFO wetland associated with	stream HHEI-CMS-05. Snow melt a	and heavy rain contributed to hydrology	indicators.
Hydrology			
Wetland Hydrology Indicators	:	_Sec	ondary Indicators (minimum of two required)
	of one required; check all that app		Surface Soil Cracks (B6)
Surface Water (A1)	☐ True Aquatic	` '	Sparsely Vegetated Concave Surface (B8)
☐ High Water Table (A2)☐ Saturation (A3)			Drainage Patterns (B10)
Water Marks (B1)			Moss Trim Lines (B16) Dry Season Water Table (C2)
Sediment Deposits (B2)		` ′	Crayfish Burrows (C8)
Drift deposits (B3)	☐ Thin Muck Su	` ′	Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)		` '	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		✓	Geomorphic Position (D2)
Inundation Visible on Aerial In	magery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present? Ye	es No Depth (inch	es): 0.5	
	0 0	es):	
		Wetland Hydrolog	y Present? Yes No
(includes capillary fringe)	es No Depth (inch	·	
Describe Recorded Data (strea	m gauge, monitoring well, aerial p	hotos, previous inspections), if available	:
Remarks:			
	scharge and snow melt contributed	to hydrology evident at time of sampling	g.
, , , ,			

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

			ecies? -		Sampling Point: W-CMS-03B
Tree Stratum (Plot size: 30')	Absolute % Cover	R.	I.Strat.	Indicator Status	Dominance Test worksheet:
1 Carya laciniosa	_70_	V	77.8%	FAC	Number of Dominant Species That are OBL, FACW, or FAC:3(A)
2 Acer rubrum	20	V	22.2%	FAC	
3	_		0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		Species Across All Strata.
		\Box	0.0%		Percent of dominant Species
5			0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)
6					
7			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:)	90	= To	otal Cover	•	OBL species <u>5</u> x 1 = <u>5</u>
	_		0.0%		FACW species <u>85</u> x 2 = <u>170</u>
1					FAC species $100 \times 3 = 300$
2			0.0%		FACU species $20 \times 4 = 80$
3			0.0%		
4	0		0.0%		•
5	0	Ш	0.0%		Column Totals: <u>210</u> (A) <u>555</u> (B)
6	0		0.0%		Prevalence Index = B/A =2.643
7	0		0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9	•		0.0%		
10			0.0%		
	_	= Ta	otal Cover		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size: 15')					Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1. Berberis thunbergii		V	50.0%	FACU	Problematic Hydrophytic Vegetation 1 (Explain)
2. Crataegus crus-galli		V	50.0%	FACU	Problematic Hydrophlytic Vegetation (Explain)
3	0		0.0%		Indicators of hydric soil and wetland hydrology must
4	0		0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
	20	= To	otal Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: 5')		V	00.00/	E4614/	Sapling/shrub stratum – Consists of woody plants, excluding
1. Poa palustris	80		80.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Geum aleppicum	10		10.0%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Rumex verticillatus	5		5.0%	OBL	
4. Solidago gigantea	5		5.0%	FACW	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5		Ш	0.0%		
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
10 1.	0	$\overline{\Box}$	0.0%		less than 3 in. (7.6 cm) DBH.
12.	0	\Box	0.0%		Shrub stratum – Consists of woody plants, excluding woody
			otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	100	- 10	otal Cover		Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
**	0		0.0%		
5	0		0.0%		Hydrophytic
6					Vegetation Present? Yes No
	0	= 1	otal Cove	Г	

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

Per the EMP supplement at each sampling point in the potential wetland, drop any Certain FACU species that commonly dominate wetlands listed from the vegetation data, and compile the species list and coverage data for the remaining species in the community. Rosa multiflora - 10%

Soil Sampling Point: W-CMS-03B

Profile Descr		the depth i				onfirm the	absence of indicators.)		
Depth (inches)	Matrix			1.5.2	Toutere	ъ.	aulca		
(inches) 0-8	Color (moist) 10YR 6/1	%	Color (moist) 7.5YR 5/6	% 20	Tvpe 1	<u>Loc²</u> M	Texture Sandy Clay Loam	Rem	arks
			7.5110 5/0				Sandy Clay Loan		
							· · · · · · · · · · · · · · · · · · ·		
	-					-	,		
1- 0.0									
		on. RM=Redu	ced Matrix, CS=Cove	red or Coat	ted Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=N	/latrix	
Hydric Soil I							Indicators for Proble	ematic Hydric	c Soils ³ :
Histosol (•		Dark Surface (. ,	(CO) (MI DA	147 140)	2 cm Muck (A10)	(MLRA 147)	
	pedon (A2)		Polyvalue Belo Thin Dark Surf				Coast Prairie Redo	ox (A16)	
Black Hist	ııc (A3) ı Sulfide (A4)		Loamy Gleyed			140)	(MLRA 147,148)		
	Layers (A5)		✓ Depleted Matr		.)		Piedmont Floodpl	ain Soils (F19)	
	k (A10) (LRR N)		Redox Dark Su				(MLRA 136, 147) Very Shallow Dark Surface (TF12)		2)
	Below Dark Surface (A	111)	Depleted Dark	, ,					.2)
	k Surface (A12)	111)	Redox Depres	-	,		Other (Explain in	Remarks)	
	ıck Mineral (S1) (LRR I	N.	Iron-Mangane		(F12) (LRR	N,			
MLRA 147	7, 148)	• • •	MLRA 136)						
Sandy Gle	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	22)	3 7-4	la ada a a la akta a a	
Sandy Re	dox (S5)		Piedmont Floo	dplain Soil	s (F19) (ML	RA 148)	³ Indicators of wetland hyd	nydropnytic ve Irology must b	egetation and se present,
Stripped I	Matrix (S6)		Red Parent Ma	aterial (F21	.) (MLRA 12	7, 147)		sturbed or pro	
Restrictive L	ayer (if observed):								
Type: _G									
Depth (inc							Hydric Soil Present?	Yes 💿	No O
Remarks:									
Kemarks.									

Upland 79, 80

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable	City/County: Jefferson Sampling Date: 14-Feb-19
Applicant/Owner: AEP	State: OH Sampling Point: UPL-W-CMS-02&3
Investigator(s): CMS, RM	Section, Township, Range: S 36 T 9N R 3W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): flat Slope: 25.0% / 14.0 °
Subregion (LRR or MLRA): N 124	at.: 40.370898
Soil Map Unit Name: BmD - Berks-Guernsey complex, 15 to 25 pe	
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes No (If no, explain in Remarks.)
	antly disturbed? Are "Normal Circumstances" present? Yes O No
Are Vegetation , Soil , or Hydrology natural	lly problematic? (If needed, explain any answers in Remarks.)
	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No •	
Hydric Soil Present? Yes No •	To the Commission Co.
Yes O No O	Is the Sampled Area Yes O No within a Wetland?
Remarks: Maintained transmission line ROW.	
Hydrology	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic P	
High Water Table (A2) Hydrogen Sulfi	
	spheres along Living Roots (C3) Moss Trim Lines (B16)
	educed Iron (C4) Dry Season Water Table (C2)
	eduction in Tilled Soils (C6) Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Surf	
Algal Mat or Crust (B4) Other (Explain	
☐ Iron Deposits (B5)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
	s):
Water Table Present? Yes O No Depth (inche	SS: Wetland Hydrology Present? Yes O No •
Saturation Present? (includes capillary fringe) Yes No Depth (inche	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), if available:
Remarks:	
1	

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

		-Species?	Sampling Point: UPL-W-CMS-02&3
	Absolute	Rel.Strat. Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Cover Status	Number of Deminant Charies
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2.		0.0%	
		0.0%	Total Number of Dominant
3			Species Across All Strata:
4			Daysant of daysinant Cassics
5	0		Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
6	0		That Are Obe, FACW, of FAC.
7		0.0%	Prevalence Index worksheet:
8		0.0%	Total % Cover of: Multiply by:
	0 -	= Total Cover	OBL species
Sapling-Sapling/Shrub Stratum (Plot size:)		<u> </u>
1	0	0.0%	FACW species $0 \times 2 = 0$
2		0.0%	FAC species $0 \times 3 = 0$
		0.0%	FACU species $80 \times 4 = 320$
3			UPL species $\frac{15}{}$ x 5 = $\frac{75}{}$
4			
5	0		Column Totals: 95 (A) 395 (B)
6	0		Prevalence Index = $B/A = 4.158$
7	0	0.0%	Hydrophytic Vogotation Indicators
8		0.0%	Hydrophytic Vegetation Indicators:
9	_	0.0%	Rapid Test for Hydrophytic Vegetation
			☐ 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%	Problematic Hydrophytic Vegetation 1 (Explain)
		0.0%	¹ Indicators of hydric soil and wetland hydrology must
3			be present, unless disturbed or problematic.
4			
5	0		Definition of Vegetation Strata:
6	0		Four Vegetation Strata:
7		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5')		= Total Cover	regardless of height.
			Sapling/shrub stratum – Consists of woody plants, excluding
1. Poa annua		✓ 73.7% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Daucus carota	10	10.5%UPL	Herb stratum – Consists of all herbaceous (non-woody)
3. Schizachyrium scoparium	10	10.5%FACU	plants, regardless of size, and all other plants less than 3.28
4 Plantago lanceolata	5	5.3% UPL	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0	0.0%	ft in height.
6		0.0%	
			Five Vegetation Strata:
7			Tree - Woody plants, excluding woody vines, approximately
8			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		
0			Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1	0	0.0%	less than 3 in. (7.6 cm) DBH.
2		0.0%	Shrub stratum - Consists of woody plants, excluding woody
		= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)			Herb stratum – Consists of all herbaceous (non-woody)
1	0		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0	0.0%	3 ft (1 m) in height.
3.		0.0%	Woody vines – Consists of all woody vines, regardless of
4.		0.0%	height.
5			Hydrophytic
6	0		Vegetation No. 20
	0	= Total Cover	Present? Yes V No S
Damada (Taalada ahata aasata a	ah a at `		
Remarks: (Include photo numbers here or on a separate	sneet.)		

Soil Sampling Point: UPL-W-CMS-02&3

	Matrix			dox Featu			absence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc2	Texture	Remarks
0-5	10YR 5/3	100					Clay Loam	
5-10	10YR 6/6	100	-				Clay Loam	
							,	
				-				
							,	
				-			· · · · · · · · · · · · · · · · · · ·	
ype: C=Cor	ncentration. D=Depletion	on. RM=Red	uced Matrix, CS=Cover	ed or Coat	ted Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=N	1atrix
-	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :
│ Histosol (,		Dark Surface (,	(CO) /M! D *	147 140	2 cm Muck (A10)	(MLRA 147)
J Histic Epi ☐ Black His	ipedon (A2)		Polyvalue Below				Coast Prairie Redo	ox (A16)
_	n Sulfide (A4)		Loamy Gleyed			170)	(MLRA 147,148)	
	Layers (A5)		Depleted Matri		,		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)
_	ck (A10) (LRR N)		Redox Dark Su				Very Shallow Dark	s Surface (TF12)
_	Below Dark Surface (A	A11)	Depleted Dark	Surface (F	7)		Other (Explain in	
Thick Da	rk Surface (A12)		Redox Depress	sions (F8)			Otter (Explain in Remarks)	
Sandy Mu MLRA 14	uck Mineral (S1) (LRR 7, 148)	N,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR	N,		
Sandy Gl	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3 - 11 - 6	
Sandy Re	edox (S5)		Piedmont Floo	dplain Soil:	s (F19) (ML	RA 148)	Indicators of wetland hyd	hydrophytic vegetation and Irology must be present,
Stripped	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)	unless dis	sturbed or problematic.
estrictive L	.ayer (if observed):							
Type: <u>fr</u>	radinan						Under Call Processes	Yes ○ No •
Depth (inc	ches): 10						Hydric Soil Present?	Yes O No 💿
Remarks:								

Wetland 80ab	Rater(s): C.STALLO	NE, R. MASSA	Date:	2/14/2019
1 1		W-CMS-003 PEM		
max 6 pts subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.073 acres on-	site	
12 13	Metric 2. Upland buffers and surr	ounding land use.		
max 14 pts. subtotal	Za. Calculate average buffer width. Select only on WIDE. Buffers average 50m (164ft) or more around w MEDIUM. Buffers average 25m to <50m (82 to <164ft NARROW. Buffers average 10m to <25m (32ft to <82 VERY NARROW. Buffers average <10m (<32ft) arou 2b. Intensity of surrounding land use. Select one of VERY LOW. 2nd growth or older forest, prairie, savar to Company of the	vetland perimeter (7) t) around wetland perimeter (4) tft) around wetland perimeter (1) nd wetland perimeter (0) or double check and average. nnah, wildlife area, etc. (7) d growth forest. (5) ark, conservation tillage, new fallow field. (3)		
20.0 33	HIGH. Urban, industrial, open pasture, row cropping, Metric 3. Hydrology.	mining, construction. (1)		
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >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. Score None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch point tile filling dike road weir dred stormwater input Other	an use (1) complex (1)) n. Score one or dbl check urated (4) (12in) (1) source (nonstormwater) y/grading bed/RR track gling	
7 40		•		
max 20 pts. subtotal	Aa. Substrate disturbance. Score one or double cl None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) Ab. Habitat development. Select only one and ass Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	ign score. and average. Check all disturbances observed x mowing shrul grazing herb x clearcutting sedit selective cutting dred woody debris removal		al

Wetland 80a | W-CMS-003 PEM&PFO_Field

Site: W-C	MS-003 PE	M Rater(s): C.STALLONE	Ē, F	R. MASSA	Date:	2/14/2019
	40				W-CMS-003 PEM		
	subtotal this p	Metric 5. Special We	etlands.				
max 10 pts.	subtotal	Check all that apply and Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetla Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak of Relict Wet Praires (10) Known occurrence state/federal Significant migratory songbird/W Category 1 Wetland. See Quest	nd-unrestricted hydrolog nd-restricted hydrology (openings) (10) threatened or endangers ater fowl habitat or usage	y (1 5) ed s	pecies (10) 0)		
	3 43	Metric 6. Plant com	munities, inters _l	pe	rsion, microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation			Vegetation Community Cove		
		Score all present using 0 to 3 so	ale.		Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed Emergent Shrub			Present and either comprises small pa vegetation and is of moderate quality, significant part but is of low quality		
		1 Forest		2	Present and either comprises significa		
		Mudflats			vegetation and is of moderate quality of	r comprises a small	
		Open water Other	-		part and is of high quality Present and comprises significant part	or more of wetland's 2	
		6b. horizontal (plan view) Inter			vegetation and is of high quality	, or more, or wettand's 5	
		Select only one.			9		
		High (5)			Narrative Description of Vegetation		
		Moderately high(4)			Low spp diversity and/or predominance	e of nonnative or low	
		Moderate (3)			disturbance tolerant native species		
		x Moderately low (2) Low (1)			Native spp are dominant component of although nonnative and/or disturbance		
		None (0)			can also be present, and species diver		
		6c. Coverage of invasive plant	s. Refer		moderately high, but generallyw/o pres		
		Table 1 ORAM long form for list			threatened or endangered spp to		
		or deduct points for coverage		ſ	A predominance of native species, with	n nonnative spp high	
		Extensive >75% cover (-5)			and/or disturbance tolerant native spp		
		x Moderate 25-75% cover (-3)	P. arundinacea		absent, and high spp diversity and ofte		
		Sparse 5-25% cover (-1) Nearly absent <5% cover (0)		Į.	the presence of rare, threatened, or er	dangered spp	
		Absent (1)			Mudflat and Open Water Class Qual	tv	
	1	6d. Microtopography.			Absent <0.1ha (0.247 acres)	,	
	_	Score all present using 0 to 3 so		1	Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/tussucks			Moderate 1 to <4ha (2.47 to 9.88 acres	s)	
		1 Coarse woody debris >15cm (6i		3	High 4ha (9.88 acres) or more		
		Standing dead >25cm (10in) dbl	1		Microtonography Cover Scale		
		Amphibian breeding pools			Microtopography Cover Scale Absent		
			_		Present very small amounts or if more	common	
Modified					of marginal quality		
					Present in moderate amounts, but not		
Category 2			_	_	quality or in small amounts of highest o	quality	
	43 GRAND	TOTAL(max 100 pts)	:		Present in moderate or greater amoun	S	
					and of highest quality		



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 80a

Date:

February 14, 2019

Description:

PEM

Modifeid Category 2

Facing North



Wetland 80a

Date:

February 14, 2019 **Description:**

PEM

Modified Category 2

Facing South





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 80a

Date:

February 14, 2019

Description:

PEM

Modified Category 2

Facing West



Wetland 80a

Date:

February 14, 2019 **Description:**

PEM

Modified Category 2

Soil Pit





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 80b

Date:

February 14, 2019

Description:

PFO

Modified Category 2

Facing North



Wetland 80b

Date:

February 14, 2019 **Description:**

PFO

Modified Category 2

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 80b

Date:

February 14, 2019

Description:

PFO

Modified Category 2

Facing South



Wetland 80b

Date:

February 14, 2019 **Description:**

PFO

Modified Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

Site Location:

AEP Gable-Carrollton 138 kV Transmission Line Project

60582598

Project No.

Wetland 80b

Client Name:

Date:

February 14, 2019

Description:

PFO

Modified Category 2

Soil Pit



Wetland 81

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County: Jefferson	Sampling Date: 14-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: W-CMS-04
Investigator(s): CMS, RM		Section, Township, Range: S	36 T 19N R 3W
Landform (hillslope, terrace, etc	c.): Hillside	Local relief (concave, convex, no	one): hummocky Slope: 40.0% / 21.8 °
Subregion (LRR or MLRA): N	 I 124	Lat.: 40.369292 Long	g.: -80.858848
Soil Map Unit Name: BmD - Be	erks-Guernsey complex, 15 to 2	25 percent slopes	NWI classification: NA
Are climatic/hydrologic condition	ons on the site typical for this ti	me of year? Yes $lacktriangle$ No $lacktriangle$ (If no,	explain in Remarks.)
Are Vegetation $lacksquare$, Soil $lacksquare$, or Hydrology 🗌 sig	nificantly disturbed? Are "Normal	Circumstances" present? Yes O No 💿
Are Vegetation , Soil	, or Hydrology 🗹 na	turally problematic? (If needed, e	xplain any answers in Remarks.)
Summary of Findings		wing sampling point location	s, transects, important features, etc.
Hydrophytic Vegetation Prese			
Hydric Soil Present?	Yes No	Is the Sampled Area	Yes No
Wetland Hydrology Present?	Yes ● No ○	within a Wetland?	
Maintained transmission line l	ROW. PEM wetland associated	with stream HHEI-CMS-06. Snow melt ar	nd heavy rain contributed to hydrology indicators.
Hydrology			
Wetland Hydrology Indicators	:	P	Secondary Indicators (minimum of two required)
	of one required; check all that		Surface Soil Cracks (B6)
Surface Water (A1)		atic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
☐ High Water Table (A2)☐ Saturation (A3)		()	✓ Drainage Patterns (B10)
Water Marks (B1)		Rhizospheres along Living Roots (C3) of Reduced Iron (C4)	
Sediment Deposits (B2)		on Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)		k Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		plain in Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)			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? Yes	es No Depth (inches): 0.25	
	0 0		
	-1 (inches): Wetland Hydro	ology Present? Yes No
(includes capillary fringe)	es No Depth (inches):	
Describe Recorded Data (strea	ım gauge, monitoring well, aeri	al photos, previous inspections), if availa	ıble:
Remarks:			
	scharge and snow melt contribu	ited to hydrology evident at time of sam	nlina
Treapitation, ground water als	scharge and show mere contribe	acca to flydrology evident at time of sum	pillig.

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

			ninant		Sampling Point: W-CMS-04
Tree Stratum (Plot size:)	Absolute % Cover	Rel.	00.00	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (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	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:)	0	= Tot	al Cover		OBL species <u>15</u> x 1 = <u>15</u>
	•		0.0%		FACW species
1		<u> </u>	0.0%		FAC species $0 \times 3 = 0$
2		<u> </u>			FACU species $0 \times 4 = 0$
3		H-	0.0%		UPL species $\frac{7}{}$ x 5 = $\frac{35}{}$
4		<u> </u>	0.0%		
5		H-	0.0%		
6		H-	0.0%		Prevalence Index = B/A = 2.062
7		H-	0.0%		Hydrophytic Vegetation Indicators:
8		H-	0.0%		✓ Rapid Test for Hydrophytic Vegetation
9		Ц_	0.0%		✓ Dominance Test is > 50%
10	0	\sqcup _	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0	= Tot	al Cover		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2			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.
5			0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7	0	\Box	0.0%		Tree stratum - Consists of woody plants, excluding vines, 3
Herb Stratum (Plot size: _5')	0	= Tot	al Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. Poa palustris	40	~	41.2%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
0 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	30		30.9%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum – Consists of all herbaceous (non-woody)
	15		15.5%	OBL	plants, regardless of size, and all other plants less than 3.28
3. Carex lurida 4. Solidago gigantea	- <u>13</u> 5	<u> </u>	5.2%	FACW	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5. Rubus occidentalis	- <u> </u>		5.2%	UPL	ft in height.
6. Daucus carota	2		2.1%	UPL	
•		П-	0.0%	- OI L	Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately
8					20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		H-	0.0%		Sapling stratum – Consists of woody plants, excluding
10		H-	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11		H-	0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	0		0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	97	= 100	al Cover		Herb stratum - Consists of all herbaceous (non-woody)
1	0	\square_{-}	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation V
	0	= Tot	al Cove	-	Present? Yes No
Remarks: (Include photo numbers here or on a separate she	et.)				1
	,				

Soil Sampling Point: W-CMS-04

	Matrix			edox Feat			absence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Tvpe 1	Loc2	Texture	Remarks
0-4	10YR 5/2	80	10YR 6/2	20	D	М	Clay Loam	
4-12	10YR 5/1	60	10YR 5/6	40	С	М	Clay Loam	
				_				
				_				
Type: C=Cor	ncentration. D=Depletion	on. RM=Red	uced Matrix, CS=Cov	ered or Coa	ted Sand Gr	ains ²Loc	ation: PL=Pore Lining. M=1	Matrix
Hydric Soil	Indicators:						Indicators for Proble	
Histosol (• •		☐ Dark Surface	` '	(60) (14) 5.4	4.47.4.40)	2 cm Muck (A10)	(MLRA 147)
_	ipedon (A2)		Polyvalue Be				Coast Prairie Redo	ox (A16)
☐ Black His			☐ Thin Dark Su			148)	(MLRA 147,148)	. ,
_	n Sulfide (A4)		Loamy Gleye	-	<u>2)</u>		Piedmont Floodpl	ain Soils (F19)
_	Layers (A5)		Depleted Ma				(MLRA 136, 147)	
_	ck (A10) (LRR N)		Redox Dark S	` '			☐ Very Shallow Dark Surface (TF12)	
_ '	Below Dark Surface (A	A11)	Depleted Dai		F/)		Other (Explain in	Remarks)
Sandy M	rk Surface (A12) uck Mineral (S1) (LRR	N,	Iron-Mangan MLRA 136)	, ,	(F12) (LRR	N,		
MLRA 14			Umbric Surfa	rce (F13) (M	1I RA 136, 12	72)		
_	eyed Matrix (S4)		Piedmont Flo				³ Indicators of hydrophytic vegetation and	
_	edox (S5) Matrix (S6)		Red Parent N					lrology must be present, sturbed or problematic.
	ayer (if observed):							
							Hydric Soil Present?	Yes No
	ches): <u>12</u>						Tryanc Jon 1 resent.	
Type: _E Depth (inc Remarks:							Hydric Soil Present?	Yes No

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable	City/County: Jefferson Sampling Date: 14-Feb-19
Applicant/Owner: AEP	State: OH Sampling Point: UPL-W-CMS-04
Investigator(s): CMS, RM	Section, Township, Range: S 36 T 9N R 3W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): flat Slope: 25.0% / 14.0 °
Subregion (LRR or MLRA): N 124 Lat.:	40.369202 Long.: -80.858717 Datum: NAD83
Soil Map Unit Name: BmD - Berks-Guernsey complex, 15 to 25 percer	
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes No (If no, explain in Remarks.)
	y disturbed? Are "Normal Circumstances" present? Yes O No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)
	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No •	Is the Sampled Area
Wetland Hydrology Present? Yes No •	Is the Sampled Area within a Wetland? Yes ○ No ●
Remarks:	
Maintained transmission line ROW.	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants	
High Water Table (A2) Hydrogen Sulfide O	
	eres along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduce	
	ction in Tilled Soils (C6) Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4) ☐ Other (Explain in Re	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? (includes capillary frince) Yes No Depth (inches):	Wetland Hydrology Present? Yes O No 💿
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos	
3225-,	· · · · · · · · · · · · · · · · · · ·
Remarks:	

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

		Dominant Creation 2	Sampling Point: <u>UPL-W-CMS-04</u>
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Cover Indicator Status	
 1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC:
2	0	0.0%	
3		0.0%	Total Number of Dominant Species Across All Strata: 1 (B)
4		0.0%	Species Across Air Strata.
5.		0.0%	Percent of dominant Species
6.		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
7		0.0%	Prevalence Index worksheet:
8		0.0%	Total % Cover of: Multiply by:
	0 =	= Total Cover	OBL species $0 \times 1 = 0$
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species 90 x 2 = 180
1			FAC species $0 \times 3 = 0$
2			
3			1E 7E
4			
5	0		Column Totals: 110 (A) 275 (B)
6			Prevalence Index = $B/A = \underline{2.500}$
7			Hydrophytic Vegetation Indicators:
8			Rapid Test for Hydrophytic Vegetation
9			✓ Dominance Test is > 50%
0	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%	Problematic Hydrophytic Vegetation ¹ (Explain)
3		0.0%	¹ Indicators of hydric soil and wetland hydrology must
4		0.0%	be present, unless disturbed or problematic.
5		0.0%	Definition of Vegetation Strata:
6		0.0%	Four Vegetation Strata:
	0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
7		= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. Phalaris arundinacea	90	✓ 81.8% 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. Daucus carota	5	4.5%UPL	Herb stratum – Consists of all herbaceous (non-woody)
3. Solidago canadensis	5		plants, regardless of size, and all other plants less than 3.28
4. Plantago lanceolata	5		ft tall Woody vines – Consists of all woody vines greater than 3.28 If in height.
5. Tanacetum vulgare	5		it in neight.
6	0		Five Vegetation Strata:
7	0	0.0%	Tree - Woody plants, excluding woody vines, approximately
8	0	0.0%	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9		0.0%	diameter at breast height (DBH).
0	0	0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1.		0.0%	less than 3 in. (7.6 cm) DBH.
2	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:)	110 =	= Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%	plants, including herbaceous vines, regardless of size, and
2		0.0%	woody species, except woody vines, less than approximately 3 ft (1 m) in height.
		0.0%	Woody vines – Consists of all woody vines, regardless of
3		0.0%	height.
4			
5		0.0%	Hydrophytic
^	0	 0.0%	Vegetation
6		= Total Cover	Present? Yes No

Soil Sampling Point: UPL-W-CMS-04

(inches) Color (n	70	Color (moist) 10YR 5/3	dox Features % Type 30 C	M	Texture Clay Loam	Remarks
Type: C=Concentration. D= Hydric Soil Indicators: Histosol (A1)			30 C		Clay Loam	
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	luced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	luced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Rec	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Red	duced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)	Depletion. RM=Red	luced Matrix, CS=Cover				
Hydric Soil Indicators: Histosol (A1)			ed or Coated San	d Grains ² Loca	ation: PL=Pore Lining. M=N	1atrix
_ ` ´					Indicators for Proble	
Histic Epipedon (A2)		☐ Dark Surface (S7)			•
		Polyvalue Belo	w Surface (S8) (M	LRA 147,148)	2 cm Muck (A10)	
Black Histic (A3)			ace (S9) (MLRA 14		Coast Prairie Redo (MLRA 147,148)	ox (A16)
Hydrogen Sulfide (A4)		Loamy Gleyed	Matrix (F2)		Piedmont Floodpla	ain Soils (F19)
Stratified Layers (A5)		Depleted Matri	x (F3)		(MLRA 136, 147)	alii 30li3 (i 13)
2 cm Muck (A10) (LRR	N)	Redox Dark Su	ırface (F6)		Very Shallow Dark	Surface (TF12)
Depleted Below Dark S	urface (A11)	Depleted Dark	Surface (F7)		Other (Explain in	Remarks)
Thick Dark Surface (A1	2)	Redox Depress	, ,			
Sandy Muck Mineral (Si MLRA 147, 148)	L) (LRR N,	Iron-Manganes MLRA 136)	se Masses (F12) (l	RR N,		
Sandy Gleyed Matrix (S	4)	Umbric Surface	e (F13) (MLRA 136	5, 122)	3 7 41	handarahada arabadan and
Sandy Redox (S5)		☐ Piedmont Floo	dplain Soils (F19)	(MLRA 148)	wetland hyd	hydrophytic vegetation and rology must be present,
Stripped Matrix (S6)		Red Parent Ma	iterial (F21) (MLRA	127, 147)	unless dis	sturbed or problematic.
Restrictive Layer (if obse	rved):					
Type: <u>fraginan</u>						
Depth (inches): 10					Hydric Soil Present?	Yes O No 💿
Remarks:						

Wetland 81	Rater(s): C.STALLO	NE, R. MASSA	Date:	2/14/201
max 6 pts subtotal	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	W-CMS-004 PEM 0.005 acres	s on-site	
	Metric 2. Upland buffers and suri 2a. Calculate average buffer width. Select only or WIDE. Buffers average 50m (164ft) or more around with metric average 25m to <50m (82 to <164ft) NARROW. Buffers average 25m to <25m (32ft to <8: VERY NARROW. Buffers average <10m (<32ft) around the surrounding land use. Select one VERY LOW. 2nd growth or older forest, prairie, sava LOW. Old field (<10 years), Shrubland, young secon, HIGH. High. Residential, tenced pasture, per HIGH. Urban, industrial, open pasture, row cropping.	ne and assign score. Do not double of wetland perimeter (7) it) around wetland perimeter (4) 2ft) around wetland perimeter (1) und wetland perimeter (0) or double check and average. unnah, wildlife area, etc. (7) d growth forest. (5) park, conservation tillage, new fallow fire		
x	Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Solution or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	3b. Connectivity. Score all th 100 year floodplain (1) Between stream/lake and other Part of wetland/upland (e.g. for x Part of riparian or upland corric 3d. Duration inundation/satur Semi- to permanently inundate Regularly inundated/saturated x Seasonally inundated (2) Seasonally inundated in upper core one or double check and average check all disturbances observed.	r human use (1) est), complex (1) for (1) ration. Score one or dbl check d/saturated (4) (3) 30cm (12in) (1) ge.	с.
x x x	Metric 4. Habitat Alteration and E 4a. Substrate disturbance. Score one or double of the content of the conten	heck and average. sign score.	ed shrub/sapling removal herbaceous/aquatic bed remov sedimentation dredging farming nutrient enrichment	ral

