SUIL
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Profile Desc	ription: (Describe to	o the dep	th needed to docur	nent the	indicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redo	x Feature	S				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 14	2.5Y 4/2	98	7.5YR 4/6	2	Concer	PL	Silty clay		
<u>14 <sup>-</sup> 18</u>	2.5Y 5/2	77	5YR 4/6	3	Concer	PL	Clay		
-			10YR 5/8	20	Concer	Μ			
-									
-									
-									
-				_					
-									
-									
-									
-									
-						·			
	oncentration, D=Deple		Reduced Matrix_M	S=Masker		aine	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil I						aniis.		for Problematic Hydric Soils <sup>3</sup> :	
Histosol	· /		Polyvalue Belov		(S8) ( <b>LRF</b>	RR,		uck (A10) (LRR K, L, MLRA 149B)	
	pipedon (A2)		MLRA 149B)			DA 4400		Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
Black His Hydroge	n Sulfide (A4)		Thin Dark Surfa					ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) urface (S7) ( <b>LRR K, L, M</b> )	
	Layers (A5)		Loamy Gleyed			, _/		ue Below Surface (S8) ( <b>LRR K, L</b> )	
	Below Dark Surface	(A11)	X Depleted Matrix		,		Thin Dark Surface (S9) (LRR K, L)		
	ark Surface (A12)		Redox Dark Su					anganese Masses (F12) ( <b>LRR K, L, R</b> )	
	lucky Mineral (S1)		Depleted Dark		-7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )	
-	leyed Matrix (S4)		Redox Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
-	edox (S5)							rrent Material (F21)	
	Matrix (S6)							nallow Dark Surface (TF12)	
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149E	3)				Other (I	Explain in Remarks)	
	hydrophytic vegetati	on and we	atland hydrology mus	t be pres	ent, unless	disturbed	or problematic.		
	_ayer (if observed):								
Type:							Undria Cail I	Bracenta Vec X No	
Remarks:	ches):						Hydric Soll	Present? Yes X No	
Nemarks.									

General Site Photos

Upland LP-016,017





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Soil

County: Geauga County Sampling Date: 10/22/2021
State: OH Sampling Point: Wetland LP-018
tion, Township, Range: <u>N/A</u>
elief (concave, convex, none): Concave Slope (%):0
556 Long: -81.17150566666668 Datum: WGS 1984
NWI classification: N/A
Yes X No (If no, explain in Remarks.)
Irbed? Are "Normal Circumstances" present? Yes X No
natic? (If needed, explain any answers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-018					
Remarks: (Explain alternative procedu	Remarks: (Explain alternative procedures here or in a separate report.)						
PEM wetland in maintained powerline easement. T-line structures in wetland. Access road flooded with >6 in. standing water at time of survey.							

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Second	pils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes X No Depth (inches): 1	
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Tree Stratum (Distaire: 30)	Absolute	Dominant		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: <sup>2</sup> (B)
3				
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of:         Multiply by:           OBL species         0         x 1 =
Sapling/Shrub Stratum (Plot size: 15 )		= Total Cov	er	OBL species         0         x 1 =         0           FACW species         120         x 2 =         240
	15	Yes	FACW	FAC species $\begin{array}{c} 0 \\ x 3 = \end{array}$
				FACU species 2 x 4 = 8
2				UPL species x 5 =10
3				Column Totals: <u>124</u> (A) <u>258</u> (B)
4				Prevalence Index = B/A = 2.0806451612
5				Hydrophytic Vegetation Indicators:
6 7				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
· ·		= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )		- Total Cov	er	X 3 - Prevalence Index is $\leq 3.0^1$
Hero Stratum     (Plot size.       1.     Phalaris arundinacea	90	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
		<u> </u>	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		<u>No</u>	FACW	
		<u>No</u>	UPL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		No	FACU	Definitions of Vegetation Strata:
6 7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10.				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	109	= Total Cov	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes $\underline{X}$ No
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

SUIL
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Profile Desc	ription: (Describe to	o the depth	needed to docun	nent the i	indicator	or confirm	the absence of	of indicators.)		
Depth	Matrix		Redo	x Feature	<u>s</u>					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 8	10YR 4/1	98	5YR 3/4	2	Concer	PL	Silty clay			
8 <sup>-</sup> 18	10YR 4/1	55	7.5YR 4/6	25	Concer	М	Clay			
-			Gley 1 6/_	20	Depleti	М				
-										
-										
-							·			
							·			
							<u> </u>			
							<u> </u>			
-										
-										
-										
-										
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil I		,						or Problematic Hydric Soils <sup>3</sup> :		
Histosol		_	Polyvalue Belov		(S8) ( <b>LRF</b>	R,		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )		
	pipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)		
Black Hi		_	Thin Dark Surfa			-		ucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)	_	_ Loamy Mucky M			, L)		Irface (S7) (LRR K, L, M)		
	l Layers (A5) l Below Dark Surface	(Δ11)	Loamy Gleyed I Completed Matrix		.)		Polyvalue Below Surface (S8) ( <b>LRR K, L</b> )			
-	ark Surface (A12)	(,,,,,) <u>,</u>		epleted Matrix (F3) edox Dark Surface (F6)				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		_ Depleted Dark S				Piedmont Floodplain Soils (F12) ( <b>MLRA 149B</b> )			
	ileyed Matrix (S4)		Redox Depress		,		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
	edox (S5)			. ,				rent Material (F21)		
	Matrix (S6)							allow Dark Surface (TF12)		
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149B)					Other (E	Explain in Remarks)		
<sup>3</sup> Indicators of	hydrophytic vegetatio	on and wetla	and hydrology mus	t be prese	ent. unless	disturbed	or problematic.			
	_ayer (if observed):		, 3,		,					
Туре:										
Depth (inc	ches):						Hydric Soil F	Present? Yes X No		
Remarks:										

General Site Photos

Wetland LP-018



Soil

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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County	Geauga County	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-019
Investigator(s): MJA Section, To	wnship, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Depression Local relief (co	ncave, convex, none): <u>Concave</u>	Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.63166876666666	Long: -81.17218223333333	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Re	marks.)
Are Vegetation, SoilX, or Hydrology significantly disturbed?	Are "Normal Circumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-019					
Remarks: (Explain alternative procedures here or in a separate report.)							
PEM wetland in an old unmaintained agricultural field. Evidence of historic soil disturbance.							

Wetland Hydrology Indicators:	Secondary Indicators (mi	nimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks	(B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B	310)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B1	6)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Ta	able (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8	3)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	oots (C3) Saturation Visible on	Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed	Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	s (C6) X Geomorphic Position	i (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3	3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Re	lief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D	5)
Field Observations:		
Surface Water Present? Yes <u>No X</u> Depth (inches):		
Water Table Present? Yes X No Depth (inches): 1		
······································		
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes	s_X_ No
		s <u>X</u> No
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective re		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective re		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       0         Remarks:       Remarks:       0       0		s <u>X</u> No

Sampling Point: <u>Wetland LP-019</u>

Tree Stratum (Plat size) 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size: 50 )	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: (A)
2		·		Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7		<u> </u>		Total % Cover of:Multiply by:
		= Total Cove	r	OBL species23 x 1 =23
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1				FAC species x 3 = 300
2				FACU species10 x 4 =40
				UPL species x 5 =0
3				Column Totals: <u>133</u> (A) <u>363</u> (B)
4		·		Prevalence Index = B/A = 2.7293233082
5		·		Prevalence Index = B/A = 2.729323308
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	r	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)			•	<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum         (Plot size:         0 <th0< th="">         0         <th0< th=""> <th0< th=""></th0<></th0<></th0<>	70	Yes	FAC	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2Typha latifolia			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			FACU	
3. Dipsacus fullonum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Leersia oryzoides	15	No	OBL	
5Setaria pumila	30	Yes	FAC	Definitions of Vegetation Strata:
6. Persicaria hydropiperoides	3	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9 10.		·		Herb - All herbaceous (non-woody) plants, regardless of
		·		size, and woody plants less than 3.28 ft tall.
		<u> </u>		Woody vines – All woody vines greater than 3.28 ft in
12				height.
	133	= Total Cove	r	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic
		·		Vegetation Present? Yes <sup>X</sup> No
3	·			
4		<u> </u>		
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the absence of	of indicators.)
Depth	Matrix		Redo	x Features	3			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 <sup>-</sup> 18	2.5Y 4/1	95	7.5YR 4/6	5	Concer	PL	Silty clay	
-								
-								
-								
-								
							<u> </u>	
-								
-								
-								
-								
1			,					
	ncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils <sup>3</sup> :
Histosol		-	Polyvalue Belov		(S8) ( <b>LRR</b>	RR,		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black His			_ Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	_ Loamy Mucky N			, L)		urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	(644)	Loamy Gleyed		)		-	ue Below Surface (S8) (LRR K, L)
-	Below Dark Surface	(A11) <u>-</u>	Completed Matrix Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12) ucky Mineral (S1)		_ Redox Dark Su	. ,	7)			nganese Masses (F12) ( <b>LRR K, L, R</b> ) Int Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matrix (S4)	_	Depleted Dark Redox Depress		7)			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)		_ Nedox Depress	10115 (FO)				rent Material (F21)
-	Matrix (S6)							nallow Dark Surface (TF12)
	face (S7) ( <b>LRR R, M</b>	I RA 149B)					-	Explain in Remarks)
<sup>3</sup> Indicators of	hydrophytic vegetati	on and wet	and hydrology mus	t be prese	nt unless	disturbed	or problematic	
	ayer (if observed):				,	alotarboa		
Type:								
	I )							
	hes):						Hydric Soli I	Present? Yes X No
Remarks:								