Wetland 81 | W-CMS-004 PEM_Field 3/8/2019

Site: W-Cl	MS-004 PE	M Rater(s): C.STALLO	ΝE,	R. MASSA	Date:	2/14/2019
	18			W-CMS-004 PEM		
	subtotal this	Metric 5. Special Wetlands.				
max 10 pts.	subtotal	Check all that apply and score as indica Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrolog Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Praires (10) Known occurrence state/federal threatened or endang Significant migratory songbird/water fowl habitat or us Category 1 Wetland. See Question 5 Qualitative Ratio	logy (gy (5) gered sage (ng (-1	species (10) (10) (10)		
	-1 17	Metric 6. Plant communities, inte	rspe	, , ,		
max 20pts.	subtotal	6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale. Aquatic bed 1 Emergent Shrub Forest Mudflats Open water Other 6b. horizontal (plan view) Interspersion. Select only one. High (5) Moderately high(4) Moderately low (2) Low (1) None (0) 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-3) X Moderate 25-75% cover (-3) Sparse 5-25% cover (-3) P. arundinacea	2	Vegetation Community Cove Absent or comprises <0.1ha (0.2471 a) Present and either comprises small pa vegetation and is of moderate quality, significant part but is of low quality Present and either comprises significan vegetation and is of moderate quality of part and is of high quality Present and comprises significant part vegetation and is of high quality Present and comprises significant part vegetation and is of high quality Narrative Description of Vegetation Low spp diversity and/or predominance disturbance tolerant native species Native spp are dominant component of although nonnative and/or disturbance can also be present, and species diver moderately high, but generallyw/o pres threatened or endangered spp to A predominance of native species, with and/or disturbance tolerant native spp absent, and high spp diversity and ofte	cres) contiguous area rt of wetland's 1 or comprises a ant part of wetland's 2 or comprises a small or more, of wetland's 3 or more more, of more more more more more more more more	
Category 1	17 GRANE	Sparse 5-25% cover (-1) Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools	1 2 3	the presence of rare, threatened, or en Mudflat and Open Water Class Quali Absent < 0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres High 4ha (9.88 acres) or more Microtopography Cover Scale Absent Present very small amounts or if more of marginal quality Present in moderate amounts, but not quality or in small amounts of highest of Present in moderate or greater amount	common of highest quality	
				and of highest quality		

Wetland 81 | W-CMS-004 PEM_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 81

Date:

February 14, 2019

Description:

PEM

Category 1

Facing North



Wetland 81

Date:

February 14, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 81

Date:

February 14, 2019

Description:

PEM

Category 1

Facing South



Wetland 81

Date:

February 14, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 81

Date:

February 14, 2019

Description:

PEM

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City/County: Jefferson	Sampling Date: 14-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: W-CMS-05
Investigator(s): CMS, RM		Section, Township, Range: S	36 T 19N R 3W
Landform (hillslope, terrace, etc.):	Swale	Local relief (concave, convex, nor	ne): hummocky Slope: <u>35.0%</u> / <u>19.3</u> °
Subregion (LRR or MLRA): N 12	 24	 Lat.: 40.367784 Long.	: -80.857721 Datum: NAD83
Soil Map Unit Name: BmD - Berk			NWI classification: NA
Are climatic/hydrologic conditions	on the site typical for this time	e of year? Yes No (If no, ex	xplain in Remarks.)
Are Vegetation 🗸 , Soil 🗌			ircumstances" present? Yes O No 💿
Are Vegetation . , Soil .	, or Hydrology 🗸 natur	ally problematic? (If needed, ex	plain any answers in Remarks.)
Summary of Findings - A		ng sampling point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present?			
Hydric Soil Present?	Yes No	Is the Sampled Area	es No
Wetland Hydrology Present?	Yes No	within a Wetland?	
Remarks: Maintained transmission line RO	W. PEM wetland associated wit	h stream HHEI-CMS-07. Snow melt and	d heavy rain contributed to hydrology indicators.
Hydrology			
Wetland Hydrology Indicators:			econdary Indicators (minimum of two required)
Primary Indicators (minimum of	one required; check all that ap	ply)	Surface Soil Cracks (B6)
Surface Water (A1)	☐ True Aquation	Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Su	ılfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhi	zospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of	Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron	Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck S	urface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Expla	in in Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		<u> </u>	. ,
Inundation Visible on Aerial Imag	gery (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 Depth (incl	hes):	
Water Table Present? Yes	O No Denth (incl	hes):	
		Wetland Hydrol	ogy Present? Yes 💿 No 🔾
(includes capillary fringe) Yes			
Describe Recorded Data (stream	gauge, monitoring well, aerial	photos, previous inspections), if availab	le:
Remarks:			
	arge and snow melt contribute	d to hydrology evident at time of sampl	ling
rrecipitation, ground water disch	arge and snow mer contributed	a to rivarology evident at time or sample	ing.

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

		-Species?	
	Absolute	Rel.Strat. Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Cover Status	New hours & Device and Consider
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
		0.0%	That are obe, they, or the.
2			Total Number of Dominant
3	0		Species Across All Strata: (B)
4	0		
5		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
		0.0%	Prevalence Index worksheet:
7			
8			Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:	,0 =	= Total Cover	OBL species 80 x 1 = 80
			FACW species 20 x 2 = 40
1			FAC species $0 \times 3 = 0$
2	0		
3	0	0.0%	FACU species $0 \times 4 = 0$
4		0.0%	UPL species $0 \times 5 = 0$
		0.0%	Column Totals: 100 (A) 120 (B)
5	_		
6		0.0%	Prevalence Index = B/A = <u>1.200</u>
7			Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9		0.0%	
0		0.0%	
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%	Indicators of hydric soil and wetland hydrology must
		0.0%	be present, unless disturbed or problematic.
4			Definition of Vegetation Strate.
5			Definition of Vegetation Strata:
6	0	0.0%	Four Vegetation Strata:
7	0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
	0 =	= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: _5')			Sapling/shrub stratum – Consists of woody plants, excluding
1. Ludwigia palustris		✓ 80.0% OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Solidago gigantea	20	✓ 20.0% FACW	Herb stratum - Consists of all herbaceous (non-woody)
3	0	0.0%	plants, regardless of size, and all other plants less than 3.28
4		0.0%	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5		0.0%	ft in height.
6			Five Vegetation Strata:
7	0		Tree - Woody plants, excluding woody vines, approximately
8		0.0%	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	0.0%	diameter at breast height (DBH).
		0.0%	Sapling stratum – Consists of woody plants, excluding
0			woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1	0		· · · · · ·
2			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:)	100 =	= Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
	0	0.0%	plants, including herbaceous vines, regardless of size, and
1			woody species, except woody vines, less than approximately
2	0		3 ft (1 m) in height.
3			Woody vines – Consists of all woody vines, regardless of
4	0		height.
5	0	0.0%	
U		0.0%	Hydrophytic Vegetation
			I VECIETATION C. C.
6		= Total Cover	Present? Yes No

Soil Sampling Point: W-CMS-05

Depth	Matrix		Re	dox Featu				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Tvpe 1	Loc ²	Texture	Remarks
0-12	10YR 5/2	90	10YR 5/6	10	С	M	Clay Loam	
				_			-	
		n. RM=Redu	iced Matrix, CS=Cove	red or Coat	ed Sand Gr	nins ² Loca	ation: PL=Pore Lining. M	=Matrix
dric Soil I				(0=)			Indicators for Pro	olematic Hydric Soils ³ :
Histosol (A	•		Dark Surface ((CO) (MI D *	147 140	2 cm Muck (A1	0) (MLRA 147)
,	pedon (A2)		Polyvalue Belo Thin Dark Surf				Coast Prairie Re	
Black Histi	Sulfide (A4)		Loamy Gleyed			TO)	(MLRA 147,148	
1	Layers (A5)		✓ Depleted Matr		,		Piedmont Flood (MLRA 136, 14	lplain Soils (F19)
,	(A10) (LRR N)		Redox Dark Su				`	/) ark Surface (TF12)
	Below Dark Surface (A	11)	Depleted Dark	. ,	7)			
'	s Surface (A12)	/	Redox Depres		•		Other (Explain	ш кетагку)
	ck Mineral (S1) (LRR N	١,	☐ Iron-Mangane		F12) (LRR	٧,		
MLRÁ 147	, 148)	,	MLRA 136)					
Sandy Gle	yed Matrix (S4)		Umbric Surfac				3 Indicators	of hydrophytic vegetation and
	. (0=)		Piedmont Floo	odplain Soils	(F19) (ML	RA 148)	wetland h	lydrology must be present,
Sandy Red								
Sandy Rec Stripped M			Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)		disturbed or problematic.
Stripped M	Matrix (S6)		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)		
Stripped Mestrictive La	Matrix (S6) Byer (if observed):		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)		disturbed or problematic.
Stripped Mestrictive La	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)		disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fra Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fra Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fra Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fra Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fra Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped Mestrictive La Type: _Fra Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.
Stripped M strictive La Type: _Fr Depth (inch	Matrix (S6) Ayer (if observed): aginan		Red Parent Ma	aterial (F21)) (MLRA 12	7, 147)	unless	disturbed or problematic.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton_Gable		City	/County: Jefferson		Sampling	Date: 14-Feb-19
Applicant/Owner: AEP			State: Ol	Н	Sampling Point:	UPL-W-CMS-05
Investigator(s): CMS, RM		Sec	ction, Township, Range: S	5 3	36 T 9N	R 3W
Landform (hillslope, terrace, etc.):	Hillside	Loca	I relief (concave, convex,	none	e): flat SI	ope: _30.0%_ / 16.7 °
Subregion (LRR or MLRA): N 124			267555 Lo	na ·	-80.857505	Datum: NAD83
Soil Map Unit Name: BmD - Berks-					NWI classification: N	
Are climatic/hydrologic conditions o				o. exn	— Dlain in Remarks.)	
Are Vegetation 🗸 , Soil 🗌	or Hydrolo,				cumstances" present?	Yes O No •
Are Vegetation, Soil	, or Hydrol				ain any answers in Rema	arke)
Summary of Findings - At			(-		_
Hydrophytic Vegetation Present?	Yes O	No •				
Hydric Soil Present?	Yes \bigcirc	No •	Is the Sampled Area	Voc	s ○ No ●	
Wetland Hydrology Present?	Yes \bigcirc	No •	within a Wetland?	163	S O NO O	
Remarks: Maintained transmission line ROW	<u>'</u> .					
Hydrology						
Wetland Hydrology Indicators:				Sec	condary Indicators (minimu	m of two required)
Primary Indicators (minimum of o	ne required;	check all that apply)			Surface Soil Cracks (B6)	
Surface Water (A1)		True Aquatic Plants (B14	1)		Sparsely Vegetated Concav	ve Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odor (•	Ц	Drainage Patterns (B10)	
Saturation (A3)		Oxidized Rhizospheres a		Ц	Moss Trim Lines (B16)	
Water Marks (B1)		Presence of Reduced Iro	` '		Dry Season Water Table (0	C2)
Sediment Deposits (B2)		Recent Iron Reduction in	n Tilled Soils (C6)		Crayfish Burrows (C8)	LT (60)
☐ Drift deposits (B3) ☐ Algal Mat or Crust (B4)		☐ Thin Muck Surface (C7)			Saturation Visible on Aeria	- , . ,
Iron Deposits (B5)		Other (Explain in Remark	ks)		Stunted or Stressed Plants	(DI)
Inundation Visible on Aerial Image	ary (R7)				Geomorphic Position (D2) Shallow Aquitard (D3)	
Water-Stained Leaves (B9)	19 (67)				Microtopographic Relief (D	4)
Aquatic Fauna (B13)				П	FAC-neutral Test (D5)	7)
Field Observations:					TAC ficultur rest (D3)	
Surface Water Present? Yes	No 💿	Depth (inches):				
Water Table Present? Yes	No 💿	Depth (inches):				
Saturation Present? (includes capillary frings) Yes	No ●	Depth (inches):	Wetland Hyd	irolog	gy Present? Yes \bigcirc	No •
(includes capillary fringe) Describe Recorded Data (stream ga			evious inspections), if avai	ilable	2:	
, (3 - 7				
Remarks:						

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

Tree Stratum	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 1
1.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	That are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata:
2.	0.0% 0.0%	That are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata:
2.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Total Number of Dominant Species Across All Strata: Percent of dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 30 x 2 = 60 FAC species 0 x 3 = 0 FACU species 60 x 4 = 240 UPL species 10 x 5 = 50 Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Percent of dominant Species
4	0.0% 0.0%	Percent of dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet:
5.	0.0% 0.0%	That Are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet:
6.	0.0% 0.0%	That Are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet:
7.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Prevalence Index worksheet:
8	0.0% 0.0% 0	Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 30 x 2 = 60 FAC species 0 x 3 = 0 FACU species 60 x 4 = 240 UPL species 10 x 5 = 50 Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤ 3.0 1 Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation 1 (Explain)
8	0.0% 0.0%	OBL species
Sapling-Sapling/Shrub Stratum	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FACW species 30 x 2 = 60 FAC species 0 x 3 = 0 FACU species 60 x 4 = 240 UPL species 10 x 5 = 50 Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
1	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FACW species 30 x 2 = 60 FAC species 0 x 3 = 0 FACU species 60 x 4 = 240 UPL species 10 x 5 = 50 Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
2.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FAC species 0 x 3 = 0 FACU species 60 x 4 = 240 UPL species 10 x 5 = 50 Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
3.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FACU species 60 x 4 = 240 UPL species 10 x 5 = 50 Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
3.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	UPL species
4	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Column Totals: 100 (A) 350 (B) Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
5.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
6	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Prevalence Index = B/A = 3.500 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
7	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
8	0.0% 0.0%	Rapid Test for Hydrophytic Vegetation Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
9	0.0% 0.0% Fotal Cover 0.0% 0.0%	 Dominance Test is > 50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
0	0.0% Fotal Cover 0.0% 0.0% 0.0%	 Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
Shrub Stratum (Plot size:	0.0% 0.0% 0.0%	 Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
Shrub Stratum (Plot size:	0.0%	 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) □ Problematic Hydrophytic Vegetation¹ (Explain)
1	0.0%	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2	0.0%	Problematic Hydrophytic Vegetation 1 (Explain)
3	0.0%	
		1 To discuss of books of the discussion of books of the discussion of
0	0.00/	¹ Indicators of hydric soil and wetland hydrology must
4		be present, unless disturbed or problematic.
5	0.0%	Definition of Vegetation Strata:
6	0.0%	Four Vegetation Strata:
7	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
	Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot Size: _5)		Sapling/shrub stratum – Consists of woody plants, excluding
1. <u>Poa annua</u> 40		vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Phalaris arundinacea 30	30.0% FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Solidago canadensis 20	20.0% FACU	plants, regardless of size, and all other plants less than 3.28
4. Daucus carota 10	10.0% UPL	ft tall, Woody vines – Consists of all woody vines greater than 3.28
5	0.0%	ft in height.
6	0.0%	
7 0	0.0%	Five Vegetation Strata:
		Tree - Woody plants, excluding woody vines, approximately
8	0.0%	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		Sapling stratum – Consists of woody plants, excluding
0		woody vines, approximately 20 ft (6 m) or more in height and
1	0.0%	less than 3 in. (7.6 cm) DBH.
2	0.0%	Shrub stratum – Consists of woody plants, excluding woody
	Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
	7 0.00/	Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1	0.0%	woody species, except woody vines, less than approximately
2		3 ft (1 m) in height.
3		Woody vines – Consists of all woody vines, regardless of
4	0.0%	height.
5	0.0%	the decode at the
6	0.0%	Hydrophytic Vegetation
	Total Cover	Present? Yes No •
Remarks: (Include photo numbers here or on a separate sheet.)	. Juli Jarei	

Soil Sampling Point: UPL-W-CMS-05

Profile Descr		the depth i				nfirm the	absence of indicators.)	
Depth	Matrix			dox Featu	ures 1	Loc2	Tandonia	Damanka
(inches) 0-8	Color (moist) 10YR 5/3	% 70	Color (moist) 10YR 6/4	% 30	Tvpe ¹	M	Texture Clay Loam	Remarks
							Ciay Loani	
				-				
							1	
1 Type: C=Con	centration D-Depletic	n PM-Pedi	ced Matrix CS-Cove	red or Coal	tod Sand Gr	aine 21 oc	ation: PL=Pore Lining. M=1	Matrix
Hydric Soil I		JII. KIII–Keut	ced Matrix, C3=Cove	red or coa	teu Sanu Gi	allis -Luc		
Histosol (Dark Surface ((C7)			Indicators for Proble	ematic Hydric Soils ³ :
	pedon (A2)		Polyvalue Belo	. ,	(S8) (MLRA	147 148)	2 cm Muck (A10)	(MLRA 147)
Black Hist			Thin Dark Surf				Coast Prairie Redo	ox (A16)
	Sulfide (A4)		Loamy Gleyed			,	(MLRA 147,148)	
	Layers (A5)		Depleted Matr		• /		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)
2 cm Muc	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dar	k Surface (TF12)
	Below Dark Surface (A	A11)	Depleted Dark	Surface (F	7)		Other (Explain in	
	k Surface (A12)	,	Redox Depres	sions (F8)			Other (Explain in	remarks)
Sandy Mu MLRA 147	uck Mineral (S1) (LRR 1 7, 148)	Ν,	Iron-Mangane MLRA 136)	se Masses	(F12) (LRR	N,		
	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	22)	2	
Sandy Re			Piedmont Floo	dplain Soil	s (F19) (ML	RA 148)	³ Indicators of	hydrophytic vegetation and Irology must be present,
Stripped I	Matrix (S6)		Red Parent Ma	aterial (F21	.) (MLRA 12	7, 147)		sturbed or problematic.
Do atulativa I	(if abanuad).							
Type: <u>fr</u>	ayer (if observed):							
Depth (inc							Hydric Soil Present?	Yes O No 💿
	. iles). <u>n</u>							
Remarks:								

Wetland 82	Rater(s): C.STALLC	ONE, R. MASSA	Date:	2/14/201
max 6 pts subtotal	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts)	W-CMS-005 PEM 0.1 acres	s on-site	
	3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)			
5	6 Metric 2. Upland buffers and sur	rrounding land use.		
max 14 pts. subtotal	2a. Calculate average buffer width. Select only of WIDE. Buffers average 50m (164ft) or more around MEDIUM. Buffers average 25m to <50m (82 to <164 NARROW. Buffers average 10m to <25m (32ft to < x VERY NARROW. Buffers average <10m (<32ft) around 10m (<32ft) ar	wetland perimeter (7) 4ft) around wetland perimeter (4) 82ft) around wetland perimeter (1)	check.	
	2b. Intensity of surrounding land use. Select one VERY LOW. 2nd growth or older forest, prairie, sav X LOW. Old field (>10 years), shrubland, young secon MODERATELY HIGH. Residential, fenced pasture, HIGH. Urban, industrial, open pasture, row cropping	annah, wildlife area, etc. (7) nd growth forest. (5) park, conservation tillage, new fallow fie	eld. (3)	
9.0 1	5 Metric 3. Hydrology.			
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >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. Selection (2) Recovered (7) Recovered (7) Recovered (7) Recent or no recovery (1) Metric 4. Habitat Alteration and	Semi- to permanently inundated Regularly inundated/Asturated x Seasonally inundated (2) Seasonally saturated in upper 3 Score one or double check and average Check all disturbances observed itle dike x weir stormwater input	human use (1) est), complex (1) for (1) ration. Score one or dbl check. d/saturated (4) (3) 30cm (12in) (1) ge.	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double	•		
33000	None or none apparent (4) Recovered (3) x Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and as Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) x Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check None or none apparent (9) Recovered (6) x Recovering (3) Recent or no recovery (1)	sign score.	ed shrub/sapling removal herbaceous/aquatic bed remova sedimentation dredging farming nutrient enrichment	ı
subtotal ti	his page ORAM v. 5.0 Field Form Quantitative Rating			

Wetland 82 | W-CMS-005 PEM_Field 3/8/2019

Site: W-0	CMS-005 PEN	M Rater(s): C.STALLON	ΝE,	R. MASSA	Date:	2/14/2019
	22			W-CMS-005 PEM		
	subtotal this pa	Metric 5. Special Wetlands.				
max 10 pts.	subtotal	Check all that apply and score as indicar Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrolog Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Prairies (10) Known occurrence state/federal threatened or endang Significant migratory songbird/water fowl habitat or us	logy (jy (5) jered age ((10) species (10) 10)		
	3 25	Category 1 Wetland. See Question 5 Qualitative Ratin				
max 20pts.	3 Z5	Metric 6. Plant communities, inter 6a. Wetland Vegetation Communities.	spo	ersion, microtopograpny Vegetation Community Cove		
	_	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed	1	Present and either comprises small pa		
		1 Emergent		vegetation and is of moderate quality,	or comprises a	
	-	Shrub Forest	2	significant part but is of low quality Present and either comprises significa	nt nort of watland's 0	
	-	Mudflats	2	vegetation and is of moderate quality		
	-	Open water		part and is of high quality	or comprises a smair	
	F	Other	3	Present and comprises significant part	. or more, of wetland's 3	
	_	6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	,,	
		Select only one.		0 . ,		
	Γ	High (5)		Narrative Description of Vegetation	Quality	
		Moderately high(4)		Low spp diversity and/or predominance	e of nonnative or low	
		Moderate (3)		disturbance tolerant native species		
	L	Moderately low (2)		Native spp are dominant component o		
		Low (1)		although nonnative and/or disturbance		
	L	X None (0)		can also be present, and species dive		
		6c. Coverage of invasive plants. Refer		moderately high, but generallyw/o pres	sence of rare	
		Table 1 ORAM long form for list. Add or deduct points for coverage		threatened or endangered spp to A predominance of native species, wit	h nonnative enn high	
	г	Extensive >75% cover (-5)		and/or disturbance tolerant native spe		
	F	Moderate 25-75% cover (-3)		absent, and high spp diversity and often		
	F	Sparse 5-25% cover (-1)		the presence of rare, threatened, or er		
	T	Nearly absent <5% cover (0)			<u> </u>	
	Г	x Absent (1)		Mudflat and Open Water Class Qual	ity	
	_	6d. Microtopography.		Absent <0.1ha (0.247 acres)		
	_	Score all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 acres)		
	_	1 Vegetated hummucks/tussucks	_2		s)	
	-	Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more		
		Standing dead >25cm (10in) dbh Amphibian breeding pools		Microtopography Cover Scale		
	L	Tourbuild needing hoops	0	Absent		
			1	Present very small amounts or if more	common	
			•	of marginal quality		
			2	Present in moderate amounts, but not	of highest	
Category 1				quality or in small amounts of highest		
	25 GRAND	TOTAL(max 100 pts)	3	Present in moderate or greater amoun	ts	
		,	-			
				and of highest quality		

Wetland 82 | W-CMS-005 PEM_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 82

Date:

February 14, 2019

Description:

PEM

Category 1

Facing North



Wetland 82

Date:

February 14, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 82

Date:

February 14, 2019

Description:

PEM

Category 1

Facing South



Wetland 82

Date:

February 14, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 82

Date:

February 14, 2019

Description:

PEM

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project	City/County: Jefferson Sampling Date: 18-Feb-19
Applicant/Owner: AEP Ohio Transmission Company	State: OH Sampling Point: W-MRK-001 PEM
Investigator(s): M.R.Kline, R.C.Massa	Section, Township, Range: S 36 T 9N - Wayne R 3W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): concave Slope: 3.0% / 1.7
	31070
Soil Map Unit Name: BmD-Berks-Guernsey complex, 15	
Are climatic/hydrologic conditions on the site typical for	· · · · · · · · · · · · · · · · · · ·
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$	naturally problematic? (If needed, explain any answers in Remarks.)
· · · · · · · · · · · · · · · · · · ·	showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes • No •	Is the Sampled Area Yes No
Wetland Hydrology Present? Yes ● No ○	within a Wetland?
Hydrology	f-way. The wetland boundary follows edge of depression and hydrophytic vegetation.
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check a	Secondary Indicators (minimum of two required) I that apply) Surface Soil Cracks (B6)
Surface Water (A1)	ue Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)	drogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3)	idized Rhizospheres along Living Roots (C3) Moss Trim Lines (B16)
_	esence of Reduced Iron (C4)
	cent Iron Reduction in Tilled Soils (C6)
	in Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
	ner (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	☐ Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No •	Depth (inches):
	Wetland Hydrology Present? Yes No
(includes capillary fringe) Yes No C	Depth (inches): 8
Describe Recorded Data (stream gauge, monitoring we	ll, aerial photos, previous inspections), if available:
Remarks:	
Source of hydrology is spring seeps.	

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

		Dominant Species?	Sampling Point: W-MRK-001 PEM
Tree Stratum (Plot size:)	Absolute % Cover	-Species? Rel.Strat. Cover Status	
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2		0.0%	
3		0.0%	Total Number of Dominant Species Across All Strata: 3 (B)
4		0.0%	Species Across All Strata:3(B)
5		0.0%	Percent of dominant Species
5 6		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
7		0.0%	Prevalence Index worksheet:
3	0	0.0%	Total % Cover of: Multiply by:
	0 =	= Total Cover	OBL species $10 \times 1 = 10$
Sapling-Sapling/Shrub Stratum (Plot size:			FACW species $110 \times 2 = 220$
1			FAC species $0 \times 3 = 0$
2			FACU species $\frac{20}{3}$ x 4 = $\frac{80}{3}$
3			
1			· ·
5			Column Totals: <u>140</u> (A) <u>310</u> (B)
5			Prevalence Index = $B/A = \underline{2.214}$
7			Hydrophytic Vegetation Indicators:
3			✓ Rapid Test for Hydrophytic Vegetation
9			✓ 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%	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.
5		0.0%	Definition of Vegetation Strata:
5		0.0%	Four Vegetation Strata:
7	0	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
Herb Stratum (Plot size: <u>5' radius</u>)		= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
. Phalaris arundinacea	50	✓ 35.7% FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Agrimonia parviflora	30	✓ 21.4% FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Poa palustris	30	✓ 21.4% FACW	plants, regardless of size, and all other plants less than 3.28
1. Phleum pratense	20	14.3%FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28 If in height.
5. Scirpus atrovirens	10	7.1% OBL	it in neight.
5			Five Vegetation Strata:
7		0.0%	Tree - Woody plants, excluding woody vines, approximately
8		0.0%	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	0.0%	diameter at breast height (DBH).
)		0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1	0	0.0%	less than 3 in. (7.6 cm) DBH.
2	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Noody Vine Stratum (Plot size:)	140 =	= Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%	plants, including herbaceous vines, regardless of size, and
2.		0.0%	woody 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
i		0.0%	height.
		0.0%	
5	0	0.0%	Hydrophytic
5		= Total Cover	Vegetation
	· · ·	- IULAI CUVEI	1

Soil Sampling Point: W-MRK-001 PEM

Depth	Matrix		Re	dox Featu				
(inches)	Color (moist)	%	Color (moist)	%_	Tvpe 1	Loc²	Texture	Remarks
0-16	10YR 4/2	90	10YR 5/8	10	C	M	Silty Clay Loam	
	-							
				-				
vne: C=Con	centration. D=Depletion	on. RM=Redi	iced Matrix, CS=Cove	red or Coat	ed Sand Gr	ains 2loc	ation: PL=Pore Lining. M=M	atrix
	Indicators:	on. Ri i–Redi	acca Matrix, CS=COVC	rea or coat	.ca Sana Gre	JIII LOC		
Histosol (Dark Surface	(\$7)			Indicators for Proble	-
_ `	pedon (A2)		Polyvalue Belo		(S8) (MI RA	147 148)	2 cm Muck (A10) (MLRA 147)
Black Hist			Thin Dark Sur				Coast Prairie Redox	(A16)
_	Sulfide (A4)		Loamy Gleyed			10)	(MLRA 147,148)	
_	Layers (A5)		✓ Depleted Matr		,		Piedmont Floodpla (MLRA 136, 147)	in Soils (F19)
_	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dark	Surface (TE12)
_	Below Dark Surface (۸11)	Depleted Dark	` '	7)			
- '	k Surface (A12)	711)	Redox Depres		- /		Other (Explain in R	demarks)
_	ick Mineral (S1) (LRR	N	☐ Iron-Mangane		(F12) (LRR	N,		
MLRA 147	7, 148)	IN,	MLRA 136)	,	, , ,	,		
Sandy Gle	eyed Matrix (S4)		Umbric Surfac	e (F13) (MI	LRA 136, 12	2)	2	
Sandy Re			Piedmont Floo	dplain Soils	s (F19) (MLI	RA 148)	³ Indicators of h	ydrophytic vegetation and ology must be present,
Stripped I	Matrix (S6)		Red Parent Ma	aterial (F21) (MLRA 12	7, 147)		urbed or problematic.
	<i></i>							
	ayer (if observed):							
Type:	L V -						Hydric Soil Present?	Yes No
Depth (inc	nes):							100 - 110 -
emarks:								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Proje	ct	City/County: Jefferson	Sampling Date: 18-Feb-19
Applicant/Owner: AEP Ohio Transmission O	Company	State: OH Samplin	
Investigator(s): M.R.Kline, R.C.Massa	. ,	Section, Township, Range: S	36 T 9N - Wayne R 3
Landform (hillslope, terrace, etc.): Hills	ide .	Local relief (concave, convex, r	
			5.070
Subregion (LRR or MLRA): LRR N	Lat.:	40.366698 Lor	
Soil Map Unit Name: BmD-Berks-Guerns			classification: N/A
Are climatic/hydrologic conditions on the	site typical for this time of ye	ar? Yes $lacktriangle$ No $lacktriangle$ (If no,	explain in Remarks.)
Are Vegetation \square , Soil \square , or	Hydrology significantly	y disturbed? Are "Normal	Circumstances" present? Yes No ○
Are Vegetation $\ \ \ \ $, Soil $\ \ \ $, or	Hydrology 🗌 naturally pr	roblematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Attacl	n site map showing s	ampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	s ○ No ●		
Hydric Soil Present? Yes	s O No 💿	Is the Sampled Area	Yes ○ No ●
_ ·	s ○ No ●	within a Wetland?	res O No O
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one rec	uired; check all that apply)		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)	Presence of Reduce	res along Living Roots (C3)	Moss Trim Lines (B16) Dry Season Water Table (C2)
Sediment Deposits (B2)		ion 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 R	• *	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	Outer (Explain in to	chartoj	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:			
Carrace Tracer Frederics	o Depth (inches):		
Water Table Present? Yes N	o Depth (inches):		rology Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Yes N	Depth (inches):	Wetland Hyd	rology Present? Yes O No •
Describe Recorded Data (stream gauge,	monitoring well, aerial photos	s, previous inspections), if avai	able:
Remarks:			
No source of hydrology.			
, , , , , , , , , , , , , , , , , , , ,			