General Site Photos

Wetland LP-019



Soil

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W-MJA-102221-03



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Gea	uga County	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Upland LP-018,019
Investigator(s): MJA Section, Township	o, Range: N/A	
Landform (hillslope, terrace, etc.): Flat Local relief (concave	, convex, none): <u>Flat</u>	Slope (%): <u>3</u>
Subregion (LRR or MLRA): LRR R Lat: 41.63174433333334	Long: -81.17218566666666	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $X$	No (If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" pro	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers	s in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X Are Vegetation, Soil, or Hydrology significantly disturbed?	No (If no, explain in Re Are "Normal Circumstances" pr	marks.) esent? Yes <u>X</u> No

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u></u> No <u></u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No <u></u>	If yes, optional Wetland Site ID: Upland LP-018,019
Remarks: (Explain alternative proced	lures here or in	a separate report.)	
Upland data form for W-MJA-102221-	03 and W-MJA-	102221-04. Data poir	nt taken in old unmaintained agricultural field.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? Yes <u>No X</u> Depth (inches):				
Water Table Present? Yes <u>No X</u> Depth (inches):				
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _ X			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:			
Remarks:				

Sampling Point: Upland LP-018,019

Tree Stratum (Distaire) 30	Absolute	Dominant		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4	. <u> </u>		. <u> </u>	Percent of Dominant Species
5			. <u> </u>	That Are OBL, FACW, or FAC: 0.3333333333 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		$\begin{array}{c} \hline \hline \\ $
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $\frac{45}{x 2} = 90$
				FAC species $0 \times 3 = 0$
1				FACU species x 4 = 420
2				UPL species x 5 = 50
3				Column Totals: <u>160</u> (A) <u>560</u> (B)
4				Prevalence Index = B/A = 3.5
5	<u> </u>			
6	·			Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				$3$ - Prevalence Index is $\leq 3.0^{1}$
1Setaria faberi	40	Yes	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Cyperus strigosus	25	Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Dipsacus fullonum	20	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5. Persicaria pensylvanica	20	No	FACW	Definitions of Vegetation Strata:
6. Cirsium vulgare	10	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Daucus carota	10	No	UPL	at breast height (DBH), regardless of height.
8. Potentilla indica		Yes	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb - All herbaceous (non-woody) plants, regardless of
				size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12				height.
00	160	= Total Cov	er	
Woody Vine Stratum (Plot size: 30)				
1	<u> </u>			Live a shutia
2				Hydrophytic Vegetation
3				Present? Yes <u>No</u> X
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

## SOIL

	<u>Matrix</u> Color (moist)	%	Color (moist)	<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	
<u>(inches)</u> 0 <sup>-</sup> 18	10YR 2/2	<u></u> 98	2.5YR 3/4	2		M			Remark	.5
0 - 18	101K 2/2	90	2.51K 3/4		Concer	IVI	Silty clay loam			
		·					·			
-										
-										
-										
							·			
·		·					·			
							<u> </u>			
-										
-										
-										
<sup>1</sup> Type: C=Cor	ncentration D=Depl	etion RM	=Reduced Matrix, M	S=Masked	Sand Grai	ins	<sup>2</sup> l ocation	PL=Pore	ining M=N	Aatrix
Hydric Soil In							Indicators			
Histosol (			Polyvalue Belov		(S8) ( <b>LRR</b>	R,		. , .		MLRA 149B)
	pedon (A2)		MLRA 149B	,					. , .	RR K, L, R)
Black His	n Sulfide (A4)		Thin Dark Surfa					ucky Peat ( urface (S7)		) (LRR K, L, R) M)
	Layers (A5)		Loamy Gleyed			L)				) (LRR K, L)
	Below Dark Surface	e (A11)	Depleted Matrix					ark Surface		
	rk Surface (A12)		Redox Dark Su							2) ( <b>LRR K, L, R</b> )
	ucky Mineral (S1)		Depleted Dark		7)					19) ( <b>MLRA 149B</b>
	eyed Matrix (S4)		Redox Depress	sions (F8)						44A, 145, 149B)
Sandy Re	adox (S5) Matrix (S6)							arent Materi hallow Dark		F12)
QUIDDEDT	face (S7) ( <b>LRR R, M</b>	ILRA 149E	3)					Explain in F		112)
									,	
Dark Surf			etland hydrology mus	st be prese	nt, unless	disturbed	or problematic	•		
Dark Surf <sup>3</sup> Indicators of	hydrophytic vegetati									
Dark Surf <sup>3</sup> Indicators of Restrictive La										
Dark Surf <sup>3</sup> Indicators of <b>Restrictive La</b> Type:	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Vos	No X
Dark Surf <sup>3</sup> Indicators of Restrictive La Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	No
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	No
Dark Surf <sup>3</sup> Indicators of <b>Restrictive La</b> Type:	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	No <u>X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of Restrictive La Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>
Dark Surf <sup>3</sup> Indicators of I <b>Restrictive L</b> a Type: Depth (incl	hydrophytic vegetati ayer (if observed):						Hydric Soil	Present?	Yes	<u>No X</u>

Upland LP-018,019



Soil



Ν

Project/Site: Leroy Center-Mayfield 138 kV Trans	mission Line Projec City/County:	Geauga County	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Wetland LP-020
Investigator(s): MJA	Section, Tow	nship, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (cond	cave, convex, none): <u>Concave</u>	Slope (%): 2
Subregion (LRR or MLRA): LRR R	Lat: 41.63071333333335	Long: <u>-81.174059</u>	Datum: WGS 1984
Soil Map Unit Name: EhD2: Ellsworth silt loam, 12	2 to 18 percent slopes, eroded	NWI classifi	cation: N/A
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes X	No (If no, explain in F	₹emarks.)
Are Vegetation X_, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	ers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X	No No No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-020
Remarks: (Explain alternative procedu	ures here or in a se	eparate report.)	
PEM in gully adjacent to stream. Culve	rted driveway betw	veen wetland poly	gons. Most of vegetation recently mowed.

Wetland Hydrology Indicators:	0	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6)		
Surface Water (A1) Water-Stained Leaves (B9)	-	Drainage Patterns (B10)		
X High Water Table (A2) Aquatic Fauna (B13)	_	Moss Trim Lines (B16)		
X Saturation (A3) Marl Deposits (B15)	-	Dry-Season Water Table (C2)		
Water Marks (B1) Hydrogen Sulfide Odor (C1)	-	Crayfish Burrows (C8)		
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3) Presence of Reduced Iron (C4)	-	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6)	X Geomorphic Position (D2)		
Iron Deposits (B5) Thin Muck Surface (C7)	-	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	-	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	-	X FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present? Yes <u>No X</u> Depth (inches):				
Water Table Present? Yes X No Depth (inches): 10				
Saturation Present? Yes X No Depth (inches): 3	Wetland Hy	rdrology Present? Yes X No		
Saturation Present? Yes X No Depth (inches): 3 (includes capillary fringe)	-			
Saturation Present? Yes X No Depth (inches): 3 (includes capillary fringe)	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Stream gauge, monitoring well, aerial photos, previous inspective	-			
Saturation Present?       Yes       X       No       Depth (inches):       3         (includes capillary fringe)       0       <	-			