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

			ninant		Sampling Point: W-MRK-001 UPL
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Rel.	00.00	Indicator Status	
1 Quercus imbricaria	20	V	100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
2			0.0%	-7.0	mat are obt, racw, or rac.
		Π^{-}	0.0%		Total Number of Dominant
3		<u> </u>	0.0%		Species Across All Strata: (B)
4		П-	0.0%		Percent of dominant Species
5		<u> </u>	0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)
5		H-	0.0%		
7	0	H-			Prevalence Index worksheet: Total % Cover of: Multiply by:
3			0.0%		
Sapling-Sapling/Shrub Stratum (Plot size:)=	= 10ta	al Cover		OBL species
1			0.0%		FACW species $0 \times 2 = 0$
2.			0.0%		FAC species <u>20</u> x 3 = <u>60</u>
3		\Box	0.0%		FACU species $155 \times 4 = 620$
		$\overline{\Box}^-$	0.0%		UPL species $\frac{30}{100}$ x 5 = $\frac{150}{100}$
1		$\overline{\Box}^-$	0.0%		Column Totals: 205 (A) 830 (B)
5 6.		Π^{-}	0.0%		
		П-	0.0%		Prevalence Index = B/A = 4.049
7.		<u> </u>	0.0%		Hydrophytic Vegetation Indicators:
3		H-	0.0%		Rapid Test for Hydrophytic Vegetation
9		H-			Dominance Test is > 50%
)	_	Ш_	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0 =	= Tota	al Cover	•	☐ Morphological Adaptations ¹ (Provide supporting
1	0	\sqcup_{-}	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
ł			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
7.		\Box	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
Herb Stratum (Plot size: <u>5' radius</u>)		= Tota	al Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. Phleum pratense	100	_	54.1%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Daucus carota	30		16.2%	UPL	Herb stratum – Consists of all herbaceous (non-woody)
3. Dactylis glomerata	30		16.2%	FACU	plants, regardless of size, and all other plants less than 3.28
Tridens flavus	25		13.5%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0		0.0%		ft in height.
S			0.0%		Five Vegetation Strate
7	0		0.0%		Five Vegetation Strata:
3.		\Box	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
		$\overline{\Box}$	0.0%		diameter at breast height (DBH).
))		П-	0.0%		Sapling stratum – Consists of woody plants, excluding
		<u> </u>	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1	0	H-	0.0%		Shrub stratum – Consists of woody plants, excluding woody
2		 - Tot:	o.0% al Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Noody Vine Stratum (Plot size:) 1			0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
2		\Box	0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
3		$\overline{\Box}$	0.0%		Woody vines – Consists of all woody vines, regardless of
		<u> </u>	0.0%		height.
4					
5			0.0%		Hydrophytic
5		□_	0.0%		Vegetation Present? Yes ○ No ●
	0	= Tot	al Cove	r	rieselle:

Soil Sampling Point: W-MRK-001 UPL

Profile Descr		the depth				onfirm the	absence of indicators.)		
Depth	Matrix Color (maist)			dox Featu	res 1	1 2	Tandinin	Domester	
(inches) 0-8	Color (moist) 10YR 5/3	100	Color (moist)	%	Tvpe 1	Loc²	Texture Silt Loam	Remarks	
8-16	10YR 5/6	100					Silty Clay Loam		
	-			-					
	-						-		
				-					
¹ Type: C=Con	centration. D=Depleti	on. RM=Red	uced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=N	1atrix	
Hydric Soil 1	Indicators:						Indicators for Proble	matic Hydric Soils ³ :	
Histosol ((A1)		Dark Surface (•			2 cm Muck (A10)	-	
Histic Epi	pedon (A2)		Polyvalue Belov	w Surface	(S8) (MLRA	147,148)	Coast Prairie Redo		
Black Hist	tic (A3)		Thin Dark Surfa	ace (S9) (N	/ILRA 147,	148)	(MLRA 147,148)	ox (AIb)	
Hydroger	Sulfide (A4)		Loamy Gleyed	Matrix (F2))		Piedmont Floodpla	ain Soils (F19)	
Stratified	Layers (A5)		Depleted Matrix	x (F3)			(MLRA 136, 147)	30 (1 25)	
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dark	Surface (TF12)	
Depleted	Below Dark Surface (A	A11)	Depleted Dark	Surface (F	7)		Other (Explain in	Remarks)	
☐ Thick Dar	k Surface (A12)		Redox Depress					,	
Sandy Mu MLRA 147	uck Mineral (S1) (LRR 7, 148)	N,	Iron-Manganes MLRA 136)	e Masses ((F12) (LRR	N,			
Sandy Gle	eyed Matrix (S4)		Umbric Surface	(F13) (MI	LRA 136, 1	22)	2		
Sandy Re			Piedmont Floodplain Soils (F19) (MLRA 148)			.RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 12	7, 147)		turbed or problematic.	
B. delation I	(C l 1)								
	ayer (if observed):								
Type: Depth (inc	hac):						Hydric Soil Present?	Yes ○ No •	
	illes):								
Remarks:									

Site: AE	P Carrollto	n-Gable	Rater(s): M.R.K	line, R.C.Massa	Date:	2/18/2019
-			• •	Field Id:	•	
	0	0 Metric 1. Wet	land Area (size).	W-MRK-021819-	001 PEM	
max 6 pts	subtotal	Select one size cla	ss and assign score.			
		>50 acres (>20.2ha)		0.09	acres	
		25 to <50 acres (10. 10 to <25 acres (4 to				
		3 to <10 acres (1.2 t	o <4ha) (3 pts)			
		0.3 to <3 acres (0.12 0.1 to <0.3 acres (0.				
		x <0.1 acres (0.04ha)				
	1	1 Metric 2. Upl	and buffers and su	urrounding land use.		
max 14 pts.	subtotal			one and assign score. Do not double	check	
max 14 pts.	Subtotal		ige 50m (164ft) or more arou		oneon.	
		MEDIUM. Buffers av	erage 25m to <50m (82 to <1	164ft) around wetland perimeter (4)		
			verage 10m to <25m (32ft to uffers average <10m (<32ft) a	<82ft) around wetland perimeter (1)		
				one or double check and average.		
				avannah, wildlife area, etc. (7)		
			years), shrubland, young sec			
				e, park, conservation tillage, new fallow fi	eld. (3)	
		x HIGH. Urban, indust	rial, open pasture, row croppi	ng, mining, construction. (1)		
	7.0 8.	.0 Metric 3. Hyd	lrology.			
max 30 pts.	subtotal		er. Score all that apply.	3b. Connectivity. Score	all that apply.	
		High pH groundwater (100 year floodplain (1) Between stream/lake and	other human use (1)	
		x Precipitation (1)	5)	Part of wetland/upland (e.g		
		Seasonal/Intermitten		Part of riparian or upland of		
		3c. Maximum water	ater (lake or stream) (5)	Semi- to permanently inun	saturation. Score one or dbl dated/saturated (4)	спеск.
		>0.7 (27.6in) (3)		Regularly inundated/satura		
		0.4 to 0.7m (15.7 to x <0.4m (<15.7in) (1)	27.6in) (2)	Seasonally inundated (2) x Seasonally saturated in up	nner 30cm (12in) (1)	
			natural hydrologic regime	. Score one or double check and aver		
		None or none appare	ent (12)	Check all disturbances of		
		Recovered (7) Recovering (3)		ditch tile	point source (nonstormw x filling/grading	ater)
		x Recent or no recove	ry (1)	dike	road bed/RR track	
				weir stormwater input	dredging Other:	
	0 4	<u> </u>			Other.	
		_	oitat Alteration and	•		
max 20 pts.	subtotal	4a. Substrate distu	rbance. Score one or double	e check and average.		
		Recovered (3)	Sitt (4)			
		Recovering (2)	(4)			
		x Recent or no recove 4b. Habitat develop	ment. Select only one and	assign score.		
		Excellent (7)	•			
		Very good (6) Good (5)				
		Moderately good (4)				
		Fair (3)				
		Poor to fair (2) x Poor (1)				
		4c. Habitat alteration	n. Score one or double che			
		None or none appare	ent (9)	Check all disturbances ob		
		Recovered (6) Recovering (3)		x mowing grazing	x shrub/sapling removal herbaceous/aquatic bed	removal
		x Recent or no recove	ry (1)	clearcutting	sedimentation	
				selective cutting woody debris removal	dredging farming	
	_			toxic pollutants	nutrient enrichment	
	1	1		 .		
	subtotal t	his page ORAM v. 5.0 Field F	orm Quantitative Rating			

wetland 83 | test_Field 3/8/2019

Site: AEP Carrol	lton-Gable	Rater(s): M.R.Kline, R.	C.Massa	Date:	2/18/2019
			Field Id:		
	11		W-MRK-021819-001 PEN	Л	
subt	otal this page	etric 5. Special Wetlands.			
	total Ch Bog Fen Old Matt Lak Lak Reli Knoo Sigr Catr	eck all that apply and score as indicated. (10) (10) (10) growth forest (10) ure forested wetland (5) a Erie coastal/tributary wetland-unrestricted hydrology (10 e Erie coastal/tributary wetland-restricted hydrology (5) a Plain Sand Prairies (Oak Openings) (10) ct Wet Praires (10) wn occurrence state/federal threatened or endangered spificant migratory songbird/water fowl habitat or usage (10 egory 1 Wetland. See Question 5 Qualitative Rating (-10)	pecies (10)		
-2		etric 6. Plant communities, intersper		6 1	
max 20pts. sub	Sco Aqu 1 Eme Shri Shri Foro Ope Oth 6b. Sele Higi Moc Moc Moc X Non 6c. Tab or d Extex X Moc	atic bed argent ub est fiflats on water er horizontal (plan view) Interspersion. ect only one. 1 (5) lerately high(4) lerate (3) lerately low (2) (11)	Vegetation Community Covi Absent or comprises <0.1ha (0.2471 a Present and either comprises small pa vegetation and is of moderate quality, significant part but is of low quality Present and either comprises significat vegetation and is of moderate quality opart and is of high quality Present and comprises significant part vegetation and is of high quality Narrative Description of Vegetation Low spp diversity and/or predominance disturbance tolerant native species Native spp are dominant component of although nonnative and/or disturbance can also be present, and species diver moderately high, but generallyw/o presthreatened or endangered spp to A predominance of native species, with and/or disturbance tolerant native spp absent, and high spp diversity and ofte the presence of rare, threatened, or er	cres) contiguous area rt of wetland's 1 or comprises a nt part of wetland's 2 or comprises a small , or more, of wetland's 3 Quality e of nonnative or low f the vegetation, mod tolerant native spp rsity moderate to ence of rare in nonnative spp high absent or virtually in, but not always,	
Category 1 9 GF	Abs 6d. Sco Veg Coa Star Amr	re all present using 0 to 3 scale. etated hummucks/fussucks rse woody debris >15cm (6in) ding dead >25cm (10in) dbh phibian breeding pools	Mudflat and Open Water Class Qual Absent < 0.1ha (0.247 acres) Low 0.1 to < 1ha (0.247 to 2.47 acres) Moderate 1 to < 4ha (2.47 to 9.88 acre High 4ha (9.88 acres) or more Microtopography Cover Scale Absent Present very small amounts or if more of marginal quality Present in moderate amounts, but not quality or in small amounts of highest of the present in moderate or greater amound and of highest quality	common of highest quality	

wetland 83 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 83

Date:

February 18, 2019

Description:

PEM

Category 1

Facing North



Wetland 83

Date:

February 18, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 83

Date:

February 18, 2019

Description:

PEM

Category 1

Facing South



Wetland 83

Date:

February 18, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 83

Date:

February 18, 2019

Description:

PEM

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project	City/County: Jefferson	Sampling Date: 18-Feb-19
Applicant/Owner: AEP Ohio Transmiss	sion Company	State: OH Samp	oling Point: W-MRK-002 PEM
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range:	S 36 T 9N - Wayne R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex	c, none): concave Slope: 3.0% / 1.7 °
Subregion (LRR or MLRA): LRR N		Lat.: 40.366433 L	.ong.: -80.856616
Soil Map Unit Name: BmD-Berks-Gu	ernsey complex, 15 to 25	percent slopes NV	VI classification: N/A
Are climatic/hydrologic conditions on	the site typical for this tim	ne of year? Yes No (If i	no, explain in Remarks.)
Are Vegetation, Soil			nal Circumstances" present? Yes No
Are Vegetation, Soil			d, explain any answers in Remarks.)
Summary of Findings - Att	tach site map show	•	ons, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No		
Hydric Soil Present?	Yes No	Is the Sampled Area	
Wetland Hydrology Present?	Yes No	within a Wetland?	Yes No
			egins at a small spring seep and drains down the of depression and hydrophytic vegetation.
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one			Surface Soil Cracks (B6)
Surface Water (A1)		ic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)	☐ 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)	□ Otilei (Exp	iaiii iii Keiliaiks)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery	y (B7)		Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			▼ FAC-neutral Test (D5)
Field Observations:			
Surface Water Present? Yes	No O Depth (in	ches):	
Water Table Present? Yes •	No O Depth (in		ydrology Present? Yes No
Saturation Present? (includes capillary fringe) Yes		ches): 8	
Describe Recorded Data (stream gau	uge, monitoring well, aeria	photos, previous inspections), if av	vailable:
Remarks:			
Source of hydrology is spring seeps.			

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

		Dom			Sampling Point: W-MRK-002 PEM
Tree Stratum (Plot size:)	Absolute % Cover	Rel.	J	Indicator Status	300000000000000000000000000000000000000
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2			0.0%		
3.			0.0%		Total Number of Dominant
4			0.0%		Species Across All Strata: (B)
5.		$\overline{\Box}^{-}$	0.0%		Percent of dominant Species
		$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6 7		\equiv	0.0%		Prevalence Index worksheet:
		\neg	0.0%		Total % Cover of: Multiply by:
8			o.o /o al Cover		OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:	_)	- 100	ii Covei		
1	0		0.0%		
2			0.0%		· — —
3			0.0%		FACU species $\frac{40}{3}$ x 4 = $\frac{160}{3}$
4			0.0%		UPL species $0 \times 5 = 0$
5			0.0%		Column Totals: <u>120</u> (A) <u>320</u> (B)
6			0.0%		Prevalence Index = B/A = 2.667
7	0		0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
0			0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	_	= Tota	al Cover		Morphological Adaptations ¹ (Provide supporting
1	0	П	0.0%		data in Remarks or on a separate sheet)
2.		\equiv	0.0%		Problematic Hydrophytic Vegetation 1 (Explain)
3.		$\overline{-}$	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4		$\overline{-}$	0.0%		be present, unless disturbed or problematic.
5		$\overline{\Box}$	0.0%		Definition of Vegetation Strata:
		Π^{-}	0.0%		Four Vegetation Strata:
6		$\overline{-}$	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
7			o.070		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' radius</u>)					Sapling/shrub stratum – Consists of woody plants, excluding
1. Phalaris arundinacea			41.7%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Poa palustris	_		25.0%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Solidago canadensis		$\overline{}$	16.7%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28
4. Phleum pratense		<u>H</u> _	16.7%	FACU	ft in height.
5		<u>H</u> –	0.0%		
6	0		0.0%		Five Vegetation Strata:
7		\neg	0.0%		Tree - Woody plants, excluding woody vines, approximately
8		\neg	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		\neg	0.0%		Sapling stratum – Consists of woody plants, excluding
0		\neg	0.0%		woody vines, approximately 20 ft (6 m) or more in height and
1	0	Ц_	0.0%		less than 3 in. (7.6 cm) DBH.
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	120 =	= Tota	al Cover		Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3			0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		Hadanahada
	0		0.0%		Hydrophytic Vegetation
0.					
6	0	= Tota	al Cove	r	Present? Yes NO

Soil Sampling Point: W-MRK-002 PEM

Profile Descripti	on: (Describe to	the depth n	eeded to docume	nt the indi	cator or co	nfirm the	absence of indicators.)		
Depth Matrix Redox Features									
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks	
0-16	10YR 4/2	80	10YR 5/8	20	C	M	Silty Clay Loam		
			-				-		
							,		
							,		
¹ Type: C=Concent	tration. D=Depletio	n. RM=Redu	ced Matrix, CS=Cove	ered or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N	Matrix	
Hydric Soil Indi	cators:						Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (A1)			☐ Dark Surface	(S7)					
Histic Epipedo	on (A2)		Polyvalue Bel	ow Surface	(S8) (MLRA	147,148)	2 cm Muck (A10)		
☐ Black Histic (A			Thin Dark Sur	face (S9) (N	1LRA 147, 1	148)	Coast Prairie Redo (MLRA 147,148)	ox (A16)	
Hydrogen Sul	lfide (A4)		Loamy Gleyed					ain Caile (F10)	
Stratified Laye			✓ Depleted Mat				Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)	
2 cm Muck (A			Redox Dark S				Very Shallow Dark	v Surface (TE12)	
	ow Dark Surface (A	11)	Depleted Darl	, ,	7)				
Thick Dark Su		11)	Redox Depres		,		Other (Explain in	Remarks)	
		ı	☐ Iron-Mangane	. ,	F12) (I RR	N.			
MLRA 147, 14	*	Ι,	MLRA 136)						
Sandy Gleyed			Umbric Surfa				3 Indicators of	hydrophytic vegetation and	
Sandy Redox	(S5)		Piedmont Flo	odplain Soils	(F19) (ML	RA 148)	wetland hyd	rology must be present,	
Stripped Matr	rix (S6)		Red Parent M	laterial (F21) (MLRA 12	7, 147)	unless dis	sturbed or problematic.	
Restrictive Laye	r (if observed):								
Туре:									
Depth (inches)):						Hydric Soil Present?	Yes No	
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV Project	ct	City/County: Jefferson	Sampling Date: 18-Feb-19						
Applicant/Owner: AEP Ohio Transmission (Company	State: OH Samplin	g Point: W-MRK-001 UPL						
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	36 T 9N - Wayne R 3						
Landform (hillslope, terrace, etc.): Hills	side .	Local relief (concave, convex, r							
			5.070						
Subregion (LRR or MLRA): LRR N	Lat.:		g.: -80.856829 Datum: NAD83						
Soil Map Unit Name: BmD-Berks-Guerns			classification: N/A						
Are climatic/hydrologic conditions on the	site typical for this time of ye	ar? Yes $lacktriangle$ No $lacktriangle$ (If no,	explain in Remarks.)						
Are Vegetation \square , Soil \square , or	Hydrology significantly	y disturbed? Are "Normal	Circumstances" present? Yes No ○						
Are Vegetation \square , Soil \square , or	Hydrology 🗌 naturally pr	oblematic? (If needed,	explain any answers in Remarks.)						
Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? Ye	s ○ No ●								
Hydric Soil Present? Yes	s O No 💿	Is the Sampled Area	Yes ○ No ●						
_ ·	s ○ No ●	within a Wetland?	res O No O						
Hydrology									
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one rec	juired; check all that apply)		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)	Presence of Reduce	res along Living Roots (C3)	Moss Trim Lines (B16) Dry Season Water Table (C2)						
Sediment Deposits (B2)		ion 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 R	,	Stunted or Stressed Plants (D1)						
☐ Iron Deposits (B5)	Outer (Explain in te	emarkoj	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:									
Daniace Water Frederici	Depth (inches):								
Water Table Present? Yes O	Depth (inches):		rology Present? Yes O No 💿						
Saturation Present? (includes capillary fringe) Yes N	o Depth (inches):	Wetland Hyd	rology Present? Yes O No •						
Describe Recorded Data (stream gauge,	monitoring well, aerial photos	s, previous inspections), if avai	able:						
Remarks:									
No source of hydrology.									
, , , , , , , , , , , , , , , , , , , ,									

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

	Dominant ——Species?				Sampling Point: W-MRK-001 UPL		
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Rel.S	trat.	Indicator Status			
	20	V 10	00.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)		
1. <u>Quercus imbricaria</u> 2.		\equiv	0.0%	-7.0	mat are obt, racw, or rac.		
		\equiv	0.0%		Total Number of Dominant		
3		\equiv	0.0%		Species Across All Strata: (B)		
4		=	0.0%		Percent of dominant Species		
5			0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)		
5		=	0.0%				
7	0	\neg	0.0%		Prevalence Index worksheet: Total % Cover of: Multiply by:		
3							
Sapling-Sapling/Shrub Stratum (Plot size:)=	= Total	Cover		OBL species		
1			0.0%		FACW species $0 \times 2 = 0$		
2.			0.0%		FAC species <u>20</u> x 3 = <u>60</u>		
3			0.0%		FACU species $155 \times 4 = 620$		
			0.0%		UPL species $\frac{30}{100}$ x 5 = $\frac{150}{100}$		
1		$\overline{}$	0.0%		Column Totals: 205 (A) 830 (B)		
5 6.		=	0.0%				
		$\overline{}$	0.0%		Prevalence Index = B/A = 4.049		
7.		=	0.0%		Hydrophytic Vegetation Indicators:		
3		=	0.0%		Rapid Test for Hydrophytic Vegetation		
9		\equiv			Dominance Test is > 50%		
)	_		0.0%		Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)		= Total	Cover	•	☐ Morphological Adaptations ¹ (Provide supporting		
1	0	∐_c	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		
ł			0.0%		be present, unless disturbed or problematic.		
5			0.0%		Definition of Vegetation Strata:		
5			0.0%		Four Vegetation Strata:		
7.			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3		
Herb Stratum (Plot size: <u>5' radius</u>)		= Total	Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
1. Phleum pratense	100	✓ _ 5	4.1%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
Daucus carota	30	1	6.2%	UPL	Herb stratum – Consists of all herbaceous (non-woody)		
3. Dactylis glomerata	30	1	6.2%	FACU	plants, regardless of size, and all other plants less than 3.28		
Tridens flavus	25		3.5%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28		
5	0		0.0%		ft in height.		
S			0.0%		Five Vegetation Strate		
7	0		0.0%		Five Vegetation Strata:		
3.			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		
		\neg	0.0%		diameter at breast height (DBH).		
))		\neg	0.0%		Sapling stratum – Consists of woody plants, excluding		
		\neg	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
1	0	\equiv	0.0%		Shrub stratum – Consists of woody plants, excluding woody		
2		= Total			vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Noody Vine Stratum (Plot size:) 1).0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and		
2		\neg	0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.		
3		$\overline{-}$	0.0%		Woody vines – Consists of all woody vines, regardless of		
		$\overline{}$	0.0%		height.		
4		\neg					
5			0.0%		Hydrophytic		
5				Vegetation Present? Yes No No			
	0	= Tota	I Cove	r	Present? 165 0 140 0		

Soil Sampling Point: W-MRK-001 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix Color (maist)			dox Featu	res 1	1 3	Tandon	Damarka	
(inches) 0-8	Color (moist) 10YR 5/3	100	Color (moist)	%	Tvpe 1	Loc²	Texture Silt Loam	Remarks	
-									
8-16	10YR 5/6	100					Silty Clay Loam		
	-			-					
1 Typo: C=Con	contration D-Donloti	on DM-Dod	used Matrix CS=Cover	od or Coat	od Sand Cr	rains 21 oc	ation: DI - Doro Lining M-N	Antriv	
		on. KM=Reu	uceu Matrix, CS=Cover	eu or Coat	eu Sanu Gi	allis -LOC	ation: PL=Pore Lining. M=N		
Hydric Soil 1			Dark Surface (27)			Indicators for Proble	ematic Hydric Soils ³ :	
·	pedon (A2)		Polyvalue Belov	•	(S8) (MI DA	147 148)	2 cm Muck (A10)	(MLRA 147)	
Black Hist			Thin Dark Surfa				Coast Prairie Redo	ox (A16)	
	Sulfide (A4)		Loamy Gleyed			1.0)	(MLRA 147,148)		
	Layers (A5)		Depleted Matrix		,		Piedmont Floodpla (MLRA 136, 147)	ain Soils (F19)	
	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dark	(Surface (TF12)	
	Below Dark Surface (A11)	Depleted Dark	. ,	7)		Other (Explain in		
	k Surface (A12)	,	Redox Depress					Remarks)	
	uck Mineral (S1) (LRR	N,	☐ Iron-Manganes MLRA 136)	e Masses ((F12) (LRR	N,			
	eyed Matrix (S4)		Umbric Surface	e (F13) (MI	LRA 136, 1	22)			
Sandy Re			Piedmont Floor				³ Indicators of I	hydrophytic vegetation and	
	Matrix (S6)		Red Parent Ma				wetland hydrology must be present, unless disturbed or problematic.		
						. ,			
	ayer (if observed):								
Type: Depth (inc	hac):						Hydric Soil Present?	Yes O No 💿	
	iles)								
Remarks:									

Site: AE	P Carrollton	n-Gable	Rater(s): M.R.Kl	ine, R.C.Massa	Date:	2/18/2019
			• , ,	Field Id:	•	
	0	0 Metric 1. Wet	land Area (size).	W-MRK-021819-	002 PEM	
max 6 pts	subtotal	Select one size cla: >50 acres (>20.2ha) 25 to <50 acres (10. 10 to <25 acres (4 to 3 to <10 acres (1.2 t 0.3 to <3 acres (0.12 0.1 to <0.3 acres (0.12 x <0.1 acres (0.04ha)	to <20.2ha) (5 pts) <10.1ha) (4 pts) o <4ha) (3 pts) to <1.2ha) (2pts) 04 to <0.12ha) (1 pt)	0.06	acres	
	1	1 Metric 2. Upl	and buffers and su	rrounding land use.		
max 14 pts.	subtotal	WIDE. Buffers avera MEDIUM. Buffers av NARROW. Buffers a X VERY NARROW. Bu	ge 50m (164ft) or more aroun erage 25m to <50m (82 to <10 verage 10m to <25m (32ft to offers average <10m (<32ft) ar	64ft) around wetland perimeter (4) <82ft) around wetland perimeter (1) round wetland perimeter (0)	check.	
		VERY LOW. 2nd gro LOW. Old field (>10 MODERATELY HIG	wth or older forest, prairie, sa years), shrubland, young seco	ond growth forest. (5) , park, conservation tillage, new fallow fi	eld. (3)	
	7.0 8.	.0 Metric 3. Hyd	rology.			
max 30 pts.	subtotal	High pH groundwate (x Other groundwater (x Precipitation (1) Seasonal/Intermitten Perennial surface wa 3c. Maximum water (27 (27.6in) (3) 0.4 to 0.7m (15.7 to x <0.4m (<15.7in) (1) 3e. Modifications to None or none appare Recovered (7) Recovering (3) x Recent or no recove	t surface water (3) ter (lake or stream) (5) depth. Select one. 27.6in) (2) a natural hydrologic regime. ent (12) y (1)	Semi- to permanently inun Regularly inundated/sature Seasonally inundated (2) x Seasonally saturated in up Score one or double check and avera Check all disturbances of ditch title dike weir stormwater input	other human use (1) g. forest), complex (1) corridor (1) saturation. Score one or dbl dated/saturated (4) ated (3) oper 30cm (12in) (1) age.	
			itat Alteration and	•		
max 20 pts.	subtotal	None or none appare Recovered (3) Recovering (2) X Recent or no recove 4b. Habitat develop Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)	ry (1) ment. Select only one and a n. Score one or double chernt (9)	ussign score.	served X shrub/sapling removal herbaceous/aquatic bed is sedimentation dredging farming nutrient enrichment	removal
			orm Quantitative Rating			

wetland 84 | test_Field 3/8/2019

Site: AEP Carrol	lton-Gable	Rater(s): M.R.Kline	e, R.C.Massa	Date:	2/18/2019
		, ,	Field Id:		
	11		W-MRK-021819-00	2 PEM	
subt	11 Metric	5. Special Wetlands.			
max 10 pts. sub	total Check al Bog (10) Fen (10) Old growth Mature fore Lake Erie c Lake Plain Relict Wet Known occ Significant Category 1	I that apply and score as indicar forest (10) sted wetland (5) oastal/tributary wetland-unrestricted hydrolog oastal/tributary wetland-restricted hydrolog Sand Prairies (Oak Openings) (10) Praires (10) urrence state/federal threatened or endang migratory songbird/water fowl habitat or use Wetland. See Question 5 Qualitative Ratin	ogy (10) (5) ered species (10) ige (10) g (-10)		
-2		6. Plant communities, inter		•	
max 20pts. sub	Score all pr Aquatic bet Emergent Shrub Forest Mudflats Open wate Other 6b. horizor Select only High (5) Moderately Moderately Low (1) x None (0) 6c. Covera Table 1 OF or deduct p Extensive 2 x Moderate S	ntal (plan view) interspersion. one. high(4)	Vegetation Communi O Absent or comprises < 0.1ha (1 Present and either comprises vegetation and is of moderate significant part but is of low quarter of the comprises vegetation and is of moderate part and is of high quality Present and comprises significant part and is of high quality Present and comprises signification of Veguarter of the comprises of the comprises of the comprise of the c	(0.2471 acres) contiguous a small part of wetland's 1 e quality, or comprises a uality is significant part of wetland's e quality or comprises a small cant part, or more, of wetland it is under the comprise of the vegetation, must be compressed in the comprise of the vegetation, must be compressed in the compressed i	2 and s 3
Category 1 9 GF	Nearly absorption Absent (1) 6d. Microte Score all pr Vegetated Coarse woo Standing do	ent <5% cover (0) pography. esent using 0 to 3 scale. hummucks/fussucks dyd debris >15cm (6in) ead >25cm (10in) dbh breeding pools	Mudflat and Open Water Cla Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.4 Moderate 1 to <4ha (2.47 to 9.3 High 4ha (9.88 acres) or more Microtopography Cover Sca Absent Present in moderate amounts of marginal quality Present in moderate amounts of uality or in small amounts of all and a present in moderate or greate and of highest quality	ass Quality 17 acres) 9.88 acres) e ale or if more common s, but not of highest highest quality	

wetland 84 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 84

Date:

February 18, 2019

Description:

PEM

Category 1

Facing North



Wetland 84

Date:

February 18, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 84

Date:

February 18, 2019

Description:

PEM

Category 1

Facing South



Wetland 84

Date:

February 18, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 84

Date:

February 18, 2019

Description:

PEM

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project	City/County: Jefferson	Sampling Date: 18-Feb-19								
Applicant/Owner: AEP Ohio Transmiss	sion Company	State: OH Samplin	g Point: W-MRK-003 PEM								
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	36 T 9N - Wayne R 3W								
Landform (hillslope, terrace, etc.):	Floodplain	Local relief (concave, convex, n	one): concave Slope: 1.0% / 0.6 °								
Subregion (LRR or MLRA): LRR N	Lat.:	40.365548 Lon	g.: -80.856025 Datum: NAD83								
Soil Map Unit Name: BmD-Berks-Gu	ernsey complex, 15 to 25 percen	t slopes NWI	classification: N/A								
Are climatic/hydrologic conditions on	the site typical for this time of v	ear? Yes • No O (If no.	explain in Remarks.)								
Are Vegetation, Soil			Circumstances" present? Yes No								
Are Vegetation , Soil .			on cambiances present.								
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.											
Hydrophytic Vegetation Present?	Yes No		· · · · · · · · · · · · · · · · · · ·								
Hydric Soil Present?	Yes No	Is the Sampled Area									
_	Yes • No O	within a Wetland?	Yes ● No ○								
Wetland Hydrology Present?											
			n perennial watercourse. A slight depression The wetland boundary follows edge of								
Hydrology											
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)								
Primary Indicators (minimum of one	e required; check all that apply)		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)		eres along Living Roots (C3)	Moss Trim Lines (B16)								
Water Marks (B1)	Presence of Reduc	, ,	Dry Season Water Table (C2)								
Sediment Deposits (B2)		tion in Tilled Soils (C6)	Crayfish Burrows (C8)								
☐ Drift deposits (B3)☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface	• •	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)								
Iron Deposits (B5)	☐ Other (Explain in F	Remarks)	Geomorphic Position (D2)								
☐ Inundation Visible on Aerial Imagery	v (B7)		Shallow Aquitard (D3)								
Water-Stained Leaves (B9)	, (=,)		Microtopographic Relief (D4)								
Aquatic Fauna (B13)			FAC-neutral Test (D5)								
Field Observations:											
Surface Water Present? Yes	No O Depth (inches):	1									
Water Table Present? Yes •	No O Depth (inches):	7									
Saturation Present? (includes capillary fringe) Yes •	No O Depth (inches):	Wetland Hydr	ology Present? Yes No								
Describe Recorded Data (stream gau	uge, monitoring well, aerial photo	s, previous inspections), if avail	able:								
Remarks:											
Source of hydrology is spring seeps	and seasonal flooding.										

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

		Don			Sampling Point: W-MRK-003 PEM		
Tree Stratum (Plot size:)	Absolute % Cover	Rel.		Indicator Status	300000000000000000000000000000000000000		
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)		
2			0.0%				
3.			0.0%		Total Number of Dominant		
4		\Box	0.0%		Species Across All Strata: (B)		
5.		$\overline{\Box}^-$	0.0%		Percent of dominant Species		
		$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)		
6 7		$\overline{\Box}$	0.0%		Prevalence Index worksheet:		
		П-	0.0%		Total % Cover of: Multiply by:		
8		 - Tot	al Cover		OBL species $0 \times 1 = 0$		
Sapling-Sapling/Shrub Stratum (Plot size:	_)	- 100	ai covei		FACW species 175 x 2 = 350		
1	0		0.0%				
2			0.0%		FAC species $0 \times 3 = 0$		
3			0.0%		FACU species $0 \times 4 = 0$		
4			0.0%		UPL species $0 \times 5 = 0$		
5			0.0%		Column Totals: <u>175</u> (A) <u>350</u> (B)		
6			0.0%		Prevalence Index = B/A = 2.000		
7	0		0.0%		Hydrophytic Vegetation Indicators:		
8			0.0%		Rapid Test for Hydrophytic Vegetation		
9			0.0%		✓ Dominance Test is > 50%		
0			0.0%		✓ Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)	_	= Tot	al Cover	•			
1	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2		$\overline{\Box}$	0.0%		Problematic Hydrophytic Vegetation 1 (Explain)		
2		$\overline{\Box}$	0.0%		¹ Indicators of hydric soil and wetland hydrology must		
3 4		$\overline{\Box}$	0.0%		be present, unless disturbed or problematic.		
		$\overline{\Box}$	0.0%		Definition of Vegetation Strata:		
5		П-	0.0%		Four Vegetation Strata:		
6		Π^{-}	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3		
7		 = Tot	al Cover		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
Herb Stratum (Plot size: <u>5' radius</u>)					Sapling/shrub stratum – Consists of woody plants, excluding		
1. Phalaris arundinacea		<u>_</u> _	42.9%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2. Lysimachia nummularia			28.6%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28		
3. Juncus effusus		H-	11.4%	FACW	fit tall. Woody vines – Consists of all woody vines greater than 3.28		
4. Agrimonia parviflora		H-	11.4%	FACW	ft in height.		
5. <u>Poa palustris</u>		H-	5.7%	FACW			
6		H-	0.0%		Five Vegetation Strata:		
7		H-	0.0%		Tree - Woody plants, excluding woody vines, approximately		
8		<u> </u>	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
9		님_	0.0%		Sapling stratum – Consists of woody plants, excluding		
0		닏_	0.0%		woody vines, approximately 20 ft (6 m) or more in height and		
1	0	\sqcup _	0.0%		less than 3 in. (7.6 cm) DBH.		
2	0	\square_{-}	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Woody Vine Stratum (Plot size:)	175 =	= Tot	al Cover	•	Herb stratum – Consists of all herbaceous (non-woody)		
1	0		0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately		
2	0		0.0%		3 ft (1 m) in height.		
3			0.0%		Woody vines – Consists of all woody vines, regardless of		
4.	0		0.0%		height.		
5	0		0.0%				
	0		0.0%		Hydrophytic Vegetation		
D.		_					
6	0	= Tot	al Cove	r	Present? Yes No		

Soil Sampling Point: W-MRK-003 PEM

Matrix		
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Histosol (A1)	Remark	Remarks
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix thydric Soil Indicators: Histosol (A1)		
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Piedmont Floodplain Soils (F12) (MLRA 136, 122) Iron-Manganese Masses (F12) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F3) Umbric Surface (F7) Other (Explain in Remarks) Jindicators for Problematic Hydrogen Surface (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F (MLRA 136, 147) Very Shallow Dark Surface (T2) Other (Explain in Remarks) Jindicators of hydrophytic wetland hydrology musualless disturbed or property in the present? Estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes		
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F12) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F2) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Wery Shallow Dark Surface (T2) Other (Explain in Remarks) Jandicators of hydrophytic wetland hydrology musualless disturbed or property in the property of the property in the		
Histosol (A1)		
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Piedmont Floodplain Soils (F12) (MLRA 136, 122) Iron-Manganese Masses (F12) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F3) Umbric Surface (F7) Other (Explain in Remarks) Jindicators for Problematic Hydrogen Surface (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F (MLRA 136, 147) Very Shallow Dark Surface (T2) Other (Explain in Remarks) Jindicators of hydrophytic wetland hydrology musualless disturbed or property in the present? Estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes		
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Piedmont Floodplain Soils (F12) (MLRA 136, 122) Iron-Manganese Masses (F12) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F3) Umbric Surface (F7) Other (Explain in Remarks) Jindicators for Problematic Hydrogen Surface (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F (MLRA 136, 147) Very Shallow Dark Surface (T2) Other (Explain in Remarks) Jindicators of hydrophytic wetland hydrology musualless disturbed or property in the present? Estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes		
Histosol (A1)		
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Piedmont Floodplain Soils (F12) (MLRA 136, 122) Iron-Manganese Masses (F12) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F3) Umbric Surface (F7) Other (Explain in Remarks) Jindicators for Problematic Hydrogen Surface (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F (MLRA 136, 147) Very Shallow Dark Surface (T2) Other (Explain in Remarks) Jindicators of hydrophytic wetland hydrology musualless disturbed or property in the present? Estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes		
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F12) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F2) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Wery Shallow Dark Surface (T2) Other (Explain in Remarks) Jandicators of hydrophytic wetland hydrology musualless disturbed or property in the property of the property in the		
Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Matrix (S6) Red Parent Material (F21) (MLRA 148) Polyvalue Below Surface (S8) (MLRA 147, 148) Depleted (S9) (MLRA 147, 148) Doubleted Matrix (F2) Piedmont Floodplain Soils (F (MLRA 136, 147) Very Shallow Dark Surface (To there (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Piedmont Floodplain Soils (F19) (MLRA 127, 147) Battictors of Problematic Ny Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F0) Other (Explain in Remarks) Thick Dark Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Redox (S5) Red Parent Material (F21) (MLRA 127, 147) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must unless disturbed or probable of the prob	ix	
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F (MLRA 136, 147)) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Depleted Dark Surface (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F (MLRA 147, 148)) Piedmont Floodplain Soils (F7) Other (Explain in Remarks) J Indicators of hydrophytic wetland hydrology must unless disturbed or properties. Piestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	-	-
Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136, 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F (MLRA 136, 147) Other (Explain in Remarks) Other (Explain in Remarks) 3 Indicators of hydrophytic wetland hydrology mus unless disturbed or prestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	•	17)
Stratified Layers (A5) □ Depleted Matrix (F3) □ Depleted Matrix (F3) □ Depleted Matrix (F3) □ Depleted Below Dark Surface (A11) □ Depleted Below Dark Surface (A11) □ Depleted Dark Surface (F7) □ Depleted Below Dark Surface (A12) □ Redox Depressions (F8) □ Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) □ Sandy Gleyed Matrix (S4) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F8) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Stripped Matrix (S6) □ Stripped Matrix (S6) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Stripped Matrix (S6) □ Stripped Matrix	116)	
2 cm Muck (A10) (LRR N) □ Depleted Below Dark Surface (A11) □ Depleted Below Dark Surface (A12) □ Redox Depressions (F8) □ Redox Depressions (F8) □ Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) □ Sandy Gleyed Matrix (S4) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Stripped Matrix (S6) □ Redox Depressions (F8) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Stripped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ Redox Dark Surface (F10) □ Other (Explain in Remarks) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Redox Dark Surface (F10) □ Other (Explain in Remarks) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Stripped Matrix (S6) □ Redox Depressions (F8) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Stripped Matrix (S6) □ Redox Depressions (F8) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Piedmont Floodplain Soils (F19) (MLRA 148) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Iron-Manganese Masses (F12) (LRR N, MLRA 136,	Soils (F19)	F19)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Redox Depressions (F8) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Hydric Soil Present? Yes	rface (TF12)	(TF12)
Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes		
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	-,	
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes		
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) wetland hydrology musunless disturbed or present in the company of the compa	and the state of the same of	Managara da Marana d
estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	gy must be p	ust be present,
Type:	ed or probler	problematic.
Depth (inches): Hydric Soil Present? Yes		
	res ● Ne	No 🔾
Retirid its.		

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project	City/County: Jefferson	Sampling Date: 18-Feb-19			
Applicant/Owner: AEP Ohio Transmiss	sion Company	State: OH Sampling Point: W-MRK-003 PSS				
Investigator(s): M.R.Kline, R.C.Massa		Section, Township, Range: S	36 T 9N - Wayne R 3W			
Landform (hillslope, terrace, etc.):	Floodplain	Local relief (concave, convex, n	one): concave Slope: 1.0% / 0.6 °			
Subregion (LRR or MLRA): LRR N	Lat.:	40.365396 Lon	g.: -80.856088			
Soil Map Unit Name: BmD-Berks-Gu	uernsey complex, 15 to 25 percen		classification: N/A			
Are climatic/hydrologic conditions on	the site typical for this time of v	ear? Yes • No O (If no.	explain in Remarks.)			
Are Vegetation, Soil			Circumstances" present? Yes No			
Are Vegetation , Soil .			explain any answers in Remarks.)			
•		,				
	Yes No O	sampling point location	ns, transects, important features, etc.			
Hydrophytic Vegetation Present?						
Hydric Soil Present?	Yes • No O	Is the Sampled Area within a Wetland?	Yes ● No ○			
Wetland Hydrology Present?	Yes No	within a wetland:				
			perennial watercourse. Wetland is being of floodplain depression and toe-of-slope.			
Hydrology						
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one	e 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)		tion in Tilled Soils (C6)	Crayfish Burrows (C8)			
☐ Drift deposits (B3)☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface	• •	Saturation Visible on Aerial Imagery (C9)			
Iron Deposits (B5)	Other (Explain in F	Remarks)				
Inundation Visible on Aerial Imagery	v (B7)					
Water-Stained Leaves (B9)	y (b/)		Shallow Aquitard (D3) Migratana graphic Relief (D4)			
Aquatic Fauna (B13)			☐ Microtopographic Relief (D4) FAC-neutral Test (D5)			
			FAC-fieutial fest (D3)			
Field Observations: Surface Water Present? Yes	No Depth (inches):					
Water Table Present? Yes						
	z opan (menes).	Wetland Hydi	ology Present? Yes No			
(includes capillary fringe) Yes			- Lile			
Describe Recorded Data (stream gau	uge, monitoring well, aerial photo	s, previous inspections), if avail	able:			
Remarks:						
	and concernal flooding					
Source of hydrology is spring seeps	and seasonal nooding.					

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

			ominant		Sampling Point: W-MRK-003 PSS		
Tree Stratum (Plot size:)	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status			
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)		
2			0.0%				
3.			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)		
4			0.0%		Species Across Air Strata.		
5.			0.0%		Percent of dominant Species		
6.			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)		
7			0.0%		Prevalence Index worksheet:		
8	0		0.0%		Total % Cover of: Multiply by:		
	0 :	= To	otal Cove	r	OBL species 30 x 1 = 30		
Sapling-Sapling/Shrub Stratum (Plot size:			0.007		FACW species 145 x 2 = 290		
1			0.0%		FAC species $0 \times 3 = 0$		
2			0.0%		FACU species $\frac{15}{}$ x 4 = $\frac{60}{}$		
3			0.0%		UPL species $0 \times 5 = 0$		
4			0.0%		(2)		
5			0.0%				
6			0.0%		Prevalence Index = B/A = 2.000		
7			0.0%		Hydrophytic Vegetation Indicators:		
8			0.0%		Rapid Test for Hydrophytic Vegetation		
9					✓ Dominance Test is > 50%		
0	0_	_	0.0%		✓ Prevalence Index is \leq 3.0 ¹		
Shrub Stratum (Plot size: 15' radius)			otal Cove		Morphological Adaptations ¹ (Provide supporting		
1. Salix discolor		V	47.1%	FACW	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)		
2. Salix nigra	30		35.3%	OBL			
3. Rosa multiflora			17.6%	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
4			0.0%				
5			0.0%		Definition of Vegetation Strata:		
6			0.0%		Four Vegetation Strata:		
7	0	Ш	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),		
Herb Stratum (Plot size: <u>5' radius</u>)	85:	= To	otal Cove	r	regardless of height.		
1. Poa palustris	40	V	38.1%	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. Impatiens capensis	40	V	38.1%	FACW	Herb stratum – Consists of all herbaceous (non-woody)		
3. Agrimonia parviflora	15		14.3%	FACW	plants, regardless of size, and all other plants less than 3.28 ft tall.		
4. Lysimachia nummularia	10		9.5%	FACW	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.		
5			0.0%				
6			0.0%		Five Vegetation Strata:		
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately		
8	0	Ц	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
9		Ц	0.0%		Sapling stratum – Consists of woody plants, excluding		
0	0	Ц	0.0%		woody vines, approximately 20 ft (6 m) or more in height and		
1			0.0%		less than 3 in. (7.6 cm) DBH.		
2	0	Ш	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Woody Vine Stratum (Plot size:)	105 :	= To	otal Cove	r	Herb stratum – Consists of all herbaceous (non-woody)		
1	0		0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately		
2	0		0.0%		3 ft (1 m) in height.		
3			0.0%		Woody vines – Consists of all woody vines, regardless of		
4.	0		0.0%		height.		
5	0		0.0%		Hydrophytic		
6.	0		0.0%		Hydrophytic Vegetation		
	0	= T	otal Cove	er	Present? Yes No		
Remarks: (Include photo numbers here or on a separate she	aet)				<u> </u>		
	,						

Soil Sampling Point: W-MRK-003 PSS

Profile Descrip	ption: (Describe to	the depth r	eeded to documer	nt the indic	cator or co	nfirm the	absence of indicators.)		
Depth -	Matrix								
(inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks	
0-16	10YR 4/2	80	7.5YR 5/6	20	С	M,PL	Silty Clay Loam		
-			-				-		
							,		
							,		
				_					
¹ Type: C=Conce	entration. D=Depletio	n. RM=Redu	ced Matrix, CS=Cove	red or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N	Matrix	
Hydric Soil In	dicators:						Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (A	1)		☐ Dark Surface	(S7)					
Histic Epipe	edon (A2)		Polyvalue Beld	ow Surface	(S8) (MLRA	147,148)	2 cm Muck (A10)		
Black Histic			Thin Dark Sur	face (S9) (N	4LRA 147, 1	148)	Coast Prairie Redo (MLRA 147,148)	ox (A16)	
	Sulfide (A4)		Loamy Gleyed			•		-i- C-il- (F10)	
Stratified L			✓ Depleted Mati		,		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)	
	(A10) (LRR N)		Redox Dark S				Very Shallow Dark	(Surface (TE12)	
	elow Dark Surface (A	11)	Depleted Dark	` ,	7)				
	Surface (A12)	111)	Redox Depres		- /		Other (Explain in	Remarks)	
	, ,		☐ Iron-Mangane	. ,	(F12) (I RR	N.			
MLRA 147,	*	١,	MLRA 136)						
Sandy Gley	ved Matrix (S4)		Umbric Surfac				3 Indicators of	hydrophytic vogotation and	
Sandy Red	ox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Stripped M	atrix (S6)		Red Parent M	aterial (F21) (MLRA 12	7, 147)	unless dis	sturbed or problematic.	
Restrictive La	yer (if observed):								
Туре:									
Depth (inch	es):						Hydric Soil Present?	Yes No	
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138 kV	Project		City/County: Jefferson	Sampling Dat	e: 18-Feb-19		
Applicant/Owner: AEP Ohio Transmiss	ion Compan	ny	State: OH Sampling Point: W-MRK-003 UPL				
Investigator(s): M.R.Kline, R.C.Massa			Section, Township, Range: S	36 T 9N - Wayne	R 3W		
Landform (hillslope, terrace, etc.):	Floodplain		Local relief (concave, convex, r	one): convex Slope	: 1.0% / 0.6 °		
Subregion (LRR or MLRA): LRR N		Lat.:	40.365485 Lor	j.: -80.855944	Datum: NAD83		
Soil Map Unit Name: BmD-Berks-Gu	ernsey con	nplex, 15 to 25 percent	t slopes NWI	lassification: N/A			
Are climatic/hydrologic conditions on	the site ty	pical for this time of ye	ear? Yes • No O (If no,	explain in Remarks.)			
Are Vegetation, Soil	, or Hydrol			Circumstances" present?	es 💿 No 🔾		
Are Vegetation, Soil	, or Hydrol	ogy naturally p	roblematic? (If needed,	xplain any answers in Remarks	s.)		
Summary of Findings - Att	ach site	e map showing s	sampling point location	s, transects, importar	nt features, etc.		
Hydrophytic Vegetation Present?	Yes O	No •					
Hydric Soil Present?	Yes 🔾	No •	Is the Sampled Area				
Wetland Hydrology Present?	Yes O	No •	within a Wetland?	Yes ○ No ●			
Remarks: Upland data point for W-MRK-003.	Surroundin	g land use is right-of-v	vay and forest.				
Hydrology					_		
Wetland Hydrology Indicators:				Secondary Indicators (minimum of	two required)		
Primary Indicators (minimum of one	required;			Surface Soil Cracks (B6)			
Surface Water (A1)		☐ True Aquatic Plants		Sparsely Vegetated Concave S	urface (B8)		
High Water Table (A2)		Hydrogen Sulfide (` '	Drainage Patterns (B10)			
Saturation (A3) Water Marks (B1)		Presence of Reduc	eres along Living Roots (C3)	Moss Trim Lines (B16) Dry Season Water Table (C2)			
Sediment Deposits (B2)			tion in Tilled Soils (C6)	Crayfish Burrows (C8)			
Drift deposits (B3)		Thin Muck Surface	• •	Saturation Visible on Aerial Im	agery (CQ)		
Algal Mat or Crust (B4)		Other (Explain in R		Stunted or Stressed Plants (D1	. , , ,		
☐ Iron Deposits (B5)		Outer (Explain in N	cinaris)	Geomorphic Position (D2)	,		
☐ Inundation Visible on Aerial Imagery	(B7)			Shallow Aquitard (D3)			
☐ Water-Stained Leaves (B9)				Microtopographic Relief (D4)			
Aquatic Fauna (B13)				FAC-neutral Test (D5)			
Field Observations:							
Surface Water Present? Yes	No 💿	Depth (inches):					
Water Table Present? Yes	No 💿	Depth (inches):		ology Present? Yes 🔾 I	No •		
Saturation Present? (includes capillary fringe) Yes	No •	Depth (inches):			NO ⊚		
Describe Recorded Data (stream gau	ige, monito	oring well, aerial photo	s, previous inspections), if avail	able:			
Remarks:							
No source of hydrology.							

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

		Dominant		Sampling Point: W-MRK-003 UPL		
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	-Species? Rel.Strat. Cover	Indicator Status			
1 Juglans nigra	10	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: (A)		
2.		0.0%				
3		0.0%		Total Number of Dominant		
ł		0.0%		Species Across All Strata: (B)		
5		0.0%		Percent of dominant Species		
		0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)		
S 7		0.0%		Prevalence Index worksheet:		
		0.0%		Total % Cover of: Multiply by:		
3		= Total Cov		OBL species $0 \times 1 = 0$		
Sapling-Sapling/Shrub Stratum (Plot size:)	- Total Cov	51			
	0	0.0%_		FACW species $0 \times 2 = 0$		
2		0.0%		FAC species $10 \times 3 = 30$		
3		0.0%		FACU species $\frac{145}{}$ x 4 = $\frac{580}{}$		
		0.0%	_	UPL species $\frac{0}{x}$ $5 = \frac{0}{x}$		
). _.		0.0%	_	Column Totals: <u>155</u> (A) <u>610</u> (B)		
}.		0.0%		Prevalence Index = B/A = 3.935		
	0	0.0%				
3		0.0%		Hydrophytic Vegetation Indicators:		
)		0.0%		Rapid Test for Hydrophytic Vegetation		
)		0.0%		Dominance Test is > 50%		
	_	= Total Cov	 er	Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)			51	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
		0.0%		Problematic Hydrophytic Vegetation (Explain)		
2						
3				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
ł						
5	0			Definition of Vegetation Strata:		
5	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),		
Herb Stratum (Plot size: <u>5' radius</u>)	=	Total Cov	er	regardless of height.		
. Phleum pratense	90	✓ 62.1%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
Dactylis glomerata	25	17.2%	FACU	Herb stratum – Consists of all herbaceous (non-woody)		
Solidago canadensis	20	13.8%	FACU	plants, regardless of size, and all other plants less than 3.28		
Dichanthelium clandestinum	10	6.9%	FAC	ft tall. Woody vines – Consists of all woody vines greater than 3.28		
0	0	0.0%		ft in height.		
5	0	0.0%		v		
		0.0%		Five Vegetation Strata:		
3		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%		diameter at breast height (DBH).		
)		0.0%		Sapling stratum – Consists of woody plants, excluding		
)		0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
	0			Shrub stratum – Consists of woody plants, excluding woody		
2				vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Noody Vine Stratum (Plot size:)	145 =	= Total Cov	51	Herb stratum – Consists of all herbaceous (non-woody)		
1				plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately		
2				3 ft (1 m) in height.		
3		0.0%		Woody vines - Consists of all woody vines, regardless of		
1	0	0.0%		height.		
5	0	0.0%				
5		0.0%		Hydrophytic Vegetation		
		= Total Cov	er	Present? Yes No •		

Soil Sampling Point: W-MRK-003 UPL

Profile Description: (Describe to the depth ne	eded to documen	t the indic	ator or co	nfirm the	absence of indicators.)		
Depth Matrix		dox Featu	res				
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type 1	Loc ²	Texture	Remarks	
0-16 10YR 4/4 100					Silty Clay Loam		
					,		
					-		
		_					
¹ Type: C=Concentration. D=Depletion. RM=Reduce	d Matrix CS=Cover	ed or Coate	ed Sand Gr	ains 2loca	ation: PI =Pore Lining M=N	1atrix	
Hydric Soil Indicators:	a Matrix, CS=COVCI	cu or coate	ou Sana Gre	all 15 LOCK			
Histosol (A1)	Dark Surface (C7)			Indicators for Proble	matic Hydric Soils ³ :	
Histic Epipedon (A2)	Polyvalue Belo	,	CQ) (MI DA	147 148)	2 cm Muck (A10)	(MLRA 147)	
Black Histic (A3)	Thin Dark Surf				Coast Prairie Redo	ox (A16)	
Hydrogen Sulfide (A4)				.40)	(MLRA 147,148)		
Stratified Layers (A5)	Loamy Gleyed Depleted Matri				Piedmont Floodpla	ain Soils (F19)	
2 cm Muck (A10) (LRR N)	Redox Dark Su				(MLRA 136, 147)		
		` ,	7)		Very Shallow Dark		
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Dark Surface (F7) Redox Depressions (F8)				Other (Explain in	Remarks)	
` ′	☐ Iron-Manganes		F12\ (I RR I	N			
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	MLRA 136)						
Sandy Gleyed Matrix (S4)	Umbric Surface				3 Indicators of I	oudrophytic vocatation and	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)			RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Stripped Matrix (S6)	Red Parent Ma	iterial (F21)	(MLRA 12	7, 147)		turbed or problematic.	
Restrictive Layer (if observed):							
Type:							
Depth (inches):					Hydric Soil Present?	Yes O No 💿	
Remarks:							
Tremaile:							

Wetland 85ab

Site: AE	P Carrollton	-Gable	Rater(s): M.R.Kl	ine, R.C.Massa	Date:	2/18/2019
			• •	Field Id:	•	
	1 '	1 Metric 1. Wet	land Area (size).	W-MRK-021819-0	003 PEM	
max 6 pts	subtotal	Select one size clas >50 acres (>20.2ha) 25 to <50 acres (10. 10 to <25 acres (1.2 to 3 to <10 acres (1.2 to 0.3 to <3 acres (0.12 x 0.1 to <0.3 acres (0.42 <1.1 to <0.3 acres (0.44) <1.1 to <0.4 acres (0.44)	to <20.2ha) (5 pts) <10.1ha) (4 pts) o <4ha) (3 pts) to <1.2ha) (2pts) 04 to <0.12ha) (1 pt)	0.14	acres	
	2 :	Metric 2. Upla	and buffers and su	rrounding land use.		
max 14 pts.	subtotal	WIDE. Buffers avera MEDIUM. Buffers av NARROW. Buffers a x VERY NARROW. Bu	ge 50m (164ft) or more around erage 25m to <50m (82 to <16 verage 10m to <25m (32ft to < ffers average <10m (<32ft) ar	64ft) around wetland perimeter (4) 82ft) around wetland perimeter (1) ound wetland perimeter (0)	check.	
		VERY LOW. 2nd gro LOW. Old field (>10 x MODERATELY HIGH	wth or older forest, prairie, sav /ears), shrubland, young seco	nd growth forest. (5) , park, conservation tillage, new fallow fie	eld. (3)	
	8.0 11.0	Metric 3. Hyd	rology.			
max 30 pts.	subtotal	High pH groundwater (3 x Precipitation (1) Seasonal/Intermitten Perennial surface wa 3c. Maximum water >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 2 x <0.4m (<15.7 in) (1) 3e. Modifications to None or none apparer Recovered (7) x Recovering (3) x Recent or no recover	surface water (3) ter (lake or stream) (5) depth. Select one. 27.6in) (2) natural hydrologic regime. nt (12) y (1)	Semi- to permanently inunc Regularly inundated/satura Seasonally inundated (2) x Seasonally saturated in up Score one or double check and avera Check all disturbances of ditch tile dike weir stormwater input	other human use (1) g. forest), complex (1) orridor (1) saturation. Score one or dbl dated/saturated (4) ted (3) per 30cm (12in) (1) tge.	
	5.5 16.		itat Alteration and	•		
max 20 pts.	subtotal	None or none appare Recovered (3) X Recovering (2) X Recent or no recover 4b. Habitat develop Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteratio None or none appare Recovered (6) X Recovering (3) X Recent or no recover	y (1) ment. Select only one and a n. Score one or double chect nt (9)	ssign score.	served x shrub/sapling removal herbaceous/aquatic bed sedimentation dredging farming nutrient enrichment	removal
			orm Quantitative Rating			

wetland 85a | test_Field 3/8/2019

Wetland 85ab

Site: AEP	Carrollton-	Gable	Rater(s):	M.R.Kline, R.C	Massa	Date:	2/18/2019
			•		Field Id:		
	16.5]			W-MRK-021819-003 PEN	1	
	subtotal this	page					
	0 16.5	Metri	c 5. Special Wetland	ds.			
max 10 pts.	subtotal	Check	all that apply and score	e as indicated.			
		Bog (10)	,				
		Fen (10)	th forest (10)				
			prested wetland (5)				
			e coastal/tributary wetland-unre				
			e coastal/tributary wetland-restr in Sand Prairies (Oak Openings				
			et Praires (10)	5) (10)			
			ccurrence state/federal threate		cies (10)		
			nt migratory songbird/water fow r 1 Wetland. See Question 5 Qu				
	0 16.5			- , ,	ion, microtopography.		
max 20pts.	subtotal	6a. We	tland Vegetation Comm	nunities.	Vegetation Community Cove	er Scale	
			present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 a		
		Aquatic b		1	Present and either comprises small par vegetation and is of moderate quality, or		
		1 Shrub	ıı		significant part but is of low quality	or comprises a	
		Forest		2	Present and either comprises significar		
		Mudflats Open wa	ter		vegetation and is of moderate quality o part and is of high quality	r comprises a small	
		Other_		3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horiz Select or	contal (plan view) Interspersi		vegetation and is of high quality		
		High (5)	ily one.		Narrative Description of Vegetation	Quality	
			ely high(4)		Low spp diversity and/or predominance	of nonnative or low	
		Moderate Moderate	e (3) ely low (2)		disturbance tolerant native species Native spp are dominant component of	the vegetation mod	
		x Low (1)	51y 10W (2)		although nonnative and/or disturbance		
		None (0)			can also be present, and species diver		
			erage of invasive plants. Refe DRAM long form for list. Add	r	moderately high, but generallyw/o pres- threatened or endangered spp to	ence of rare	
			t points for coverage		A predominance of native species, with	nonnative spp high	
			e >75% cover (-5)		and/or disturbance tolerant native spp		
			e 25-75% cover (-3) i-25% cover (-1)		absent, and high spp diversity and ofte the presence of rare, threatened, or en		
			osent <5% cover (0)		the presence of fare, threatened, or en	uangered spp	
		Absent (1)		Mudflat and Open Water Class Qual	ity	
			otopography.		Absent <0.1ha (0.247 acres)		
			present using 0 to 3 scale. d hummucks/tussucks	1 2	Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres	, <u>,</u>	
			voody debris >15cm (6in)		High 4ha (9.88 acres) or more	<u> </u>	
			dead >25cm (10in) dbh		,		
		Amphibia	an breeding pools	0	Microtopography Cover Scale Absent		
				1	Present very small amounts or if more	common	
					of marginal quality		
Category 1				2	Present in moderate amounts, but not quality or in small amounts of highest q		
Jalogory	16.5 GRANI) TOTAL(ma	ax 100 pts)	3	Present in moderate or greater amount	•	
				3	and of highest quality	-	
					and or mignest quality		

wetland 85a | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 85a

Date:

February 18, 2019

Description:

PEM

Category 1

Facing North



Wetland 85a

Date:

February 18, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 85a

Date:

February 18, 2019

Description:

PEM

Category 1

Facing South



Wetland 85a

Date:

February 18, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 85a

Date:

February 18, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 85b

Date:

February 18, 2019

Description:

PSS

Category 1

Facing North





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 85b

Date:

February 18, 2019

Description:

PSS

Category 1

Facing East



Wetland 85b

Date:

February 18, 2019

Description:

PSS

Category 1

Facing South





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 85b

Date:

February 18, 2019

Description:

PSS

Category 1

Facing West



Wetland 85b

Date:

February 18, 2019

Description:

PSS

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton-Gable 138	kV Transmission Line	City/County: Harrison County	Sampling Date: 14-Feb-19
Applicant/Owner: AEP		State: Oh	Sampling Point: w-aeh-021419-05
Investigator(s): JTT, AEH		Section, Township, Range: S	2 T 11N R 4W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex,	none): concave Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR	N I	— at.: 40.359717 Lo i	ng.: -80.852023 Datum:
Soil Map Unit Name: LnC		101033717	NWI classification: N/A
Are climatic/hydrologic conditions	on the site typical for this time	of vear? Yes No (If no	, explain in Remarks.)
Are Vegetation , Soil			I Circumstances" present? Yes ● No ○
Are Vegetation \Box , Soil \Box	, or Hydrology 🗌 natura	lly problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - A	Attach site map showin	ng sampling point locatio	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: PEM wetland on hillside in cow p	asture.		
Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	one required; check all that app	ly)	Surface Soil Cracks (B6)
Surface Water (A1)	☐ True Aquatic	` '	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		fide Odor (C1)	✓ Drainage Patterns (B10)
✓ Saturation (A3) Water Marks (B1)		ospheres along Living Roots (C3)	Moss Trim Lines (B16)
Sediment Deposits (B2)		educed Iron (C4) eduction in Tilled Soils (C6)	☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)
Drift deposits (B3)	☐ Thin Muck Su	• •	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain	* *	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	outer (23pian		✓ Geomorphic Position (D2)
Inundation Visible on Aerial Imag	gery (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 (inch	20). 1	
	O O	es):1	
Water Table Present? Yes	-1- (es): Wetland Hyd	rology Present? Yes No
Saturation Present? (includes capillary fringe) Yes	No Depth (inch	es):0	
Describe Recorded Data (stream	gauge, monitoring well, aerial p	hotos, previous inspections), if avai	ilable:
Remarks:			
Hydrologyform precipitation and	seep		

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

			minant		Sampling Point: w-aeh-021419-05
Tree Stratum (Plot size:)	Absolute % Cover	Re	ecies? — I.Strat. ver	Indicator Status	
1	0	\Box _	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2	0		0.0%		Total Number of Descinant
3	0		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4	0		0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:	, _ 0 =	= To	tal Cover		OBL species <u>65</u> x 1 = <u>65</u>
			0.0%		FACW species $35 \times 2 = 70$
1		П-	0.0%		FAC species $0 \times 3 = 0$
2		\Box	0.0%		FACU species $0 \times 4 = 0$
3		Н-	0.0%		UPL species $0 \times 5 = 0$
4		\Box	0.0%		Column Totals: 100 (A) 135 (B)
5		\Box	0.0%		
6		П-	0.0%		Prevalence Index = B/A = 1.350
7		П-	0.0%		Hydrophytic Vegetation Indicators:
8		П-	0.0%		Rapid Test for Hydrophytic Vegetation
9		Н-			✓ Dominance Test is > 50%
0		Ч-	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10	tal Cover		Morphological Adaptations ¹ (Provide supporting
1		님-	0.0%		data in Remarks or on a separate sheet)
2	0	Ц.	0.0%		Problematic Hydrophytic Vegetation (Explain)
3		Ц.	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		Ц.	0.0%		
5		\sqcup_{-}	0.0%		Definition of Vegetation Strata:
6	0	Ш_	0.0%		Four Vegetation Strata:
7			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	=	= To	tal Cover		regardless of height.
1. Carex vulpinoidea	65	v _	65.0%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Poa palustris	30	V _	30.0%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Juncus effusus	5		5.0%	FACW	plants, regardless of size, and all other plants less than 3.28
4	0		0.0%		ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		0.0%		Tt III noight.
6	0	Ш_	0.0%		Five Vegetation Strata:
7	0	\sqcup_{-}	0.0%		Tree - Woody plants, excluding woody vines, approximately
8	0	$\square_{\underline{}}$	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	\square_{-}	0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding
0		\square _	0.0%		woody vines, approximately 20 ft (6 m) or more in height and
1			0.0%		less than 3 in. (7.6 cm) DBH.
2	0	\square _	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	100=	= To	tal Cover		Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%		plants, including herbaceous vines, regardless of size, and
2.	0		0.0%		woody 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
4			0.0%		height.
5			0.0%		
5 6	0		0.0%		Hydrophytic Vegetation
M.	_ <u> </u>				
	0	= To	tal Cover		Present? Yes W NO U

Soil Sampling Point: w-aeh-021419-05

Profile Descr	iption: (De	scribe to	the depth	needed to	documen	nt the indic	cator or co	onfirm the	absence of indicators.)			
Depth		Matrix				dox Featu	1					
(inches) 0-16	Color ((moist) 3/1	 50	Color	(moist)	%	Tvpe 1	Loc²	Texture Silty Clay	Ren	narks	
	10YR	5/1	45	10YR	4/6	5	С	M	Silty Clay			
	-			-								
	-			_						-		
	-			-								
		-		-					-			
		-					_					
¹ Type: C=Cond	centration. [D=Depletio	on. RM=Red	uced Matrix,	CS=Cove	red or Coat	ed Sand Gi	rains ² Loc	ation: PL=Pore Lining. M=	Matrix		
Hydric Soil I	ndicators:								Indicators for Proble	ematic Hvdri	ic Soils ³ :	
Histosol (/	A1)				k Surface				2 cm Muck (A10)			
	pedon (A2)					w Surface (Coast Prairie Red			
☐ Black Hist	. ,					face (S9) (N		148)	(MLRA 147,148)	OX (AIO)		
	Sulfide (A4 Layers (A5)					Matrix (F2))		Piedmont Floodp)	
	k (A10) (LRI				leted Matr	urface (F6)			(MLRA 136, 147)		42)	
			111)			Surface (F	7)		Very Shallow Dar		12)	
	☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12)			ox Depres		,		Other (Explain in Remarks)				
	ıck Mineral (,	N,		-Mangane A 136)	se Masses ((F12) (LRR	N,				
	Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)				22)	2				
Sandy Red		. ,		Pied	lmont Floo	odplain Soils	s (F19) (ML	.RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
Stripped N	Matrix (S6)			Red	Parent Ma	aterial (F21)) (MLRA 12	27, 147)	unless disturbed or problematic.			
Restrictive La	ayer (if obs	served):										
Type:									Hydric Soil Present?	Yes	No O	
Depth (incl	hes):								Trydric 3011 Fresent:	1G5 ©	140 😊	
Remarks:												

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable City/County: Jefferson	on County Sampling Date: 14-Feb-19
Applicant/Owner: AEP St	tate: OH Sampling Point: upl-aeh-20190214-05
Investigator(s): AEH, JTT Section, Township, R	tange: S 8 T 11N R 4W
Landform (hillslope, terrace, etc.): Hillside Local relief (concave, c	convex, none): none Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N Lat.: 40.359650789	Long.: -80.8521062546
Soil Map Unit Name: Lowell silt loam, 8 to 15 percent slopes (LnC)	NWI classification: N/A
	(If no, explain in Remarks.) "Normal Circumstances" present? Yes No
	"Normal Circumstances" present? Yes No
Are Vegetation \square , Soil \square , or Hydrology \square naturally problematic? (If i	needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ○ No •	
Hydric Soil Present? Yes No Is the Sample	od Area
Wetland Hydrology Present? Yes No • within a Wetla	
Remarks:	
Remarks:	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres along Living Roots (C	Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Presence of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	and Hydrology Present? Yes ○ No •
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	and nydrology Present? Tes C NO C
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)), if available:
Remarks:	

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

Tree Stratum (Plot size:	0	R	el.Strat. over 0.0% 0.0%	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
1	0 0 0		0.0%	Status	· ·
2	0				That are OBL, FACW, or FAC:0(A)
3	0		0.0%		·
4					Total Number of Dominant
5 6	0	Н	0.0%		Species Across All Strata: (B)
6			0.0%		Develop of development Consider
			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7			0.0%		
			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:)	:	= To	otal Cover	r	OBL species 0 x 1 = 0
1	0		0.0%		FACW species
2	0		0.0%		FAC species $0 \times 3 = 0$
3		$\overline{\Box}$	0.0%		FACU species $\frac{45}{}$ x 4 = $\frac{180}{}$
4		$\overline{\Box}$	0.0%		UPL species $\frac{40}{100}$ x 5 = $\frac{200}{100}$
5		$\overline{\Box}$	0.0%		Column Totals: <u>85</u> (A) <u>380</u> (B)
6		\Box	0.0%		Drovolonco Indox – B/A – 4 471
7			0.0%		Prevalence Index = B/A = 4.471
		П	0.0%		Hydrophytic Vegetation Indicators:
8		П	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	П	0.0%		☐ Dominance Test is > 50%
0		_			Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10	otal Cover	r	Morphological Adaptations ¹ (Provide supporting
1		Щ	0.0%		data in Remarks or on a separate sheet)
2			0.0%		Problematic Hydrophytic Vegetation (Explain)
3	0	Ц	0.0%		¹ 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. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	0 :	= T	otal Cover	r	regardless of height.
1. Bromus inermis	40	V	47.1%	UPL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Dactylis glomerata	35	V	41.2%	FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Allium schoenoprasum	5		5.9%	FACU	plants, regardless of size, and all other plants less than 3.28
4 Trifolium repens	5		5.9%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28
5.	0		0.0%		ft in height.
6	0		0.0%		Fire Manadation Charles
7	0		0.0%		Five Vegetation Strata:
8	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).
0	0		0.0%		Sapling stratum – Consists of woody plants, excluding
1	0	\Box	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
		 = To	otal Cover	r	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1			0.0%		woody species, except woody vines, less than approximately
2			0.0%		3 ft (1 m) in height.
3			0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0		0.0%		g
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation
	0	= T	otal Cove	r	Present? Yes V No V

Soil Sampling Point: upl-aeh-20190214-05

Profile Descr	iption: (Describe to	the depth r	eeded to documen	t the indic	cator or co	nfirm the	absence of indicators.)			
Depth	Matrix		Re	dox Featu						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Tvpe 1	Loc ²	Texture	Remarks		
0-18	10YR 4/2	97	10YR 5/6	_ 3	C	PL	Silty Clay Loam			
			-				-			
				-			-			
							,			
¹ Type: C=Con	centration. D=Depletic	n. RM=Redu	ced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=1	Matrix		
Hydric Soil I	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :		
Histosol (A1)		Dark Surface (S7)						
Histic Epi	pedon (A2)		Polyvalue Belo	w Surface ((S8) (MLRA	147,148)	2 cm Muck (A10)			
☐ Black Hist	tic (A3)		Thin Dark Surf	ace (S9) (N	/ILRA 147, 1	148)	Coast Prairie Redo (MLRA 147,148)	ox (A16)		
Hydrogen	Sulfide (A4)		Loamy Gleyed	Matrix (F2))		Piedmont Floodpl	ain Soile (E10)		
Stratified	Layers (A5)		✓ Depleted Matri	x (F3)			(MLRA 136, 147)	aii 30iis (i 13)		
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dar	k Surface (TF12)		
☐ Depleted	Below Dark Surface (A	11)	Depleted Dark	Surface (F	7)		Other (Explain in Remarks)			
☐ Thick Dar	k Surface (A12)		Redox Depress	sions (F8)				,		
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR N 7, 148)	١,	Iron-Manganes MLRA 136)	se Masses ((F12) (LRR	N,				
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (MI	LRA 136, 12	22)	2			
☐ Sandy Re	dox (S5)		☐ Piedmont Floo	Piedmont Floodplain Soils (F19) (MLRA 148)				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21)) (MLRA 12	7, 147)		sturbed or problematic.		
Restrictive I	ayer (if observed):									
Type:	ayer (ii observea).									
Depth (inc	hes):						Hydric Soil Present?	Yes No		
Remarks:	, ,									
i i i i i i i i i i i i i i i i i i i										

Wetland 86

Site: AEP Carrollton	-Gable	Rater(s): JTT, AEH			Date:	2/14/2019
			Field Id:			
0 (Metric 1. Wetla	nd Area (size).	w-aeh-021419-05			
max 6 pts subtotal	Select one size class a >50 acres (>20.2ha) (6 fr 25 to <50 acres (10.1 to 10 to <25 acres (4 to <1) 3 to <10 acres (1.2 to <4 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 to x <0.1 acres (0.04 to	ots) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) 0 <0.12ha) (1 pt)	0.07 ac	res		
1 1	Metric 2. Uplan	d buffers and surrou	inding land use.			
max 14 pts. subtotal	WIDE. Buffers average ! MEDIUM. Buffers average ! NARROW. Buffers average . X VERY NARROW. Buffer 2b. Intensity of surrour VERY LOW. 2nd growth LOW. Old field (>10 year MODERATELY HIGH. F	50m (164ft) or more around wetla ge 25m to <50m (82 to <164ft) ar age 10m to <25m (32ft to <82ft) a as average <10m (<32ft) around v ding land use. Select one or d or older forest, prairie, savannal rs), shrubland, young second gro	round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) louble check and average. n, wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallow field			
5.0 6.0	Metric 3. Hydro	logy.				
3.5 9.6	None or none apparent (Recovered (7) x Recovering (3) x Recent or no recovery (1	rface water (3) (lake or stream) (5) oth. Select one. iin) (2) tural hydrologic regime. Score	3b. Connectivity. Score all 100 year floodplain (1) Between stream/lake and oth Part of wetland/upland (e.g. f Part of riparian or upland con 3d. Duration inundation/sat Semi- to permanently inundat Regularly inundated/saturates Seasonally inundated (2) X Seasonally saturated in uppe one or double check and average Check all disturbances obs ditch X tile dike weir stormwater input	er human orest), cor ridor (1) turation. S ted/satural d (3) r 30cm (12 s terved point so filling/gr	use (1) mplex (1) Score one or dbl check ted (4) 2in) (1) burce (nonstormwater) rading dt/RR track	
max 20 pts. subtotal	None or none apparent (Recovered (3) X Recovering (2) X Recent or no recovery (1 4b. Habitat development Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. S None or none apparent (Recovered (6) Recovering (3) X Recent or no recovery (1) nt. Select only one and assign score one or double check and 9)	score. average.	shrub/si herbace sedimer dredging farming	g	ıl

wetland 86 | test_Field 3/8/2019

Site: AEF	Carrollton	-Gable Rater(s): JTT, AEH		Date:	2/14/2019
-		•	Field	ld:	
	9.5]	w-aeh	-021419-05	
	subtotal this	-			
max 10 pts.	subtotal	Check all that apply and score as indicate Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-restricted hydrolog (Lake Erie coastal/tributary wetland-restricted hydrology (Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Praires (10) Known occurrence state/federal threatened or endanger Significant migratory songbird/water fowl habitat or usag Category 1 Wetland. See Question 5 Qualitative Rating	y (10) 5) ed species (10) e (10) 10)	iovotovo gwanhy	
	4 13.5	_			
max 20pts.	subtotal	6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale. Aquatic bed Emergent Shrub Forest Mudflats Open water Other 6b. horizontal (plan view) Interspersion. Select only one. High (5) Moderately high(4) Moderate (3) Moderately low (2) Low (1) X None (0) 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	Absent or Present a vegetation significan Present a vegetation part and i vegetation part and i vegetation Narrative Low spp of disturban Native sp although can also i moderate threatene A predom and/or dis absent, a	tion Community Cover Scale comprises <0.1ha (0.2471 acres) contiguous at ind either comprises small part of wetland's 1 in and is of moderate quality, or comprises a t part but is of low quality ind either comprises significant part of wetland's in and is of moderate quality or comprises a sma s of high quality ind comprises significant part, or more, of wetlan in and is of high quality ind comprises significant part, or more, of wetlan in and is of high quality diversity and/or predominance of nonnative or lo ce tolerant native species p are dominant component of the vegetation, monnative and/or disturbance tolerant native spp pe present, and species diversity moderate to ly high, but generallyw/o presence of rare d or endangered spp to innance of native species, with nonnative spp hig sturbance tolerant native spp absent or virtually ind high spp diversity and often, but not always, nce of rare, threatened, or endangered spp	2 II Id's 3 W
Category 1	13.5 GRANI	Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools	Mudflat a 0 Absent < 1 Low 0.1 tr 2 Moderate 3 High 4ha Microtop 0 Absent 1 Present v of margin 2 Present ir quality or	ind Open Water Class Quality 0.1ha (0.247 acres) 0 <1ha (0.247 to 2.47 acres) 1 to <4ha (2.47 to 9.88 acres) (9.88 acres) or more ography Cover Scale ery small amounts or if more common	
	13.5 GRAN	TOTAL(max 100 pts)		n moderate or greater amounts phest quality	

wetland 86 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 86

Date:

February 14, 2019

Description:

PEM

Category 1

Facing North



Wetland 86

Date:

February 14, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 86

Date:

February 14, 2019

Description:

PEM

Category 1

Facing South



Wetland 86

Date:

February 14, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 86

Date:

February 14, 2019

Description:

PEM

Category 1

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling	Date: 25-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point:	w-aeh-20190225-01
Investigator(s): AEH, TL		Section, Township, Range: S		R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex, n	one): none Sid	ope: 45.0% / 24.2 °
Subregion (LRR or MLRA): LRR N	Lat	: 40.354124474 Lo n	g.: -80.848236636	Datum: NAD 83
Soil Map Unit Name: Westmorelan			NWI classification: N	_
Are climatic/hydrologic conditions or			explain in Remarks.)	
Are Vegetation , Soil			Circumstances" present?	Yes No
Are Vegetation \square , Soil \square	, or Hydrology $\ \ \ \ \ \ \ \ \ \ \ $ naturally	problematic? (If needed,	explain any answers in Rema	arks.)
Summary of Findings - At		sampling point location	ns, transects, import	ant 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?		
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minimur	n of two required)
Primary Indicators (minimum of or	ne required; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	☐ True Aquatic Plar	` '	Sparsely Vegetated Concav	re Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	` ,	✓ Drainage Patterns (B10)	
Saturation (A3) Water Marks (B1)		heres along Living Roots (C3)	Moss Trim Lines (B16)	27)
Sediment Deposits (B2)	Presence of Redu	iced from (C4)	Dry Season Water Table (C Crayfish Burrows (C8)	.2)
Drift deposits (B3)	☐ Thin Muck Surfac		Saturation Visible on Aerial	Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in		Stunted or Stressed Plants	
☐ Iron Deposits (B5)	outer (Explain iii	· · · · · · · · · · · · · · · · · · ·	Geomorphic Position (D2)	. ,
Inundation Visible on Aerial Image	ry (B7)		Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			Microtopographic Relief (De	4)
☐ Aquatic Fauna (B13)			✓ FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes	No Depth (inches):			
	, , ,			
			ology Present? Yes •	No O
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):			
Describe Recorded Data (stream ga	auge, monitoring well, aerial phot	os, previous inspections), if avail	able:	
Demonitor				
Remarks:				

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

		-Species?	
	Absolute	Rel.Strat. Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Cover Status	Number of Deminent Cresics
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
		0.0%	
2			Total Number of Dominant
3	0		Species Across All Strata:1 (B)
4	0	0.0%	
5		0.0%	Percent of dominant Species
6		0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
		0.0%	Prevalence Index worksheet:
7			
8			Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:	,0 =	= Total Cover	OBL species 0 x 1 = 0
			FACW species
1	0		FAC species 0 x 3 = 0
2	0	0.0%	
3	0	0.0%	FACU species $\frac{2}{x}$ $x = \frac{8}{x}$
4		0.0%	UPL species $\frac{0}{x}$ $x = \frac{0}{x}$
		0.0%	Column Totals: 104 (A) 212 (B)
5	_		Cordina rocars (A)
6			Prevalence Index = B/A = <u>2.038</u>
7	0		Hydrophytic Vegetation Indicators:
8		0.0%	Rapid Test for Hydrophytic Vegetation
9	_	0.0%	
		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%	Problematic Hydrophytic Vegetation 1 (Explain)
			1
3			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4	0		
5	0	0.0%	Definition of Vegetation Strata:
6		0.0%	Four Vegetation Strata:
		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
7			in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	=	= Total Cover	regardless of height.
1. Phalaris arundinacea	95	✓ 91.3% FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Juncus effusus		4.8% FACW	Herb stratum – Consists of all herbaceous (non-woody)
	2	1.9% FACW	plants, regardless of size, and all other plants less than 3.28
3. Scirpus cyperinus			ft tall. Woody vines – Consists of all woody vines greater than 3.28
4. Dipsacus fullonum		1.9%FACU	ft in height.
5	0		
6		0.0%	Five Vegetation Strata:
7		0.0%	
8		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
			diameter at breast height (DBH).
9			Sapling stratum – Consists of woody plants, excluding
0	0		woody vines, approximately 20 ft (6 m) or more in height and
1	0	0.0%	less than 3 in. (7.6 cm) DBH.
2	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody
	104 =	= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)			Herb stratum – Consists of all herbaceous (non-woody)
1			plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2		0.0%	3 ft (1 m) in height.
3.		0.0%	Woody vines – Consists of all woody vines, regardless of
			height.
4			
5	0		Hydrophytic
	0	0.0%	Vanatation .
6			
6		= Total Cover	Present? Yes No

Soil Sampling Point: w-aeh-20190225-01

Depth	Matrix			dox Featı	ures		absence of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks	
0-18	10YR 5/1	85	10YR 5/6	15	С	PL	Silty Clay Loam		
	-								
ype: C=Con	centration. D=Depletion	on. RM=Redu	iced Matrix, CS=Cove	red or Coat	ted Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=I	Matrix	
lydric Soil I	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (•		Dark Surface	. ,			2 cm Muck (A10)	-	
_	pedon (A2)		Polyvalue Belo				Coast Prairie Red		
			☐ Thin Dark Sur			.48)	(MLRA 147,148)	ox (A10)	
_	Sulfide (A4)		Loamy Gleyed		2)		Piedmont Floodpl	ain Soils (F19)	
_	Layers (A5)		✓ Depleted Matr				(MLRA 136, 147)		
_	ck (A10) (LRR N)		Redox Dark Su	. ,			☐ Very Shallow Dar		
_ ·	Below Dark Surface (A	A11)	☐ Depleted Dark ☐ Redox Depres		")		Other (Explain in Remarks)		
_	k Surface (A12)	M.	☐ Iron-Mangane		(F12) (I RR	N.			
□ Sandy Mu ■ MLRA 147	uck Mineral (S1) (LRR I 7, 148)	N,	MLRA 136)						
_	eyed Matrix (S4)		Umbric Surfac				3 Indicators of	hydrophytic vegetation and	
☐ Sandy Re			☐ Piedmont Floo				wetland hyd	drology must be present,	
	Matrix (S6)		Red Parent Ma	aterial (F21	.) (MLRA 12	7, 147)	unless di	sturbed or problematic.	
estrictive L	ayer (if observed):								
Type:							Undein Call Decounts	Yes ● No ○	
Depth (inc	:hes):						Hydric Soil Present?	Yes No	
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable	City/County: Jeffer	rson County Sampling Date: 25-Feb-19
Applicant/Owner: AEP	•	State: OH Sampling Point: upl-aeh-2019025-01
Investigator(s): AEH, TL	Section, Township,	
Landform (hillslope, terrace, etc.): Hillsi		
Subregion (LRR or MLRA): LRR N		15.0 % ZT.Z
	Lat.: 40.354064983	0.0101025507
Soil Map Unit Name: Westmoreland-Lowell complex, 40 to 70 percent slopes (WuF) NWI classification: N/A		
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No No		
Are Vegetation U , Soil U , or H	ydrology Significantly disturbed? Are	re "Normal Circumstances" present? Yes No
Are Vegetation $\ \square$, Soil $\ \square$, or H	ydrology 🗌 naturally problematic? (If	f needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes	○ No •	
Hydric Soil Present? Yes	No Is the Sample	led Area Yes O No •
Wetland Hydrology Present? Yes		
Remarks:		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one requ	uired; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots (
☐ Water Marks (B1)	Presence of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No	Depth (inches):	
	Depth (inches):	
	Wet	tland Hydrology Present? Yes O No 💿
(includes capillary fringe) Yes V	Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

			ecies? -		Sampling Point: <u>upi-aen-2019025-01</u>
	Absolute	R.	I.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	C	over	Status	Number of Densirent Cossiss
1. Acer rubrum	15	V	50.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
"		_ _	50.0%	FACU	
———————————————————————————————————————				TACO	Total Number of Dominant
3			0.0%		Species Across All Strata:
4	0		0.0%		
5	0	Ш	0.0%		Percent of dominant Species That Are OBL FACW or FAC: 42.9% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 42.9% (A/B)
7			0.0%		Prevalence Index worksheet:
		\Box	0.0%		Total % Cover of: Multiply by:
8			otal Cove		
Sapling-Sapling/Shrub Stratum (Plot size:	_) = 30	- 10	otal Cove	Г	OBL species 0 x 1 = 0
1 Rubus allegheniensis	20	V	57.1%	FACU	FACW species $20 \times 2 = 40$
		✓	42.9%	FAC	FAC species $30 \times 3 = 90$
2. Acer rubrum				FAC	FACU species $\frac{75}{}$ x 4 = $\frac{300}{}$
3	0		0.0%		
4	0		0.0%		or L species X J =
5	0		0.0%		Column Totals: 125 (A) 430 (B)
6			0.0%		Prevalence Index = B/A = 3.440
			0.0%		·
7			0.0%		Hydrophytic Vegetation Indicators:
8	_	\Box			Rapid Test for Hydrophytic Vegetation
9	0	Ш	0.0%		Dominance Test is > 50%
0	0	Ш	0.0%		Prevalence Index is ≤3.0 ¹
Church Churchian (Diet cize:	35	= Te	otal Cove	r	
Shrub Stratum (Plot size:)	0		0.0%		Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
1		Н			Problematic Hydrophytic Vegetation 1 (Explain)
2			0.0%		Problematic Hydrophytic Vegetation (Explain)
3	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
		$\overline{\Box}$	0.0%		Four Vegetation Strata:
6					Tree stratum – Consists of woody plants, excluding vines, 3
7		Ш	0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	0	= To	otal Cove	r	regardless of height.
1. Phalaris arundinacea	20	V	33.3%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
	20	V	33.3%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Solidago canadensis					Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28
3. Symphyotrichum ericoides	15	V	25.0%	FACU	
4. Dipsacus fullonum	5		8.3%	FACU	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0	Ш	0.0%		1
6.	0		0.0%		Five Vegetation Strate
7			0.0%		Five Vegetation Strata:
		\Box	0.0%		Tree - Woody plants, excluding woody vines, approximately
8					20 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
0	0	Ш	0.0%		woody vines, approximately 20 ft (6 m) or more in height and
1	0		0.0%		less than 3 in. (7.6 cm) DBH.
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	60	= To	otal Cove	r	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)				-	Herb stratum – Consists of all herbaceous (non-woody)
1	0	Ш	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3.			0.0%		Woody vines – Consists of all woody vines, regardless of
		\Box	0.0%		height.
4					
5	0	\sqsubseteq	0.0%		Hydrophytic
6	0		0.0%		Vegetation No. 0
	0	= T	otal Cove	er	Present? Yes No •
					<u> </u>
Remarks: (Include photo numbers here or on a separate sh	ieet.)				

Soil Sampling Point: upl-aeh-2019025-01

Depth (inches) Color (moist) % 0-18 10YR 4/2 95 Type: C=Concentration. D=Depletion. RM=Red Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N)	Redox Features Color (moist) % Tvpe 10YR 5/6 5 C PL 10YR 5/6 5 C PL Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Texture Remarks Silty Clay Silty Clay Lation: PL=Pore Lining. M=Matrix Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Type: C=Concentration. D=Depletion. RM=Red Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Juced Matrix, CS=Covered or Coated Sand Grains 2Loc Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	cation: PL=Pore Lining. M=Matrix Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Polyvalue Below Surface (S8) (MLRA 147,148) Thin Dark Surface (S9) (MLRA 147, 148)	☐ 2 cm Muck (A10) (MLRA 147)
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	Thin Dark Surface (S9) (MLRA 147, 148)	
Hydrogen Sulfide (A4) Stratified Layers (A5)		Coast Prairie Redox (A16) (MLRA 147,148)
_	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
2 cm Muck (A10) (LRR N)	✓ Depleted Matrix (F3)	(MLRA 136, 147)
	Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	3
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
Restrictive Layer (if observed):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		

Wetland 87

Site: Carrollton Gable	e Rater(s): Audrey Ha	nner, Tom Lipp	Date:	2/25/2019
	, , ,	Field Id:		
0 0	Metric 1. Wetland Area (size).	w-aeh-201890225-01	1	
max 6 pts subtotal	Select one size class and assign score. 50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)	0.04 acres		
13 13	Metric 2. Upland buffers and surro	unding land use.		
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one a X WIDE. Buffers average 50m (164ft) or more around wetl MEDIUM. Buffers average 25m to <50m (82 to <164ft) e NARROW. Buffers average 10m to <25m (32ft to <82ft) VERY NARROW. Buffers average <10m (<32ft) around 2b. Intensity of surrounding land use. Select one or X VERY LOW. 2nd growth or older forest, prairie, savanna X LOW. Old field (>10 years), shrubland, young second gr MODERATELY HIGH. Residential, fenced pasture, park HIGH. Urban, industrial, open pasture, row cropping, mit	and perimeter (7) iround wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) double check and average. ih, wildlife area, etc. (7) owth forest. (5) , conservation tillage, new fallow field. (3)		
7.0 20.0	Metric 3. Hydrology.			
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Scor None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1) Metric 4. Habitat Alteration and Dev	Check all disturbances obser ditch tile dike weir stormwater input	human use (1) sst), complex (1) or (1) ation. Score one or dbl /saturated (4) 3)	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double check None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	d average. Check all disturbances observed mowing X in a grazing X clearcutting X selective cutting woody debris removal	d shrub/sapling removal herbaceous/aquatic bed n sedimentation dredging farming nutrient enrichment	emoval

wetland 87 | test_Field 3/8/2019

Site: Carr	ollton Gabl	e Rater(s): Audrey	Hanner	, Tom Lipp	Date:	2/25/2019
-				Field Id:	•	"
	27]		w-aeh-201890225	-01	
	subtotal this	Metric 5. Special Wetlands.				
may 10 pto	subtotal	Check all that apply and score as indi	cated			
max 10 pts.		Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrol Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Praires (10) Known occurrence state/federal threatened or ends Significant migratory songbird/water fowl habitat or Category 1 Wetland. See Question 5 Qualitative Ra	drology (10) logy (5) angered sper usage (10) ating (-10)	, ,		
	0 27	Metric 6. Plant communities, int	erspers	ion, microtopogra	phy.	
max 20pts.	subtotal	6a. Wetland Vegetation Communities.		Vegetation Commun	ity Cover Scale	
		Score all present using 0 to 3 scale.	0		(0.2471 acres) contiguous area	
		Aquatic bed	1	Present and either comprise		
		1 Emergent Shrub		vegetation and is of moderat significant part but is of low of		
		Forest	2		s significant part of wetland's 2	
		Mudflats	_		te quality or comprises a small	
		Open water		part and is of high quality		
		Other	3		ficant part, or more, of wetland's 3	
		6b. horizontal (plan view) Interspersion. Select only one.		vegetation and is of high qua	ality	
		High (5)		Narrative Description of Ve	egetation Quality	
		Moderately high(4)			dominance of nonnative or low	
		Moderate (3)		disturbance tolerant native s	pecies	
		Moderately low (2)			mponent of the vegetation, mod	
		Low (1)			isturbance tolerant native spp	
		x None (0)		can also be present, and spe		
		6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add		moderately high, but general threatened or endangered sp		
		or deduct points for coverage			pecies, with nonnative spp high	
		Extensive >75% cover (-5)		and/or disturbance tolerant n		
		Moderate 25-75% cover (-3)		absent, and high spp diversit		
		x Sparse 5-25% cover (-1)		the presence of rare, threate	ened, or endangered spp	
		Nearly absent <5% cover (0) Absent (1)		M	lana Overlike	
		6d. Microtopography.	٥	Mudflat and Open Water C Absent <0.1ha (0.247 acres)		
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.		
		Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to	9.88 acres)	
		O Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or mor	re	
		0 Standing dead >25cm (10in) dbh				
		0 Amphibian breeding pools	0	Microtopography Cover So Absent	cale	
			1	Present very small amounts	or if more common	
				of marginal quality		
			2	Present in moderate amount		
Category 1				quality or in small amounts o	f highest quality	
	27 GRANI	TOTAL(max 100 pts)	3	Present in moderate or great	ter amounts	
				and of highest quality		

wetland 87 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 87

Date:

February 25, 2019

Description:

PEM

Category 1

Facing North



Wetland 87

Date:

February 25, 2019

Description:

PEM

Category 1

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 87

Date:

February 25, 2019

Description:

PEM

Category 1

Facing South



Wetland 87

Date:

February 25, 2019

Description:

PEM

Category 1

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 87

Date:

February 25, 2019

Description:

PEM

Category 1

Soil Pit



Wetland 88

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson Count	Sampling Date: 25-Feb-19
Applicant/Owner: AEP		State: 0	H Sampling Point: w-aeh-20190225-05
Investigator(s): AEH, TL		Section, Township, Range: S	S 28 T 9N R 3W
Landform (hillslope, terrace, etc.):	Floodplain	Local relief (concave, convex,	none): none
Subregion (LRR or MLRA): LRR N		40.34776956 Lo	ong.: -80.84240836
Soil Map Unit Name: Fitchville varia			NWI classification: N/A
Are climatic/hydrologic conditions o			o, explain in Remarks.)
Are Vegetation, Soil		tly disturbed? Are "Norma	al Circumstances" present? Yes Vo V
Are Vegetation , Soil , Soil		-	explain any answers in Remarks.) ons, transects, important features, etc.
		sampling point locatio	ins, transects, important reacures, etc.
Hydrophytic Vegetation Present?			
Hydric Soil Present?	Yes • No ·	Is the Sampled Area within a Wetland?	Yes ● No ○
Wetland Hydrology Present?	Yes No	William a Wollana.	
Hydrology			
Wetland Hydrology Indicators: Primary Indicators (minimum of or	ne required: check all that annly)		Secondary Indicators (minimum of two required)
Surface Water (A1)	True Aquatic Plar	nts (B14)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)	Hydrogen Sulfide	` '	✓ Drainage Patterns (B10)
Saturation (A3)		heres along Living Roots (C3)	Moss Trim Lines (B16)
✓ Water Marks (B1)	Presence of Redu	iced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Redu	iction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	☐ Thin Muck Surfac	e (C7)	Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	Other (Explain in	Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Image	nn. (D7)		✓ Geomorphic Position (D2)
Water-Stained Leaves (B9)	19 (67)		Shallow Aquitard (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13)			✓ FAC-neutral Test (D5)
Field Observations:			
Surface Water Present? Yes	No Depth (inches):		
Water Table Present? Yes	No O Depth (inches):	4	
Saturation Present? (includes capillant frings) Yes		Wetland Hyd	drology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream ga			ulahle:
Describe Recorded Data (stream ga	auge, monitoring well, derial prior	os, previous inspections), ii ava	nable.
Remarks:			

Wetland 88 **VEGETATION** (Five/Four Strata)- Use scientific names of plants.

		-Spe	cies? =		
(0)	Absolute	Rel	Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Cov		Status	Number of Dominant Species
1	0	Ц_	0.0%		That are OBL, FACW, or FAC:3(A)
2	0	Ц_	0.0%		Total Number of Dominant
3	0	Ц_	0.0%		Species Across All Strata:3(B)
4	0	Ш_	0.0%		
5	0	\square_{-}	0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
	ο.	= Tota	al Cover		OBL species $40 \times 1 = 40$
Sapling-Sapling/Shrub Stratum (Plot size:					FACW species $60 \times 2 = 120$
1	0	<u>H</u> _	0.0%		FAC species $0 \times 3 = 0$
2		\sqcup _	0.0%		16
3	0	\sqcup _	0.0%		
4	0	\sqcup _	0.0%		ore species — x 3 = —
5	0	Ш_	0.0%		Column Totals: <u>104</u> (A) <u>176</u> (B)
6			0.0%		Prevalence Index = B/A = 1.692
7	0		0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
0			0.0%		
	_	= Tota	al Cover		
Shrub Stratum (Plot size:)					Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		H-	0.0%		Problematic Hydrophytic Vegetation 1 (Explain)
2		$\overline{-}$	0.0%		
3		$\overline{-}$	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		\neg	0.0%		
5		\sqcup _	0.0%		Definition of Vegetation Strata:
6	0	\sqcup_{-}	0.0%		Four Vegetation Strata:
7	0	\square_{-}	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	0 =	= Tota	al Cover	•	regardless of height.
Typha angustifolia	40	v	38.5%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Juncus effusus	30	\Box	28.8%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Poa palustris	30	\Box	28.8%	FACW	plants, regardless of size, and all other plants less than 3.28
4. Dipsacus fullonum	2		1.9%	FACU	ft tall, Woody vines – Consists of all woody vines greater than 3.28
5. Solidago canadensis	2		1.9%	FACU	ft in height.
6			0.0%		
			0.0%		Five Vegetation Strata:
7 8		\neg	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
		\neg			diameter at breast height (DBH).
9		H-	0.0%		Sapling stratum – Consists of woody plants, excluding
0		H-	0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1		\equiv	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:)	104 =	= Tota	al Cover	r	Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2			0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5		$\overline{}$	0.0%		
			0.0%		Hydrophytic
		-	0.070		Vegetation Present? Yes No
6			al Cove	.	Present? Yes VO V

Soil Sampling Point: w-aeh-20190225-05

Profile Descr		the depth r				nfirm the	absence of indicators.)		
Depth	Matrix			dox Feati	ures 1	12	Tanderse	-	dea
(inches) 0-18	Color (moist) 10YR 4/1	%	Color (moist) 10YR 6/6	% 15	Tvpe 1	Loc² PL	Texture Silty Clay	Remai	rks
	- 101K						Sity Clay		
	-								
1 Type: C=Con	centration D-Depletic	on DM-Dedu	cod Matrix CS-Cove	red or Coa	tod Sand Gr	ains 21 oc	ation: PL=Pore Lining. M=1	Matrix	
Hydric Soil 1		Jii. Ki•i–Redu	ceu Matrix, C3=Cove	ieu oi coa	leu Sanu Gr	aii is -Loc			2
Histosol (Dark Surface ((\$7)			Indicators for Proble	•	Soils ³ :
	pedon (A2)		Polyvalue Belo	. ,	(S8) (MLRA	147.148)	2 cm Muck (A10)	(MLRA 147)	
Black Hist			☐ Thin Dark Surf				Coast Prairie Redo	ox (A16)	
	Sulfide (A4)		Loamy Gleyed			-,	(MLRA 147,148)		
	Layers (A5)		✓ Depleted Matr		•		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)	
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	urface (F6)			Very Shallow Dar	k Surface (TF12)	
Depleted	Below Dark Surface (A	\11)	Depleted Dark	Surface (F	7)		Other (Explain in		
☐ Thick Dar	k Surface (A12)		Redox Depres	sions (F8)			Outer (Explain in	rtemarito)	
Sandy Mu MLRA 147	uck Mineral (S1) (LRR I 7, 148)	N,	Iron-Mangane MLRA 136)	se Masses	(F12) (LRR	N,			
Sandy Gle	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	.2)	3		
☐ Sandy Re	edox (S5)		☐ Piedmont Floo	dplain Soil	s (F19) (ML	RA 148)	Indicators of wetland hyd	hydrophytic vego Irology must be	etation and present.
Stripped I	Matrix (S6)		Red Parent Ma	aterial (F21	.) (MLRA 12	7, 147)		sturbed or proble	
Restrictive L	ayer (if observed):								
Type:									
Depth (inc	thes):						Hydric Soil Present?	Yes 💿 N	lo O
Remarks:									

Upland 88

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling	Date: 25-Feb-19
Applicant/Owner: AEP		State: Oh	Sampling Point	: upl-aeh-20190225-05
Investigator(s): AEH, TL		Section, Township, Range: S	28 T 9N	R 3W
Landform (hillslope, terrace, etc.):	Floodplain	Local relief (concave, convex, i	none): none S	Slope: 4.0% / 2.3 °
Subregion (LRR or MLRA): LRR N	Lat.:	40,34772053 Lor	-80.84225658	Datum: NAD 83
Soil Map Unit Name: Richland silt le		10.51772035	NWI classification:	
Are climatic/hydrologic conditions o	n the site typical for this time of y	$_{ear}$? Yes $leftilde{left}$ No $leftilde{igcirc}$ (If no	, explain in Remarks.)	
Are Vegetation, Soil	, or Hydrology significant	tly disturbed? Are "Norma	Circumstances" present?	Yes ● No ○
Are Vegetation . , Soil .	, or Hydrology	problematic? (If needed,	explain any answers in Ren	narks.)
Summary of Findings - At		sampling point location	ns, transects, impoi	rtant features, etc.
Hydrophytic Vegetation Present?	Yes O No O			
Hydric Soil Present?	Yes O No 💿	Is the Sampled Area	Yes ○ No ●	
Wetland Hydrology Present?	Yes No	within a Wetland?	100 - 110 -	
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minimu	um of two required)
Primary Indicators (minimum of or	ne required; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	True Aquatic Plant	` '	Sparsely Vegetated Conce	ave Surface (B8)
✓ High Water Table (A2)	Hydrogen Sulfide	` ,	Drainage Patterns (B10)	
Saturation (A3)		neres along Living Roots (C3)	Moss Trim Lines (B16)	(00)
Water Marks (B1)	Presence of Reduc	• •	Dry Season Water Table ((C2)
Sediment Deposits (B2) Drift deposits (B3)		ction in Tilled Soils (C6)	Crayfish Burrows (C8)	al Imagany (CO)
Algal Mat or Crust (B4)	☐ Thin Muck Surface	• ,	Saturation Visible on Aeric Stunted or Stressed Plant	,
☐ Iron Deposits (B5)	☐ Other (Explain in I	Remarks)	Geomorphic Position (D2)	` ,
☐ Inundation Visible on Aerial Image	ry (B7)		Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			Microtopographic Relief (I	D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)	,
Field Observations:				
Surface Water Present? Yes	No Depth (inches):			
Water Table Present? Yes	No O Depth (inches):			
Saturation Present? (includes capillary fringe) Yes	No O Depth (inches):	Wetland Hyd	rology Present? Yes •	No O
(includes capillary fringe) Describe Recorded Data (stream ga		os, previous inspections), if avai	lable:	
Remarks:				
1				

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

Tree Stratum (Plot size:		Re Co	ecies? I.Strat. ver 0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 5 x 1 = 5 FACW species 5 x 2 = 10 FAC species 0 x 3 = 0 FACU species 95 x 4 = 380 UPL species 0 x 5 = 0
1			0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	That are OBL, FACW, or FAC:
2.			0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% tal Cover 0.0% 0.0% 0.0%	That are OBL, FACW, or FAC:
2.		To:	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% tal Cover 0.0% 0.0% 0.0%	Total Number of Dominant Species Across All Strata:
3.		To	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% tal Cover 0.0% 0.0% 0.0%	Species Across All Strata:
4		To	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet:
5.		To	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0	That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet:
6.		To:	0.0% 0.0% 0.0% tal Cover 0.0% 0.0% 0.0%	That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet:
7		To:	0.0% 0.0% tal Cover 0.0% 0.0% 0.0%	Prevalence Index worksheet:
8		To	0.0% tal Cover 0.0% 0.0% 0.0%	Total % Cover of: Multiply by: OBL species 5 x $1 = 5$ FACW species 5 x $2 = 10$ FAC species 0 x $3 = 0$ FACU species 95 x $4 = 380$ UPL species 0 x $5 = 0$
8	_	To:	0.0% 0.0% 0.0% 0.0%	OBL species 5 \times 1 = 5 FACW species 5 \times 2 = 10 FAC species 0 \times 3 = 0 FACU species 95 \times 4 = 380 UPL species 0 \times 5 = 0
Sapling-Sapling/Shrub Stratum	_ = [To	0.0% 0.0% 0.0% 0.0%	FACW species 5 \times 2 = 10 FAC species 0 \times 3 = 0 FACU species 95 \times 4 = 380 UPL species 0 \times 5 = 0
1. 0 2. 0 3. 0 4. 0 5. 0 6. 0 7. 0			0.0% 0.0% 0.0%	FAC species 0 $x 3 = 0$ FACU species 95 $x 4 = 380$ UPL species 0 $x 5 = 0$
2. 0 3. 0 4. 0 5. 0 6. 0 7. 0			0.0% 0.0% 0.0%	FAC species 0 $x 3 = 0$ FACU species 95 $x 4 = 380$ UPL species 0 $x 5 = 0$
3. 0 4. 0 5. 0 6. 0 7. 0			0.0%	FACU species 95 x 4 = 380 UPL species 0 x 5 = 0
4	_ [_ [_ [_ [_ [0.0%	UPL species $0 \times 5 = 0$
4	_ [_ [_ []_]_]_		
6			0.0%	- 105 th 205 (B)
6				Column Totals: 105 (A) 395 (B)
70	_ [0.0%	Prevalence Index = $B/A = 3.762$
			0.0%	· ——
0			0.0%	Hydrophytic Vegetation Indicators:
		Ξ-	0.0%	Rapid Test for Hydrophytic Vegetation
J		Ξ-		☐ Dominance Test is > 50%
00			0.0%	Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	_ =	To	tal Cover	Morphological Adaptations ¹ (Provide supporting
1	_ [$\square_{\underline{}}$	0.0%	data in Remarks or on a separate sheet)
2	_ [$\Box_{_}$	0.0%	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
3	_ [0.0%	¹ Indicators of hydric soil and wetland hydrology must
40	_ [0.0%	be present, unless disturbed or problematic.
50	_ [٦	0.0%	Definition of Vegetation Strata:
		=-	0.0%	Four Vegetation Strata:
0		Ξ-	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
		 		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)0	_		tal Cover	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Solidago canadensis 60	_ 🖢	v _	57.1% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Symphyotrichum ericoides 35	_ [v _	33.3% FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Poa palustris 5	_ [4.8% FACW	plants, regardless of size, and all other plants less than 3.28
4. Carex vulpinoidea 5			4.8% OBL	ft tall, Woody vines – Consists of all woody vines greater than 3.28
5	_ [0.0%	ft in height.
6	_ [7	0.0%	
		7	0.0%	Five Vegetation Strata:
1.	-	Π-	0.0%	Tree - Woody plants, excluding woody vines, approximately
0	_	Ϊ-		20 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
0		닠-	0.0%	woody vines, approximately 20 ft (6 m) or more in height and
1	_	ᆜ-	0.0%	less than 3 in. (7.6 cm) DBH.
2	_ L	ᆜ_	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:)	_ =	To	tal Cover	Herb stratum – Consists of all herbaceous (non-woody)
10	Γ		0.0%	plants, including herbaceous vines, regardless of size, and
		¬_	0.0%	woody species, except woody vines, less than approximately 3 ft (1 m) in height.
2	– 'r	Π-	0.0%	Woody vines – Consists of all woody vines, regardless of
0	_	Ϊ-		height.
T		Ϊ-	0.0%	
5	-	۲-	0.0%	Hydrophytic
60	_ L	ᆜ_	0.0%	Vegetation Present? Yes No No
0	_ =	То	otal Cover	Present? Yes V NO V

Upland 88 **Soil** Sampling Point: upl-aeh-20190225-05

Type: C=Concentration. D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains PL=Pore Lining, M=Matrix			dox Featur	Re		Matrix		Depth
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix 1vdric Soil Indicators:	Tvpe ¹ Loc ² Texture	Tvpe 1	<u>%</u>	Color (moist)	%			
Histosol (A1)	C PL Silty Clay		1	10YR 66	99	3/1	10YR	0-18
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depth (inches): Depth (inches): Indicators for Problematic Hy 2 cm Muck (A10) (MLRA 147, 148) 2 cm Muck (A10) (MLRA 147, 148) Depleted Surface (S9) (MLRA 147, 148) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Dark Surface (F6) Very Shallow Dark Surface (MLRA 136, 147) Depleted Dark Surface (F7) Other (Explain in Remarks) Other (Explain in Remarks) A Indicators of hydrophyt wetland hydrology must only strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes								
Indicators for Problematic Hyllistic Soil Indicators: Histosol (A1)								
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depth (inches): Depth (inches): Indicators for Problematic Hy 2 Indicators for Muck (A10) (MLRA 147, 148) Depleted Below Surface (S9) (MLRA 147, 148) Piedmont Floodplain Soils (MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 148) Wery Shallow Dark Surface (F7) Other (Explain in Remarks) Jandicators of hydrophyt wetland hydrology much and the problematic Hy 2 Indicators of hydrophyt wetland hydrology much shall be problematic Hy 2 Indicators for Muck Hydrogen Indicators for Muck Hydrogen Indicators for Problematic Hy 2 Indicators for Muck Hydrogen Indicators for Problematic Hydrogen Indicators for Muck Hydrogen Indicators for Problematic Hydrogen Indicators for Muck Hydrogen Indicators for Muck Hydrog								
Indicators for Problematic Hy Histosol (A1) Histosol (A2) Black Histic Epipedon (A2) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (F13) (MLRA 147, 148) Depleted Dark Surface (F19) Depleted Dark Surface (F19) MLRA 136, 122) Piedmont Floodplain Soils (MLRA 136, 122) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Stripped Matrix (S6) Thin Dark Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Tron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Thin Dark Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Tron-Manganese Masses (F12) (LRR N, MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Hydric Soil Present? Yes		———					-	
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Coast Prairie Redox (A16) Extratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Extratified Layers (A5) Depleted Matrix (F3) Red Parent Material (F21) (MLRA 148) Indicators for Problematic Hy 2 cm Muck (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils ((MLRA 136, 147) Very Shallow Dark Surface Other (Explain in Remarks) Tiron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Fiedmont Floodplain Soils (F19) (MLRA 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Type: Depth (inches): Hydric Soil Present? Yes					-			
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depth (inches): Depth (inches): Indicators for Problematic Hy 2 Indicators for Muck (A10) (MLRA 147, 148) Depleted Below Surface (S9) (MLRA 147, 148) Piedmont Floodplain Soils (MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 148) Wery Shallow Dark Surface (F7) Other (Explain in Remarks) Jandicators of hydrophyt wetland hydrology much and the problematic Hy 2 Indicators of hydrophyt wetland hydrology much shall be problematic Hy 2 Indicators for Muck Hydrogen Indicators for Muck Hydrogen Indicators for Problematic Hy 2 Indicators for Muck Hydrogen Indicators for Problematic Hydrogen Indicators for Muck Hydrogen Indicators for Problematic Hydrogen Indicators for Muck Hydrogen Indicators for Muck Hydrog								
Histosol (A1)								
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depth (inches): Depth (inches): Indicators for Problematic Hy 2 cm Muck (A10) (MLRA 147, 148) Depleted Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Dark Surface (F6) Very Shallow Dark Surface (MLRA 136, 147) Depleted Dark Surface (F7) Other (Explain in Remarks) Tinon-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) MLRA 136) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depleted Dark Surface (F13) (MLRA 127, 147) Wetland hydrology much less disturbed or strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes								
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depth (inches): Depth (inches): Indicators for Problematic Hy 2 Indicators for Muck (A10) (MLRA 147, 148) Depleted Below Surface (S9) (MLRA 147, 148) Piedmont Floodplain Soils (MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 148) Wery Shallow Dark Surface (F7) Other (Explain in Remarks) Jandicators of hydrophyt wetland hydrology much and the problematic Hy 2 Indicators of hydrophyt wetland hydrology much shall be problematic Hy 2 Indicators for Muck Hydrogen Indicators for Muck Hydrogen Indicators for Problematic Hy 2 Indicators for Muck Hydrogen Indicators for Problematic Hydrogen Indicators for Muck Hydrogen Indicators for Problematic Hydrogen Indicators for Muck Hydrogen Indicators for Muck Hydrog								
Indicators for Problematic Hy Histosol (A1) Histosol (A2) Black Histic Epipedon (A2) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (F13) (MLRA 147, 148) Depleted Dark Surface (F19) Depleted Dark Surface (F19) MLRA 136, 122) Piedmont Floodplain Soils (MLRA 136, 122) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Stripped Matrix (S6) Thin Dark Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Tron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Thin Dark Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Tron-Manganese Masses (F12) (LRR N, MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Hydric Soil Present? Yes			. ———					
Histosol (A1)			- ——					
Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Coast Prairie Redox (A16) (MLRA 147,148) Piedmont Floodplain Soils (MLRA 147,148) Piedmont Floodplain Soils (MLRA 136, 147) Other (Explain in Remarks) Other (Explain in Remarks) Tron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Werd Soil Present? Yes (Pycic Cast Prairie Redox (A16) (MLRA 148) Coast Prairie Redox (A16) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 136, 147) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Other (Explain in Remarks) Type:	ted Sand Grains ² Location: PL=Pore Lining. M=Matr	d Sand Grain	ed or Coate	uced Matrix, CS=Cover	on. RM=Red	D=Depletio	centration. I	pe: C=Conc
Histosol (A1) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Diedmont Floodplain Soils (F19) (MLRA 148) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Hydric Soil Present? Yes	Indicators for Problems					:	ndicators:	dric Soil I
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Matrix (S6) Piedmont Floodplain Soils (MLRA 136, 147) Very Shallow Dark Surface (F7) Other (Explain in Remarks) Tron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Piedmont Floodplain Soils (F19) (MLRA 127, 147) Wery Shallow Dark Surface (F7) Other (Explain in Remarks) Type: Depth (inches): Hydric Soil Present? Yes			S7)	☐ Dark Surface (A1)	Histosol (A
Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Com Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Hydric Soil Present? Yes (MLRA 147, 148) Piedmont Floodplain Soils (MLRA 136, 147) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Other (Explain in Remarks) Tyne: Umbric Surface (F13) (MLRA 136, 122) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	(S8) (MLRA 147,148)	8) (MLRA 14	พ Surface (ร	Polyvalue Belo			pedon (A2)	Histic Epip
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (MLRA 136, 122) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Hydric Soil Present? Yes		_RA 147, 148	ace (S9) (M	Thin Dark Surf			ic (A3)	Black Histi
Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Depth (inches): Hydric Soil Present? Yes			Matrix (F2)	Loamy Gleyed				
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Type: Depth (inches): Hydric Soil Present? Yes	(MLRA 136, 147)		x (F3)	Depleted Matri)	Layers (A5)	Stratified L
Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	L Very Shahow Bark Se		. ,			RR N)	k (A10) (LR	2 cm Muck
Sandy Muck Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Wetland hydrology mu unless disturbed or with the control of the cont	-7) Other (Explain in Rer)			\11)	k Surface (A	Below Dark	Depleted E
MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes						A12)	k Surface (A	Thick Dark
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	(F12) (LRR N,	12) (LRR N,	e Masses (F		Ν,	(S1) (LRR N	ck Mineral (', 148)	Sandy Mud MLRA 147
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) wetland hydrology multiple disturbed or unless disturbed or strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	ILRA 136, 122)	RA 136, 122)	: (F13) (MLF	Umbric Surface		(S4)	yed Matrix	Sandy Gle
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or strictive Layer (if observed): Type:	ls (F19) (MLRA 148) S Indicators of hyd wetland hydrok	(F19) (MLRA	dplain Soils	☐ Piedmont Floor			dox (S5)	Sandy Red
Type:		(MLRA 127,	terial (F21)	Red Parent Ma			/latrix (S6)	Stripped M
Type:						served).	ever (if oh	strictive La
Depth (inches): Hydric Soil Present? Yes						osci ved ji	ayer (ii ob	
	Hydric Soil Present?						nes):	
and its:							103)	
								illai KS.

Wetland 88

Site: Car	rollton Gab	le Rater(s): Audrey H	anner, Tom Lipp	Date:	2/25/2019
		• • • • • • • • • • • • • • • • • • • •	Field Id:	•	
	2 2	Metric 1. Wetland Area (size).	w-aeh-201890225-0)5	
max 6 pts	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.38 acre	es	
	13 1	Metric 2. Upland buffers and surro	unding land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one X WIDE. Buffers average 50m (164ft) or more around we MEDIUM. Buffers average 25m to <50m (82 to <164ft) NARROW. Buffers average 10m to <25m (32ft to <82ft VERY NARROW. Buffers average <10m (<32ft) aroun 2b. Intensity of surrounding land use. Select one o	tland perimeter (7) around wetland perimeter (4)) around wetland perimeter (1) d wetland perimeter (0) r double check and average. lah, wildlife area, etc. (7)	eck.	
		x LOW. Old field (>10 years), shrubland, young second of MODERATELY HIGH. Residential, fenced pasture, pal HIGH. Urban, industrial, open pasture, row cropping, m	k, conservation tillage, new fallow field.	(3)	
	17.0 32.0	0 Metric 3. Hydrology.			
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) X Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >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. Sco. None or none apparent (12) X Recovered (7) X Recovering (3) Recent or no recovery (1) Metric 4. Habitat Alteration and De	Check all disturbances obserditch ditch tile dike weir stormwater input X X X X X X X X X	r human use (1) rest), complex (1) for (1) for (1) fration. Score one or dbl d/saturated (4) (3) 30cm (12in) (1)	
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double che None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and assign excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and None or none apparent (9) Recovered (6) X Recovering (3) X Recent or no recovery (1)	in score. nd average. Check all disturbances observe	ed shrub/sapling removal herbaceous/aquatic bed r sedimentation dredging farming nutrient enrichment	removal
	3	7	<u> </u>	J	

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

wetland 88 | test_Field 3/8/2019

Site: Carro	ollton Gable	e Rater(s): Audrey H	lanner	, Tom Lipp	Date:	2/25/2019
_		•		Field Id:	-	
	37			w-aeh-201890225-05		
	subtotal this p					
	0 37	Metric 5. Special Wetlands.				
max 10 pts.	subtotal	Check all that apply and score as indica	ited.			
		Bog (10)				
		Fen (10)				
		Old growth forest (10) Mature forested wetland (5)				
		Lake Erie coastal/tributary wetland-unrestricted hydrol	logy (10)			
		Lake Erie coastal/tributary wetland-restricted hydrolog	y (5)			
		Lake Plain Sand Prairies (Oak Openings) (10)				
		Relict Wet Praires (10) Known occurrence state/federal threatened or endanger	narad ena	cies (10)		
		Significant migratory songbird/water fowl habitat or use		cies (10)		
		Category 1 Wetland. See Question 5 Qualitative Ratin	ng (-10)			
	-1 36	Metric 6. Plant communities, inter	rspers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation Communities.		Vegetation Community Cov	ver Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471		
		Aquatic bed	1	Present and either comprises small p		
		1 Emergent Shrub		vegetation and is of moderate quality significant part but is of low quality	, or comprises a	
		Forest	2	Present and either comprises signific	ant part of wetland's 2	
		Mudflats		vegetation and is of moderate quality	or comprises a small	
		Open water	_	part and is of high quality		
		Other6b. horizontal (plan view) Interspersion.	3	Present and comprises significant pa vegetation and is of high quality	rt, or more, of wetland's 3	
		Select only one.		vegetation and is of high quality		
		High (5)		Narrative Description of Vegetation	n Quality	
		Moderately high(4)		Low spp diversity and/or predominan	ce of nonnative or low	
		Moderate (3) Moderately low (2)		disturbance tolerant native species Native spp are dominant component	of the vegetation, mod	
		Low (1)		although nonnative and/or disturbance		
		X None (0)		can also be present, and species div		
		6c. Coverage of invasive plants. Refer		moderately high, but generallyw/o pre	sence of rare	
		Table 1 ORAM long form for list. Add		threatened or endangered spp to	ith nonnative can high	
		or deduct points for coverage Extensive >75% cover (-5)		A predominance of native species, w and/or disturbance tolerant native sp		
		x Moderate 25-75% cover (-3)		absent, and high spp diversity and of		
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or e	endangered spp	
		Nearly absent <5% cover (0)		Modelet and Once Water Class Over	-114.	
		Absent (1) 6d. Microtopography.	0	Mudflat and Open Water Class Qual Absent <0.1ha (0.247 acres)	ality	
		Score all present using 0 to 3 scale.	1	· · · · · · · · · · · · · · · · · · ·)	
		Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88 acr	es)	
		1 Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more		
		0 Standing dead >25cm (10in) dbh 0 Amphibian breeding pools		Microtopography Cover Scale		
		Amphibian breeding pools	0	Absent		
			1	Present very small amounts or if more	e common	
Modified				of marginal quality	4 - 4 1 1 1 1 1	
Category 2			2	Present in moderate amounts, but no quality or in small amounts of highest		
	36 GRAND	TOTAL(max 100 pts)	3	Present in moderate or greater amou		
	COLCUMN	TOTAL (max 100 pts)	3	1	iiio	
				and of highest quality		

wetland 88 | test_Field 3/8/2019



PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 88

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Facing North



Wetland 88

Date:

February 25, 2019 **Description:**

PEM

Modified Category 2

Facing East





PHOTOGRAPHIC RECORD **WETLANDS**

Site Location:

Gable-Carrollton 138 kV Transmission Line Project AEP

Project No. 60582598

Wetland 88

Client Name:

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Facing South



Wetland 88

Date:

February 25, 2019 **Description:**

PEM

Modified Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

WEILAND

AEP Gable-Carrollton 138 kV Transmission Line Project

Site Location:

Project No. 60582598

Wetland 88

Client Name:

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Soil Pit



Wetland 89

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling Date:	25-Feb-19
Applicant/Owner: AEP		State: Oh	Sampling Point: w-ae	eh-20190225-04
Investigator(s): AEH, TL		Section, Township, Range: S	28 T 9N R	3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex, r	none): none Slope:	0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N		40.34678059 Lor		atum: NAD 83
Soil Map Unit Name: Berks-Guerns			NWI classification: N/A	11/10/05
Are climatic/hydrologic conditions o			explain in Remarks.) Circumstances" present? Yes	(A) No. (C)
Are Vegetation, Soil	, or Hydrology significant	ly disturbed? Are "Normal	Circumstances" present? Yes	● No ○
Are Vegetation , Soil .	, or Hydrology 🔲 naturally p	oroblematic? (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 No	Is the Sampled Area	Yes No	
Wetland Hydrology Present?	Yes No	within a Wetland?	ies o no o	
Remarks:				
Hydrology				
				1
Wetland Hydrology Indicators:	as required, shock all that apply)		Secondary Indicators (minimum of tw	o required)
Primary Indicators (minimum of or Surface Water (A1)	True Aquatic Plant	(P14)	Surface Soil Cracks (B6)	neo (B0)
✓ High Water Table (A2)	Hydrogen Sulfide	• •	✓ Sparsely Vegetated Concave Surfa ✓ Drainage Patterns (B10)	ace (B8)
✓ 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 Image	ery (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	ry (B7)		Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			Microtopographic Relief (D4)	
☐ Aquatic Fauna (B13)			FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes	No Depth (inches):			
Water Table Present? Yes ©	-1- ()	0 Wetland Hyd	rology Present? Yes • No	\circ
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):	0		
Describe Recorded Data (stream ga	auge, monitoring well, aerial photo	os, previous inspections), if avai	able:	
Remarks:				
Remarks.				

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

			pecies? ———	Sampling Point: W-aen-20190225-04
	Absolute	R	el.Strat. Indicate	or Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	C	over Status	Number of Paris and Consider
1	0		0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
		$\overline{\Box}$	0.0%	That are obe, thew, or the.
2		\vdash		Total Number of Dominant
3	0		0.0%	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: 100.0% (A/B)
		$\overline{\Box}$	0.0%	Paradana Zadana dakata
7		\Box		Prevalence Index worksheet:
8			0.0%	Total % Cover of: Multiply by:
Plot size:	, :	= T	otal Cover	OBL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:				FACW species
1	0		0.0%	FAC species $10 \times 3 = 30$
2.	0		0.0%	· — —
3	0		0.0%	FACU species $0 \times 4 = 0$
4.			0.0%	UPL species $0 \times 5 = 0$
• • •		\Box		Column Totals: <u>115</u> (A) <u>240</u> (B)
5		\Box		Column locals: 113 (A) 210
6	0		0.0%	Prevalence Index = B/A = <u>2.087</u>
7	0		0.0%	Hydrophytic Vegetation Indicators:
8			0.0%	
9			0.0%	_ ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
		$\overline{\Box}$		✓ Dominance Test is > 50%
0	_	ш	0.0%	Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0:	= T	otal Cover	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%	data in Remarks or on a separate sheet)
			0.0%	Problematic Hydrophytic Vegetation ¹ (Explain)
2		\Box		-
3			0.0%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4	0		0.0%	be present, unless disturbed or problematic.
5			0.0%	Definition of Vegetation Strata:
6			0.0%	Four Vegetation Strata:
		$\overline{\Box}$	0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
7		\Box		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	0 :	= To	otal Cover	regardless of height.
1. Phalaris arundinacea	45	V	39.1% FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2 Onoclea sensibilis	25	V	21.7% FACW	Herb stratum – Consists of all herbaceous (non-woody)
			-	plants, regardless of size, and all other plants less than 3.28
3. Juncus effusus	25		21.7% FACW	
4. Verbena urticifolia	10		8.7% FAC	ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Poa palustris	10		8.7% FACW	
6	0		0.0%	Five Vegetation Strate.
7			0.0%	Five Vegetation Strata:
		\Box	0.0%	Tree - Woody plants, excluding woody vines, approximately
8				20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9			0.0%	Sapling stratum – Consists of woody plants, excluding
0	0		0.0%	woody vines, approximately 20 ft (6 m) or more in height and
1.	0		0.0%	less than 3 in. (7.6 cm) DBH.
2.			0.0%	Shrub stratum – Consists of woody plants, excluding woody
		_ T	otal Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)		- ''	otal Covel	Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%	plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2			0.0%	3 ft (1 m) in height.
			0.0%	Woody vines – Consists of all woody vines, regardless of
3		\exists		height.
4	0	\Box	0.0%	
5	0		0.0%	Hydrophytic
6.	0		0.0%	Vogetation
<u> </u>	0	= T	otal Cover	Present? Yes No
		•		
Remarks: (Include photo numbers here or on a separate sh	eet.)			

Soil Sampling Point: w-aeh-20190225-04

Depth	Matrix			dox Featu	ires		absence of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks	
0-18	10YR 3/1	90	10YR 5/6	10	С	PL	Silty Clay		
	-								
Гуре: C=Cond	centration. D=Depletio	n. RM=Redi	uced Matrix, CS=Cove	red or Coat	ed Sand Gra	ains ² Loc	ation: PL=Pore Lining. M=	Matrix	
lydric Soil I	ndicators:						Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (A	A1)		Dark Surface ((S7)				-	
Histic Epip	pedon (A2)		Polyvalue Belo	w Surface	(S8) (MLRA	147,148)	2 cm Muck (A10)		
Black Histi	ic (A3)		Thin Dark Surf	face (S9) (I	MLRA 147, 1	48)	Coast Prairie Red (MLRA 147,148)	OX (A16)	
	Sulfide (A4)		Loamy Gleyed	Matrix (F2)		Piedmont Floodp	ain Soils (F19)	
_	Layers (A5)		Depleted Matr				(MLRA 136, 147)	· -/	
2 cm Mucl	(A10) (LRR N)		✓ Redox Dark Su	. ,			☐ Very Shallow Dark Surface (TF12)☐ Other (Explain in Remarks)		
_ '	Below Dark Surface (A	11)	Depleted Dark		7)				
_	k Surface (A12)		Redox Depres		(=.a) (.aa				
Sandy Mu MLRA 147	ck Mineral (S1) (LRR N ', 148)	٧,	Iron-Mangane MLRA 136)						
Sandy Gle	yed Matrix (S4)		Umbric Surfac				3 Indicators of	hydrophytic vegetation and	
Sandy Red			☐ Piedmont Floo	dplain Soil	s (F19) (MLI	RA 148)	wetland hyd	drology must be present,	
Stripped N	latrix (S6)		Red Parent Ma	aterial (F21) (MLRA 12	7, 147)	unless di	sturbed or problematic.	
Restrictive La	ayer (if observed):								
Туре:									
Depth (inch	nes):						Hydric Soil Present?	Yes No	
Remarks:									

Upland 89

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling Date: 25-Feb-19
Applicant/Owner: AEP		State: Ol	H Sampling Point: upl-aeh-20190225-04
Investigator(s): AEH, TL		Section, Township, Range: S	5 28 T 9N R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex,	none): none
Subregion (LRR or MLRA): LRR N	Lat.	: 40.346817723 Lo	ng.: -80.84145366
Soil Map Unit Name: Richland silt lo		10.5 10017725	NWI classification: N/A
		vear? Yes No (If no	o, explain in Remarks.)
Are Vocatation		•	· · · · · · · · · · · · · · · · · · ·
Are Vegetation , Soil ,		•	in directined present.
Are Vegetation . , Soil . Summary of Findings - At			explain any answers in Remarks.) ons, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No •		
	Yes O No O	To the Consulted Asses	
Hydric Soil Present?	Yes No •	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Remarks:	Tes UNU U		
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 Plan	nts (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide	Odor (C1)	Drainage Patterns (B10)
Saturation (A3)		heres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Redu	, ,	Dry Season Water Table (C2)
Sediment Deposits (B2)		iction in Tilled Soils (C6)	Crayfish Burrows (C8)
☐ Drift deposits (B3) ☐ Algal Mat or Crust (B4)	☐ Thin Muck Surfac		Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	U Other (Explain in	Remarks)	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	, , ,		
Water Table Present? Yes	No O Depth (inches):	Wester different	Irology Present? Yes No •
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):		Irology Present? Yes ○ No ●
Describe Recorded Data (stream ga	auge, monitoring well, aerial phot	os, previous inspections), if avai	ilable:
Remarks:			

Upland 89 **VEGETATION (Five/Four Strata)- Use scientific names of plants.**

		Dom			Sampling Point: upl-aeh-20190225-04
Tree Stratum (Plot size:)	Absolute % Cover	Spec- Rel.S Cove	Strat.	Indicator Status	
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:
2	0		0.0%		
3			0.0%		Total Number of Dominant Species Across All Strata: 6 (B)
4			0.0%		Species Across Air Struct.
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:
8	0		0.0%		Total % Cover of: Multiply by:
	0 =	= Tota	l Cove		OBL species $0 \times 1 = 0$
Sapling-Sapling/Shrub Stratum (Plot size:					FACW species 30 x 2 = 60
1. Lonicera morrowii			50.0%	FACU	FAC species $0 \times 3 = 0$
2. Fraxinus pennsylvanica			20.0%	FACW	FACU species $55 \times 4 = 220$
3. Rubus allegheniensis		$\overline{}$	20.0%	FACU	30 1F0
4		=	0.0%		ore species ————————————————————————————————————
5		=	0.0%		Column Totals:115 (A)430 (B)
6		Ц_	0.0%		Prevalence Index = $B/A = \underline{3.739}$
7		\neg	0.0%		Hydrophytic Vegetation Indicators:
8		Ц_	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ц_	0.0%		Dominance Test is > 50%
0	0	Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	25	= Tota	l Cove		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.			0.0%		Problematic Hydrophytic Vegetation 1 (Explain)
3			0.0%		¹ Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7		$\overline{\Box}$	0.0%		Tree stratum - Consists of woody plants, excluding vines, 3
Herb Stratum (Plot size:)		= Tota	l Cove		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. Solidago canadensis	30	✓ _ 3	33.3%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Poa palustris	25	✓ _ 2	27.8%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Setaria faberi		✓ _ 3	33.3%	UPL	plants, regardless of size, and all other plants less than 3.28
4. Schedonorus arundinaceus	5		5.6%	FACU	ft tall Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5			0.0%		it in neight.
6	0		0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately
8			0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9			0.0%		diameter at breast height (DBH).
0	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1			0.0%		less than 3 in. (7.6 cm) DBH.
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	90 =	= Tota	l Cove		Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%		plants, including herbaceous vines, regardless of size, and
1. 2.		\neg	0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
		\equiv	0.0%		Woody vines – Consists of all woody vines, regardless of
3		$\overline{-}$	0.0%		height.
4		$\overline{-}$	0.0%		
5					Hydrophytic
		1 1 1	0.0%		Vegetation
6			al Cove		Present? Yes No •

Soil Sampling Point: upl-aeh-20190225-04

Profile Descr		the depth				nfirm the	absence of indicators.)	
Depth	Matrix			dox Featı	ures 1	12	Tandroon	Danier-II-
(inches) 0-18	Color (moist) 10YR 4/3	% _ 95	Color (moist) 10YR 5/6	%_ 5	Tvpe 1	Loc² PL	Texture Silty Clay	Remarks
			10110 - 3/0				Sifty Clay	
				-				
	-							
1 Type: C=Con	centration D-Depletic	on DM-Dedu	uced Matrix CS-Cover	ed or Coal	tod Sand Gr	ains 21 oc	ation: PL=Pore Lining. M=I	Matrix
Hydric Soil I		JII. KIII–Keut	iced Matrix, C3=Cover	ed or coar	teu Sanu Gi	airis -LOC		
Histosol (Dark Surface (S7)			Indicators for Proble	-
`	pedon (A2)		Polyvalue Belo		(S8) (MI RA	147.148)	2 cm Muck (A10)	(MLRA 147)
Black Hist			☐ Thin Dark Surf				Coast Prairie Red	ox (A16)
	Sulfide (A4)		Loamy Gleyed			,	(MLRA 147,148)	ain Caile (F10)
Stratified	Layers (A5)		Depleted Matri		•		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	ırface (F6)			Very Shallow Dar	k Surface (TF12)
Depleted	Below Dark Surface (A	A11)	Depleted Dark	Surface (F	7)		Other (Explain in	
☐ Thick Dar	k Surface (A12)		Redox Depress	sions (F8)				·· ······· /
Sandy Mu MLRA 147	uck Mineral (S1) (LRR I 7, 148)	N,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR	N,		
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (M	LRA 136, 12	22)	3	
☐ Sandy Re	dox (S5)		Piedmont Floo	dplain Soil	s (F19) (ML	RA 148)	Indicators of wetland hyd	hydrophytic vegetation and Irology must be present,
Stripped I	Matrix (S6)		Red Parent Ma	iterial (F21	.) (MLRA 12	7, 147)		sturbed or problematic.
Restrictive L	ayer (if observed):							
Type:								
Depth (inc	:hes):						Hydric Soil Present?	Yes O No •
Remarks:								

Wetland 89

Site: Carrollton Gab	le Rater(s): Audrey Ha	anner, Tom Lipp	Date:	2/25/2019
	• , , , ,	Field Id:	•	
0	Metric 1. Wetland Area (size).	w-aeh-201890225-04		
max 6 pts subtotal	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)	0.01 acres		
13 1	Metric 2. Upland buffers and surro	unding land use.		
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one X WIDE. Buffers average 50m (164ft) or more around we MEDIUM. Buffers average 25m to <50m (82 to <164ft) NARROW. Buffers average 10m to <25m (32ft to <82ft VERY NARROW. Buffers average <10m (<32ft) arounc 2b. Intensity of surrounding land use. Select one of X VERY LOW. 2nd growth or older forest, prairie, savann LOW. Old field (>10 years), shrubland, young second g MODERATELY HIGH. Residential, fenced pasture, par HIGH. Urban, industrial, open pasture, row cropping, m	tland perimeter (7) around wetland perimeter (4) t) around wetland perimeter (1) d wetland perimeter (0) r double check and average. ah, wildlife area, etc. (7) prowth forest. (5) k, conservation tillage, new fallow field. (3)		
10.0 23.	0 Metric 3. Hydrology.			
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <	Check all disturbances observed ditch	tuman use (1) st), complex (1) (1) tion. Score one or dbl chesaturated (4)) cm (12in) (1)	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double che None or none apparent (4) x Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assig Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) x Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check at None or none apparent (9) Recovered (6) x Recovering (3) Recent or no recovery (1)	nd average. Check all disturbances observed mowing X sh grazing he X clearcutting X selective cutting woody debris removal fa	nrub/sapling removal erbaceous/aquatic bed rem edimentation redging urming utrient enrichment	oval
subtotal th	is page ORAM v. 5.0 Field Form Quantitative Rating			

wetland 89 | test_Field 3/8/2019

Wetland 89

Field Id: w-aeh-201890225-04		
v-aeh-201890225-04		
es (10)		
on, microtopography.		
bsent or comprises < 0.1ha (0.2471 at resent and either comprises small par egetation and is of moderate quality, cignificant part but is of low quality resent and either comprises significar egetation and is of moderate quality o art and is of high quality resent and comprises significant part, egetation and is of high quality resent and comprises significant part, egetation and is of high quality larrative Description of Vegetation of vegetation and is of high quality larrative pescription of Vegetation of vegetation and is of high quality larrative pescription of vegetation and is of high quality larrative pescription of Vegetation of vegetation and is of high quality perceivation and in the perceivation of vegetation vegetation of vegetation	cres) contiguous area t of wetland's 1 or comprises a at part of wetland's 2 r comprises a small or more, of wetland's 3 Quality of nonnative or low the vegetation, mod tolerant native spp sity moderate to ence of rare	
ne presence of rare, threatened, or en fudflat and Open Water Class Quali bsent <0.1ha (0.247 acres) ow 0.1 to <1ha (0.247 acres) ow 0.1 to <1ha (0.247 to 2.47 acres) loderate 1 to <4ha (2.47 to 9.88 acres ligh 4ha (9.88 acres) or more flicrotopography Cover Scale bsent resent very small amounts or if more of marginal quality resent in moderate amounts, but not or the following the content of	dangered spp (ity (is) common of highest uality	
reegigg land over the state of	n, microtopography. egetation Community Cove sent or comprises < 0.1ha (0.2471 ar sent or comprises < 0.1ha (0.2471 ar sent and either comprises small par getation and is of moderate quality, or inficiant part but is of low quality sent and comprises significant getation and is of moderate quality or t and is of high quality seent and comprises significant part, getation and is of high quality rrative Description of Vegetation of weap government of the predominance turbance tolerant native species tive spp are dominant component of hough nonnative and/or disturbance halso be present, and species diver derately high, but generallyw/o pres- seatened or endangered spp to be predominance of native species, with dior disturbance tolerant native spp sent, and high spp diversity and ofte to presence of rare, threatened, or en deflat and Open Water Class Quali sent < 0.1ha (0.247 acres) we 0.1 to < 1ha (0.247 to 2.47 acres) when the component of the derate the caha (2.47 to 9.88 acres) when the component of the component of the presence of the co	n, microtopography. egetation Community Cover Scale sent or comprises <0.1ha (0.2471 acres) contiguous area sent and either comprises small part of wetland's 1 getation and is of moderate quality, or comprises a nificant part but is of low quality sesent and either comprises significant part of wetland's 2 getation and is of moderate quality or comprises a small t and is of high quality sesent and comprises significant part, or more, of wetland's 3 getation and is of high quality we speciation of Vegetation Quality we speciation of Vegetation Quality we speciation and is of high quality we speciation of Vegetation Quality we speciate of the species tive species diversity and/or predominance of nonnative or low turbance tolerant native species tive species diversity moderate to derately high, but generallyw/o presence of rare seatened or endangered spp to predominance of native species, with nonnative spp high diffor disturbance tolerant native spp absent or virtually sent, and high spp diversity and often, but not always, presence of rare, threatened, or endangered spp deflat and Open Water Class Quality sent, and high spp diversity and often, but not always, presence of rare, threatened, or endangered spp deflat and Open Water Class Quality sent <0.1ha (0.247 acres) w 0.1 to <1ha (0.247 to 2.47 acres) defeate 1 to <4ha (0.247 to 9.88 acres) ph 4ha (9.88 acres) or more crotopography Cover Scale sent sent very small amounts or if more common marginal quality sesent in moderate amounts, but not of highest ality or in small amounts of highest quality sesent in moderate or greater amounts

wetland 89 | test_Field 3/8/2019



WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 89

Date:

February 25, 2019

Description:

PEM

Category 2

Facing North



Wetland 89

Date:

February 25, 2019

Description:

PEM

Category 2

Facing East





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 89

Date:

February 25, 2019

Description:

PEM

Category 2

Facing South



Wetland 89

Date:

February 25, 2019

Description:

PEM

Category 2

Facing West





WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 89

Date:

February 25, 2019

Description:

PEM

Category 2

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling Date: 25-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: w-aeh-20190225-03
Investigator(s): AEH, TL		Section, Township, Range: S	28 T 9N R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex, no	one): none Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N		40.4362897 Lon e	g.: -80.84119479
Soil Map Unit Name: Berks-Guerns			NWI classification: N/A
Are climatic/hydrologic conditions o			explain in Remarks.)
Are Vegetation, Soil	, or Hydrology significant	ly disturbed? Are "Normal	Circumstances" present? Yes No
Are Vegetation , Soil .	, or Hydrology 🔲 naturally p	oroblematic? (If needed, e	explain any answers in Remarks.)
Summary of Findings - At	tach site map showing	sampling point location	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:			
Hydrology			
Wetland Hydrology Indicators:	as required, shock all that apply)		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of or		(P14)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ✓ High Water Table (A2)	☐ True Aquatic Plant☐ Hydrogen Sulfide	• •	☐ Sparsely Vegetated Concave Surface (B8) ✓ 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)	Other (Explain in F	Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)			Geomorphic Position (D2)
Inundation Visible on Aerial Image	ry (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
☐ Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes	No Depth (inches):		
Water Table Present? Yes ©	-1- ()	6 Wetland Hydro	ology Present? Yes No
Saturation Present? (includes capillary fringe) Yes •	No Depth (inches):	0	
Describe Recorded Data (stream ga	auge, monitoring well, aerial photo	os, previous inspections), if availa	able:
Remarks:			
Remarks.			

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

		-Sı	ecies? ——		Sampling Point: <u>w-aen-20190225-03</u>
	Absolute	R	el.Strat. Ind	licator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	C	over Sta	itus	Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: 3 (A)
2.			0.0%		
		\Box	0.0%		Total Number of Dominant
3		\Box			Species Across All Strata:3(B)
4		\vdash	0.0%		Percent of dominant Species
5		\square	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6		\square	0.0%		
7	0		0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
	Λ .	= Te	otal Cover		OBL species 35 x 1 = 35
Sapling-Sapling/Shrub Stratum (Plot size:)					FACW species
1	0	Ш	0.0%		
2	0		0.0%		11 44
3	0		0.0%		FACU species $\frac{11}{}$ x 4 = $\frac{44}{}$
4	_		0.0%		UPL species $0 \times 5 = 0$
5			0.0%		Column Totals: <u>121</u> (A) <u>229</u> (B)
5 6.	_	\Box	0.0%		
			0.0%		Prevalence Index = B/A = 1.893
7			0.0%		Hydrophytic Vegetation Indicators:
8		Н			Rapid Test for Hydrophytic Vegetation
9		Ш	0.0%		✓ Dominance Test is > 50%
0	0	Ш	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	:	= To	otal Cover		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.			0.0%		Problematic Hydrophytic Vegetation 1 (Explain)
			0.0%		¹ Indicators of hydric soil and wetland hydrology must
3		\Box	0.0%		be present, unless disturbed or problematic.
4					Definition of Vegetation Strata:
5		\Box	0.0%		Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
7	0		0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	0 :	= To	otal Cover		regardless of height.
1. Typha angustifolia	35	v	28.9% OE	3L	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Juncus effusus	35	V	28.9% FA	CW	Herb stratum – Consists of all herbaceous (non-woody)
3. Poa palustris	25			CW	plants, regardless of size, and all other plants less than 3.28
4. Onoclea sensibilis	15			CW	ft tall. Woody vines – Consists of all woody vines greater than 3.28
E. A. and Market and Control	10	\Box		CU CU	ft in height.
5. Symphyotrichum ericoides		\Box			
6. Solidago canadensis		\Box		CU_	Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately
8	0		0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).
0			0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1	0		0.0%		less than 3 in. (7.6 cm) DBH.
2.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	121 :	= To	otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and
1			0.0%		woody species, except woody vines, less than approximately
2	0	\square	0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5	0		0.0%		
	0		0.0%		Hydrophytic Vegetation
6		 _ T	otal Cover		Present? Yes No
		- 1	otal Covel		
Remarks: (Include photo numbers here or on a separate she	et.)				

Soil Sampling Point: w-aeh-20190225-03

Depth	Matrix			dox Featı	ures		absence of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Tvpe 1	Loc ²	Texture	Remarks	
0-18	10YR 5/1	85	10YR 5/6	15	С	PL	Silty Clay Loam		
	-								
ype: C=Con	centration. D=Depletion	on. RM=Redu	iced Matrix, CS=Cove	red or Coat	ted Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=I	Matrix	
lydric Soil I	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (•		Dark Surface	. ,			2 cm Muck (A10)	-	
_	pedon (A2)		Polyvalue Belo				Coast Prairie Red		
			☐ Thin Dark Sur			.48)	(MLRA 147,148)	ox (A10)	
_	Sulfide (A4)		Loamy Gleyed		2)		Piedmont Floodpl	ain Soils (F19)	
_	Layers (A5)		✓ Depleted Matr				(MLRA 136, 147)		
_	ck (A10) (LRR N)		Redox Dark Su	. ,			Very Shallow Dark Surface (TF12)		
_ ·	Below Dark Surface (A	A11)	☐ Depleted Dark ☐ Redox Depres		")		Other (Explain in	Remarks)	
_	k Surface (A12)	M.	☐ Iron-Mangane		(F12) (I RR	N.			
□ Sandy Mu ■ MLRA 147	uck Mineral (S1) (LRR I 7, 148)	N,	MLRA 136)						
_	eyed Matrix (S4)		Umbric Surfac				3 Indicators of	hydrophytic vegetation and	
☐ Sandy Re			☐ Piedmont Floo				wetland hyd	drology must be present,	
	Matrix (S6)		Red Parent Ma	aterial (F21	.) (MLRA 12	7, 147)	unless di	sturbed or problematic.	
estrictive L	ayer (if observed):								
Type:							Undein Call Decounts	Yes ● No ○	
Depth (inc	:hes):						Hydric Soil Present?	Yes No	
Remarks:									

Upland 90, 91

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling Date: 25-Feb-19
Applicant/Owner: AEP		State: O	H Sampling Point UPL-aeh-20190225-02/
Investigator(s): AEH, TL		Section, Township, Range: S	5 28 T 9N R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex,	none): none Slope: _35.0%_ / _19.3 °
Subregion (LRR or MLRA): LRR N		Lat.: 40.34639905 Lo	ng.: -80.8410947067
Soil Map Unit Name: Berks-Guernse	ey complex, 25 to 40 perce	ent slopes (BmE)	NWI classification: N/A
Are climatic/hydrologic conditions or	n the site typical for this ti	me of year? Yes No (If no	o, explain in Remarks.)
Are Vegetation, Soil			Il Circumstances" present? Yes No
Are Vegetation, Soil	, or Hydrology 🔲 na	turally problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - At		wing sampling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No •		
Hydric Soil Present?	Yes No •	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present?	Yes No •	within a wetiand?	
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 Imager 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 Aqua Hydrogen Oxidized Presence Recent In Other (Ex	atic Plants (B14) I Sulfide Odor (C1) Rhizospheres along Living Roots (C3) of Reduced Iron (C4) on Reduction in Tilled Soils (C6) k Surface (C7) Iplain in Remarks) inches): inches): 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)

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

	Dominant				Sampling Point: UPL-aeh-20190225-02/0			
Tree Stratum (Plot size:)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:			
	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)			
1 2		\Box	0.0%		inat are obt, racw, or rac.			
		\Box	0.0%		Total Number of Dominant			
3		\Box	0.0%		Species Across All Strata:1(B)			
4		\Box	0.0%		Percent of dominant Species			
5		\Box	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)			
6 7		\Box	0.0%		Prevalence Index worksheet:			
8		\Box	0.0%		Total % Cover of: Multiply by:			
•	0 =	 = To	tal Cover		OBL species 0 x 1 = 0			
Sapling-Sapling/Shrub Stratum (Plot size:)				FACW species 8 x 2 = 16			
1	0		0.0%		<u> </u>			
2			0.0%		·			
3			0.0%		FACU species $95 \times 4 = 380$			
4			0.0%		UPL species $0 \times 5 = 0$			
5			0.0%		Column Totals: 103 (A) 396 (B)			
6	0		0.0%		Prevalence Index = B/A = 3,845			
7	0		0.0%		Hydrophytic Vegetation Indicators:			
8			0.0%		Rapid Test for Hydrophytic Vegetation			
9			0.0%					
0			0.0%		☐ Dominance Test is > 50% ☐ Prevalence Index is ≤ 3.0 ¹			
Shrub Stratum (Plot size:)	_	- To	tal Cover					
	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
1		Π.	0.0%		Problematic Hydrophytic Vegetation 1 (Explain)			
2	0	Π-	0.0%					
3		Π.	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
4		Π.			Definition of Vegetation Strata:			
5		Η-	0.0%		Four Vegetation Strata:			
6		Η.			Tree stratum – Consists of woody plants, excluding vines, 3			
7	0	닏.	0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),			
Herb Stratum (Plot size:)		_	tal Cover		regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding			
1. Solidago canadensis	95	ዾ_	92.2%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
2. Onoclea sensibilis	5	\bigsqcup_{-}	4.9%	FACW	Herb stratum – Consists of all herbaceous (non-woody)			
3. Agrimonia parviflora	3		2.9%	FACW	plants, regardless of size, and all other plants less than 3.28 ft tall.			
4		\sqcup	0.0%		ft tall. Woody vines – Consists of all woody vines greater than 3.28 If in height.			
5	0	Ц.	0.0%					
6	0	Ш.	0.0%		Five Vegetation Strata:			
7	0	Ш.	0.0%		Tree - Woody plants, excluding woody vines, approximately			
8		\square	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in			
9			0.0%		diameter at breast height (DBH).			
0			0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and			
1	0		0.0%		less than 3 in. (7.6 cm) DBH.			
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.			
Woody Vine Stratum (Plot size:)	103 =	= To	tal Cover		Herb stratum – Consists of all herbaceous (non-woody)			
1	0		0.0%		plants, including herbaceous vines, regardless of size, and			
2.		\Box	0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.			
3		\Box	0.0%		Woody vines – Consists of all woody vines, regardless of			
3 4		\Box	0.0%		height.			
			0.0%					
5	0		0.0%		Hydrophytic			
6					Vegetation Present? Yes ○ No ●			
	U	0 = Total Cover						

Soil Sampling Point: UPL-aeh-20190225-02/03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix			dox Featu	ires 1						
(inches)	Color (moist)		Color (moist)	%_	Tvpe 1	Loc2	Texture	Remarks			
0-18	10YR 5/3						Silty Clay Loam				
							,				
-							,				
-	-						,				
¹ Type: C=Con	centration. D=Depletion	on. RM=Redu	ced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N	Matrix			
Hydric Soil 1	Indicators:		_				Indicators for Proble	ematic Hydric Soils ³ :			
Histosol (•		Dark Surface (2 cm Muck (A10)	-			
	pedon (A2)		Polyvalue Belo				Coast Prairie Redo				
Black Hist			Thin Dark Surf			148)	(MLRA 147,148))X (A10)			
	Sulfide (A4)		Loamy Gleyed)		Piedmont Floodpl	ain Soils (F19)			
	Layers (A5)		Depleted Matri				(MLRA 136, 147)				
	k (A10) (LRR N)		Redox Dark Su	. ,	7)		Very Shallow Dark	k Surface (TF12)			
	Below Dark Surface (A	A11)	Depleted Dark Redox Depress	-	7)		Other (Explain in	Remarks)			
	k Surface (A12)		☐ Iron-Manganes		(F12) (I DD	N					
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR 1 7, 148)	N,	MLRA 136)								
	eyed Matrix (S4)		Umbric Surface				³ Indicators of	hydrophytic vegetation	and		
Sandy Re			☐ Piedmont Floo				wetland hyd	Irology must be present	logy must be present,		
☐ Stripped I	Matrix (S6)		Red Parent Ma	iterial (F21) (MLRA 12	7, 147)	unless disturbed or problematic.				
Restrictive L	ayer (if observed):										
Туре:								0 0			
Depth (inc	:hes):						Hydric Soil Present?	Yes ○ No ●			
Remarks:											

Wetland 90

Site: Carrollton Gable	Rater(s): Audrey Ha	nner, Tom Lipp	Date:	2/25/2019
	<u> </u>	Field Id:	-	
0 0	Metric 1. Wetland Area (size).	w-aeh-201890225-03		
max 6 pts subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)	0.02 acres		
13 13	Metric 2. Upland buffers and surrou	unding land use.		
max 14 pts. subtotal	Za. Calculate average buffer width. Select only one a x WIDE. Buffers average 50m (164ft) or more around wetl MEDIUM. Buffers average 25m to <50m (82 to <164ft) a NARROW. Buffers average 10m to <25m (32ft to <82ft) VERY NARROW. Buffers average <10m (<32ft) around 2b. Intensity of surrounding land use. Select one or x VERY LOW. 2nd growth or older forest, prairie, savanna LOW. Old field (>10 years), shrubland, young second grund MODERATELY HIGH. Residential, fenced pasture, park	and perimeter (7) rround wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) double check and average. th, wildlife area, etc. (7) owth forest. (5)		
40.01.05.0	HIGH. Urban, industrial, open pasture, row cropping, mir	ning, construction. (1)		
12.0 25.0	Metric 3. Hydrology.	01.0		
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) x Precipitation (1) x Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >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. Scorn None or none apparent (12) x Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch	man use (1) , complex (1) 1) on. Score one or dbl check titurated (4) m (12in) (1) d nt source (nonstormwater) ng/grading d bed/RR track dging	ck.
	Metric 4. Habitat Alteration and Dev	-		
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double check None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	d average. Check all disturbances observed mowing X shr grazing her X clearcutting X sec X selective cutting dre woody debris removal farr	ub/sapling removal baceous/aquatic bed remov ilmentation dging ming rient enrichment	val
subtotal this pa	age ORAM v. 5.0 Field Form Quantitative Rating			

wetland 90 | test_Field 3/8/2019

Wetland 90

Site: Carrollton Gable	Rater(s): Au	udrey Hanner,	Tom Lipp	Date:	2/25/2019
			Field Id:		
33			w-aeh-201890225-03		
subtotal this pa	age				
0 33	Metric 5. Special Wetlands.				
max 10 pts. subtotal	Check all that apply and score a	s indicated.			
	Bog (10)				
-	Fen (10) Old growth forest (10)				
<u> </u>	Mature forested wetland (5)				
ļ ,	Lake Erie coastal/tributary wetland-unrestric	ted hydrology (10)			
	Lake Erie coastal/tributary wetland-restricted				
	Lake Plain Sand Prairies (Oak Openings) (1	10)			
-	Relict Wet Praires (10) Known occurrence state/federal threatened	or endangered spec	ies (10)		
ļ-	Significant migratory songbird/water fowl ha		165 (10)		
	Category 1 Wetland. See Question 5 Qualit				
0 33	Metric 6. Plant communities	s, interspersi	on, microtopography	<i>1</i> .	
max 20pts. subtotal	6a. Wetland Vegetation Commun	nities.	Vegetation Community	Cover Scale	
_	Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2		
	Aquatic bed		Present and either comprises sm		
-	1 Emergent Shrub		vegetation and is of moderate qu significant part but is of low qualit		
	Forest		Present and either comprises sig		
ļ l	Mudflats		vegetation and is of moderate qu		
	Open water		part and is of high quality		
L	Other		Present and comprises significan	t part, or more, of wetland's 3	
	6b. horizontal (plan view) Interspersion. Select only one.		vegetation and is of high quality		
Γ	High (5)		Narrative Description of Vegeta	ation Quality	
	Moderately high(4)		Low spp diversity and/or predomi		
-	Moderate (3) Moderately low (2)		disturbance tolerant native specie Native spp are dominant compon		
-	Low (1)		although nonnative and/or disturb		
<u> </u>	x None (0)		can also be present, and species		
-	6c. Coverage of invasive plants. Refer		moderately high, but generallyw/o		
	Table 1 ORAM long form for list. Add		threatened or endangered spp to		
Г	or deduct points for coverage Extensive >75% cover (-5)		A predominance of native specie and/or disturbance tolerant native		
<u> </u>	Moderate 25-75% cover (-3)		absent, and high spp diversity an		
ļ ,	x Sparse 5-25% cover (-1)		the presence of rare, threatened,		
	Nearly absent <5% cover (0)				
L	Absent (1)		Mudflat and Open Water Class Absent <0.1ha (0.247 acres)	Quality	
	6d. Microtopography. Score all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 a	cres)	
Γ	Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88		
	0 Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	<u> </u>	
-	O Standing dead >25cm (10in) dbh				
L	Amphibian breeding pools		Microtopography Cover Scale Absent		
			Present very small amounts or if	more common	
Modified			of marginal quality		
			Present in moderate amounts, bu		
Category 2	TOTAL (may 100 pto)		quality or in small amounts of high		
33 GRAND	TOTAL(max 100 pts)		Present in moderate or greater a	nounts	
			and of highest quality		

wetland 90 | test_Field 3/8/2019



PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 90

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Facing North



Wetland 90

Date:

February 25, 2019 **Description:**

PEM

Modified Category 2

Facing East





PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 90

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Facing South



Wetland 90

Date:

February 25, 2019 **Description:**

PEM

Modified Category 2

Facing West





PHOTOGRAPHIC RECORD

WETLANDS

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 90

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable		City/County: Jefferson County	Sampling Date: 25-Feb-19
Applicant/Owner: AEP		State: OH	Sampling Point: w-aeh-20190225-02
Investigator(s): AEH, TL		Section, Township, Range: S	28 T 9N R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex, non	ne): none Slope: 30.0% / 16.7 °
Subregion (LRR or MLRA): LRR N		40.34634577 Long. :	: -80.840870527
Soil Map Unit Name: Berks-Guernse			NWI classification: N/A
			<u> </u>
Are climatic/hydrologic conditions or			xplain in Remarks.) ircumstances" present? Yes No No
Are Vegetation, Soil			ircumstances" present? Yes Vo No
Are Vegetation, Soil	, or Hydrology	roblematic? (If needed, exp	plain any answers in Remarks.)
Summary of Findings - At	tach site map showing s	sampling point locations	, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes ● No ○		
Hydric Soil Present?	Yes No	Is the Sampled Area	es No
Wetland Hydrology Present?	Yes No	within a Wetland?	s · NO ·
Remarks:			
Hydrology			
Wetland Hydrology Indicators:		_Se	econdary 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 (` '	
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) Drift deposits (B3)		tion in Tilled Soils (C6)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	☐ Thin Muck Surface	` ′	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	☐ Other (Explain in F	Remarks)	
☐ Inundation Visible on Aerial Imager	ry (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)		V	
Field Observations:			
Surface Water Present? Yes	, , ,		
Water Table Present? Yes	No Depth (inches):		
Saturation Present? (includes capillary frings) Yes	No Depth (inches):	Wetland Hydrolo	ogy Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream ga		s, previous inspections), if availab	le:
Remarks:			
1			

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

		Domi Speci	ioc?		Sampling Point: w-aeh-20190225-02
Tree Stratum (Plot size:)	Absolute % Cover	Rel.S	trat. I	ndicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)
2	0		0.0%		Takel Number of Densirant
3			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL FACW or FAC: 80.0% (A/B)
S	•		0.0%		That Are OBL, FACW, or FAC: 80.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
3	0		0.0%		Total % Cover of: Multiply by:
	. 0 :	= Total	l Cover		OBL species $0 \times 1 = 0$
Sapling-Sapling/Shrub Stratum (Plot size:					FACW species $110 \times 2 = 220$
Rubus allegheniensis				FACU	FAC species $0 \times 3 = 0$
Praxinus pennsylvanica				FACW	F 30
3	0	\square	0.0%		
l <u>.</u>	0	\square	0.0%		•
5	0	<u></u>	0.0%		Column Totals: <u>115</u> (A) <u>240</u> (B)
5	0		0.0%		Prevalence Index = B/A = 2.087
7		<u></u>	0.0%		Hydrophytic Vegetation Indicators:
8	0		0.0%		Rapid Test for Hydrophytic Vegetation
)			0.0%		✓ Dominance Test is > 50%
)	0		0.0%		✓ Prevalence Index is ≤3.0 ¹
		= Total	l Cover		
Ghrub Stratum (Plot size:)	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		\equiv	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
2		\neg	0.0%		
3		\neg			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
ł		\neg	0.0%		Definition of Vegetation Strata:
5		\equiv	0.0%		Four Vegetation Strata:
5		\equiv	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
7			0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
lerb Stratum (Plot size:)	:	= Total	l Cover		regardless of height.
. Onoclea sensibilis	45	✓ 4	2.9%	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. Lysimachia nummularia	30	✓ 2	8.6%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
Poa palustris	30	v 2	8.6%	FACW	plants, regardless of size, and all other plants less than 3.28
1.	0		0.0%		ft tall. Woody vines – Consists of all woody vines greater than 3.28
5	0		0.0%		ft in height.
3	0		0.0%		Five Venetation Church
7.	0		0.0%		Five Vegetation Strata:
3	0	\neg	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	\neg	0.0%		diameter at breast height (DBH).
		\neg	0.0%		Sapling stratum – Consists of woody plants, excluding
)		\neg	0.0% 0.0%		woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
l		\neg	0.0% 0.0%		Shrub stratum – Consists of woody plants, excluding woody
2			l Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Noody Vine Stratum (Plot size:)					Herb stratum – Consists of all herbaceous (non-woody)
1	0	<u></u>	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2			0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
ł. <u> </u>	0		0.0%		height.
5			0.0%		
)	0		0.0%		Hydrophytic Vegetation
✓·					Present? Yes No
	0	= 1012	l Cover		

Soil Sampling Point: w-aeh-20190225-02

Profile Descr		the depth r				nfirm the	absence of indicators.)		
Depth (inches)	Matrix			dox Featu	ures 1	1.5.2	Toutere	B -	anulso
(inches) 0-18	Color (moist) 10YR 5/1	<u>%</u> . 90	Color (moist) 10YR 5/6	% 10	Tvpe 1	<u>Loc²</u> PL	Texture Silty Clay Loam	Rem	narks
			10110 5/0				Sity Clay Loan		
	-								
-	-								
1- 0.0						. 21			
		on. RM=Redu	ced Matrix, CS=Cove	red or Coat	ted Sand Gr	ains ² Loc	ation: PL=Pore Lining. M=1	Matrix	
Hydric Soil 1							Indicators for Proble	ematic Hydri	c Soils ³ :
Histosol (•		Dark Surface (,	(CO) /MIDA	1/7 1/0\	2 cm Muck (A10)	(MLRA 147)	
Black Hist	pedon (A2)		Polyvalue Belo Thin Dark Surf				Coast Prairie Redo	ox (A16)	
	ııc (A3) ı Sulfide (A4)		Loamy Gleyed			140)	(MLRA 147,148)		
	Layers (A5)		✓ Depleted Matr		.)		Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19))
	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dar	le Curringo (TE1	12)
	Below Dark Surface (A	\11)	Depleted Dark	. ,					12)
	k Surface (A12)	111)	Redox Depres	-	,		Other (Explain in	Remarks)	
Sandy Mu	ıck Mineral (S1) (LRR I	N,	Iron-Mangane MLRA 136)		(F12) (LRR	N,			
MLRA 147			Umbric Surfac	e (F13) (M	IRA 136-12	72)	3 Indicators of hydrophytic vegetation and		
Sandy Gie	eyed Matrix (S4)		☐ Piedmont Floo						egetation and
	Matrix (S6)		Red Parent Ma				wetland hydrology must be present, unless disturbed or problematic.		
опіррей і	Tacin (50)		Red Farenci Pie	atterial (121	.) (MLIVA 12	7, 147)	unicss di	starbea or pro	biemade.
Restrictive L	ayer (if observed):								
Туре:							Hydric Soil Present?	Yes	No O
Depth (inc	:hes):						nyunc son Present?	res 🙂	NO C
Remarks:									

Upland 90, 91

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carrollton Gable			City/County:	Jefferson County	у	Sam	npling Date: 25-Feb-19
Applicant/Owner: AEP				State: O	Н	Sampling	Point <u>UPL-aeh-20190225-02/03</u>
Investigator(s): AEH, TL			Section, Town	nship, Range: S	28	T 9N	R 3W
Landform (hillslope, terrace, etc.):	Hillside		Local relief (co	ncave, convex,	none):	none	Slope: 35.0% / 19.3 °
Subregion (LRR or MLRA): LRR N		lat:	40.34639905	l o	na: -8	0.8410947067	Datum: NAD 83
Soil Map Unit Name: Berks-Guernse	v complex. 2				_	IWI classification	
Are climatic/hydrologic conditions or				No (If no		n in Remarks.)	- 1,41 · 1
Are Vegetation, Soil	or Hydrolog,		y disturbed?			nstances" prese	ent? Yes • No O
						•	
Are Vegetation, Soil	, or Hydrolog	y 🗌 naturally pr	oblematic?	(If needed,	explain	any answers ir	n Remarks.)
Summary of Findings - At	tach site r	map showing s	ampling po	int locatio	ns, tr	ansects, in	nportant features, etc.
Hydrophytic Vegetation Present?	Yes O N	lo 💿					
Hydric Soil Present?	Yes O N	lo 💿		Sampled Area	Voc	No ●	
Wetland Hydrology Present?	Yes O N	lo 💿	within	a Wetland?	163) NO (9	
Remarks:							
Hydrology							
Wetland Hydrology Indicators: Primary Indicators (minimum of on	a required: ch	neck all that annly)					ninimum of two required)
Surface Water (A1)	e required, cri	True Aquatic Plants	(R14)			rface Soil Cracks	Concave Surface (B8)
High Water Table (A2)	[Hydrogen Sulfide O				ainage Patterns (* *
Saturation (A3)	,	Oxidized Rhizosphe	. ,	Roots (C3)		oss Trim Lines (B	•
Water Marks (B1)	ſ	Presence of Reduce		(,		y Season Water T	•
Sediment Deposits (B2)	ſ	Recent Iron Reduct	ion in Tilled Soils	(C6)		ayfish Burrows (C	
Drift deposits (B3)	ſ	Thin Muck Surface	(C7)		Sa	turation Visible o	n Aerial Imagery (C9)
Algal Mat or Crust (B4)	[Other (Explain in R	emarks)		Stu	unted or Stressed	Plants (D1)
☐ Iron Deposits (B5)					Ge	eomorphic Position	n (D2)
Inundation Visible on Aerial Imager	y (B7)					allow Aquitard (D	•
Water-Stained Leaves (B9)☐ Aquatic Fauna (B13)						crotopographic R	
Field Observations:					L FA	.C-neutral Test (D	(5)
Surface Water Present? Yes	No 💿	Depth (inches):					
Water Table Present? Yes	No 💿	Depth (inches):					
Saturation Present? (includes capillary frings) Yes	_	Depth (inches):		Wetland Hyd	irology i	Present? Yo	es O No O
(includes capillary fringe) Describe Recorded Data (stream ga			nrovious insp	octions) if ava	ilablos		
Describe Recorded Data (stream ga	uge, monitorii	ng well, denai priotos	s, previous irisp	ecuons), ii ava	liable.		
Remarks:							

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

Tree Stratum (Plot size:)	Absolute	-Species?	Dominance Test worksheet:
Tree Stratum (Plot Size:)	0/a Covor		Dominance rest worksneet.
	% Cover	Cover	Number of Dominant Species
1		0.0%	That are OBL, FACW, or FAC: 0 (A)
2		0.0%	Total Number of Dominant
3		0.0%	Species Across All Strata:1(B)
4		0.0%	Percent of dominant Species
5		0.0%	That Are OBL, FACW, or FAC: 0.0% (A/B)
6			
7			Prevalence Index worksheet:
8			Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:	= =	= Total Cover	OBL species 0 x 1 = 0
1	0	0.0%	FACW species $8 \times 2 = 16$
2.		0.0%	FAC species $0 \times 3 = 0$
3		0.0%	FACU species $95 \times 4 = 380$
4	•	0.0%	UPL species $0 \times 5 = 0$
5.		0.0%	Column Totals: 103 (A) 396 (B)
6.	_	0.0%	Prevalence Index = B/A = 3.845
7		0.0%	· ———
8		0.0%	Hydrophytic Vegetation Indicators:
9.	•	0.0%	Rapid Test for Hydrophytic Vegetation
0		0.0%	Dominance Test is > 50%
		= Total 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		0.0%	Problematic Hydrophytic Vegetation 1 (Explain)
2		0.0%	
3		0.0%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			
5			Definition of Vegetation Strata:
6			Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3
7			in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	=	= Total Cover	regardless of height.
1. Solidago canadensis	95	✓ 92.2% FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Onoclea sensibilis	5		Herb stratum – Consists of all herbaceous (non-woody)
3. Agrimonia parviflora	3		plants, regardless of size, and all other plants less than 3.28
4	0		ft tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0		it in neight.
6	0		Five Vegetation Strata:
7	0		Tree - Woody plants, excluding woody vines, approximately
8			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		diameter at breast height (DBH).
0	0	0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
1	0	0.0%	less than 3 in. (7.6 cm) DBH.
2	0	0.0%	Shrub stratum – Consists of woody plants, excluding woody
Woody Vine Stratum (Plot size:)	103 =	= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb stratum – Consists of all herbaceous (non-woody)
	0	0.0%	plants, including herbaceous vines, regardless of size, and
1		0.0%	woody species, except woody vines, less than approximately 3 ft (1 m) in height.
2	0	0.0%	Woody vines – Consists of all woody vines, regardless of
3		0.0%	height.
4			
5		0.0%	Hydrophytic
6	0		Vegetation Present? Yes ○ No ●

Soil Sampling Point: UPL-aeh-20190225-02/03

Profile Descr		the depth n	eeded to documen	t the indi	cator or co	onfirm the	absence of indicators.)		
Depth	Matrix			dox Featu	ires 1			_	
(inches)	Color (moist)		Color (moist)	%_	Tvpe 1	Loc2	Texture	Rema	arks
0-18	10YR 5/3						Silty Clay Loam		
							,		
							,		
	-						,		
¹ Type: C=Con	centration. D=Depletion	on. RM=Redu	ced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N	Matrix	
Hydric Soil I	Indicators:		_				Indicators for Proble	ematic Hydric	Soils ³ :
Histosol (•		Dark Surface (2 cm Muck (A10)	-	
	pedon (A2)		Polyvalue Belo				Coast Prairie Redo		
Black Hist			Thin Dark Surf			148)	(MLRA 147,148)	ν (U10)	
	Sulfide (A4)		Loamy Gleyed)		Piedmont Floodpl	ain Soils (F19)	
	Layers (A5)		Depleted Matri				(MLRA 136, 147)		
	k (A10) (LRR N)		Redox Dark Su	. ,	7)		Very Shallow Dark	k Surface (TF12	2)
	Below Dark Surface (A	A11)	Depleted Dark Redox Depress	-	7)		Other (Explain in	Remarks)	
	k Surface (A12)		☐ Iron-Manganes		(E12) (I DD	N			
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR 1 7, 148)	N,	MLRA 136)						
	eyed Matrix (S4)		Umbric Surface				³ Indicators of	hydrophytic ye	netation and
Sandy Re			☐ Piedmont Floo				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
☐ Stripped I	Matrix (S6)		Red Parent Ma	iterial (F21) (MLRA 12	7, 147)	unless dis	sturbed or prob	lematic.
Restrictive L	ayer (if observed):								
Туре:									
Depth (inc	:hes):						Hydric Soil Present?	Yes 🔾	No •
Remarks:									

Wetland 91

Site: Carr	ollton Gab	le Rater(s): Audrey Har	nner, Tom Lipp	Date: 2/25/201
		• • • • • • • • • • • • • • • • • • • •	Field Id:	•
	0 (Metric 1. Wetland Area (size).	w-aeh-201890225-02	
max 6 pts	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)	0.01 acres	
	13 13	Metric 2. Upland buffers and surrou	inding land use.	
max 14 pts.	subtotal	Za. Calculate average buffer width. Select only one at X WIDE. Buffers average 50m (164ft) or more around wetla MEDIUM. Buffers average 25m to <50m (82 to <164ft) at NARROW. Buffers average 10m to <25m (32ft to <82ft) average 10m to <25m (32ft to <82ft) average <10m (<32ft) around very NarRow. Buffers average <10m (<32ft) around very NarRow. Buffers average <10m (<32ft) around very NarRow. Select one or or 0.00m (very Narrow). Select one or 0.00m (very Narrow).	and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) double check and average. h, wildlife area, etc. (7) woth forest. (5) conservation tillage, new fallow field. (3)	
	10.0 23.0			
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) < <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score None or none apparent (12) Recovered (7) x Recovering (3) Recent or no recovery (1) Metric 4. Habitat Alteration and Dev	Check all disturbances observed ditch x point tille filling dike road weir x dredgestormwater input x Other	an use (1) complex (1) n. Score one or dbl check. rrated (4) (12in) (1) source (nonstormwater) //grading bed/RR track jing
max 20 pts.	subtotal 37	4a. Substrate disturbance. Score one or double check None or none apparent (4) x Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and None or none apparent (9) Recovered (6) x Recovering (3) Recent or no recovery (1)	score. I average. Check all disturbances observed mowing X shrul grazing herb: X clearcutting X seloti X selective cutting dred; woody debris removal farmi	
	subtotal this			

wetland 91 | test_Field 3/8/2019

Wetland 91

Site: Carroll	ton Gable	Rater(s):	Audrey Hanner	, Tom Lipp	Date:	2/25/2019
				Field Id:		
	31			w-aeh-201890225-02		
	subtotal this p	nage				
	0 31	Metric 5. Special Wetland	ls.			
max 10 pts.	subtotal	Check all that apply and score	e as indicated.			
		Bog (10)				
		Fen (10) Old growth forest (10)				
		Mature forested wetland (5)				
		Lake Erie coastal/tributary wetland-unre	stricted hydrology (10)			
		Lake Erie coastal/tributary wetland-restr				
		Lake Plain Sand Prairies (Oak Openings	s) (10)			
		Relict Wet Praires (10) Known occurrence state/federal threate	ned or endangered spec	ries (10)		
		Significant migratory songbird/water fow		565 (10)		
		Category 1 Wetland. See Question 5 Qu				
	0 31	Metric 6. Plant communit	ies, interspers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation Comm	unities.	Vegetation Community Co	ver Scale	
		Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.247		
		Aquatic bed	1	Present and either comprises small		
		1 Emergent Shrub		vegetation and is of moderate quality significant part but is of low quality	y, or comprises a	
		Forest	2	Present and either comprises signif	cant part of wetland's 2	
		Mudflats	-	vegetation and is of moderate quality		
		Open water		part and is of high quality		
		Other		Present and comprises significant p	art, or more, of wetland's 3	
		6b. horizontal (plan view) Interspersion Select only one.	on.	vegetation and is of high quality		
		High (5)		Narrative Description of Vegetation	on Quality	
		Moderately high(4)		Low spp diversity and/or predomina	nce of nonnative or low	
		Moderate (3) Moderately low (2)		disturbance tolerant native species Native spp are dominant component	t of the vegetation mad	
		Low (1)		although nonnative and/or disturbar		
		x None (0)		can also be present, and species di		
	,	6c. Coverage of invasive plants. Refe	r	moderately high, but generallyw/o p	resence of rare	
		Table 1 ORAM long form for list. Add		threatened or endangered spp to	20 0 12.1	
	1	or deduct points for coverage Extensive >75% cover (-5)		A predominance of native species, and/or disturbance tolerant native s		
		Moderate 25-75% cover (-3)		absent, and high spp diversity and		
		x Sparse 5-25% cover (-1)		the presence of rare, threatened, or		
		Nearly absent <5% cover (0)				
		Absent (1) 6d. Microtopography.	0	Mudflat and Open Water Class Q Absent <0.1ha (0.247 acres)	uality	
		Score all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 acres)	es)	
		Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 ac		
		0 Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more		
		0 Standing dead >25cm (10in) dbh		Microtonography Cover Scale		
		0 Amphibian breeding pools	0	Microtopography Cover Scale Absent		
			1	Present very small amounts or if mo	re common	
Modified				of marginal quality		
Category 2			2	Present in moderate amounts, but r quality or in small amounts of higher		
	31 GRAND	TOTAL(max 100 pts)	-	Present in moderate or greater amo		
	S. OIVAND	TOTAL(IIIIAX TOO PLS)	3		unto	
				and of highest quality		

wetland 91 | test_Field 3/8/2019



PHOTOGRAPHIC RECORD **WETLANDS**

Client Name:

Site Location:

Project No.

AEP

Gable-Carrollton 138 kV Transmission Line Project

60582598

Wetland 91

Date:

February 25, 2019

Description:

PEM

Modified Category 2

Facing North



Wetland 91

Date:

February 25, 2019 **Description:**

PEM

Modified Category 2

Facing East



This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

5/28/2021 11:23:50 AM

in

Case No(s). 21-0554-EL-BLN

Summary: Notice LON application for the Tidd-Sunnyside 138 kV Transmission Line Rebuild Project 1201-1500 electronically filed by Tanner Wolffram on behalf of AEP Ohio Transmission Company, Inc.