Sampling Point: Wetland LP-020

Tree Stratum (Plot size:30 )	Absolute % Cover	Dominant I Species?		Dominance Test worksheet: Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata:2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	er	$\begin{array}{c} \hline \hline \\ OBL \text{ species} \\ \hline \\ 110 \\ \hline \\ x 1 = \\ 110 \\ \hline \\ \end{array}$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species40 x 2 =80
1				FAC species $0 \times 3 = 0$
2				FACU species $0   x 4 = 0$
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>150</u> (A) <u>190</u> (B)
5				Prevalence Index = B/A = 1.2666666666
6				Hydrophytic Vegetation Indicators:
7				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
·		= Total Cove		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		- 10181 0070		X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
1 Carex lurida	55	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2Scirpus cyperinus		Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Typha latifolia		No	OBL	
4. Eupatorium perfoliatum		No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
- Dhar was't a sustant's	40	No	FACW	Definitions of Vegetation Strata:
		No	FACW	
	F	No	OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7         Juncus effusus           8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	150	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

#### SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	indicator of	or confirm	n the absence o	f indicators.)
Depth	Matrix		Redo	x Feature	<u>s</u>			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 10	10YR 4/1	90	5YR 5/8	10	Concer	PL,M	Silty clay loam	Some sand
10 <sup>-</sup> 18	10YR 2/2	90	2.5YR 3/6	10	Concer	PL,M	Silty clay loam	
-								
		·					· ·	
			<u> </u>					
-								
-								
		· ·						
-								
-								
-								
-								
-								
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I								or Problematic Hydric Soils <sup>3</sup> :
<u> </u>	(A1)		Polyvalue Belov	w Surface	(S8) (LRF	RR,		ick (A10) ( <b>LRR K, L, MLRA 149B</b> )
-	pipedon (A2)		MLRA 149B	,				rairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi			Thin Dark Surfa					icky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) I Layers (A5)		Loamy Mucky Mu Mucky Mucky Muc Mucky Mucky Mu Mucky Mucky			, L)		rface (S7) ( <b>LRR K, L, M</b> ) ie Below Surface (S8) ( <b>LRR K, L</b> )
	Below Dark Surface	(A11)	X Depleted Matrix		-)			rk Surface (S9) ( <b>LRR K, L</b> )
	ark Surface (A12)		Redox Dark Su					nganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)		Depleted Dark		7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
-	leyed Matrix (S4)		Redox Depress	ions (F8)				podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)							ent Material (F21)
	Matrix (S6) rface (S7) ( <b>LRR R, M</b>	I RA 149B						allow Dark Surface (TF12) Explain in Remarks)
			)					
<sup>3</sup> Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	l or problematic.	
Restrictive L	_ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil P	resent? Yes X No
Remarks:								

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W-MJA-102221-01



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmissio	on Line Projec City/County: G	eauga County	_ Sampling Date: 10/	22/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: <sup>\</sup>	Vetland LP-021E
Investigator(s):	Section, Towns	ship, Range: <u>N/A</u>		
Landform (hillslope, terrace, etc.): Floodplain	Local relief (conca	ve, convex, none): <u>Concave</u>	Slope	(%): <u>2</u>
Subregion (LRR or MLRA): LRR R Lat:	41.629746999999995	Long: -81.17480850000001	Datum:	WGS 1984
Soil Map Unit Name: EhD2: Ellsworth silt loam, 12 to 18	3 percent slopes, eroded	NWI classifi	cation: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X	_ No (If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes <u>X</u>	No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	ers in Remarks.)	

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-021E
Remarks: (Explain alternative procedu	res here or in a separate report.)	
PEM portion of PEM/PSS complex alon	g stream. Data point taken downslo	pe of road in maintained powerline easement.

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)		Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6)	X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes NoX _ Depth (inches):		
Water Table Present? Yes X No Depth (inches): 12		
Saturation Present? Yes X No Depth (inches): 6	Wetland H	ydrology Present? Yes <u>X</u> No
Saturation Present? Yes X No Depth (inches): 6 (includes capillary fringe)		
Saturation Present? Yes X No Depth (inches): 6		
Saturation Present? Yes X No Depth (inches): 6 (includes capillary fringe)		
Saturation Present? Yes X No Depth (inches): 6 (includes capillary fringe)		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		
Saturation Present?       Yes       X       No       Depth (inches):       6         (includes capillary fringe)       0       <		

Sampling Point: <u>Wetland LP-021E</u>

Tree Stratum (Plat size) 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
				、 ,
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	r	OBL species x 1 =75
Sapling/Shrub Stratum (Plot size: 15 )				FACW species55 x 2 =110
1				FAC species x 3 =0
2				FACU species0 x 4 =0
				UPL species x 5 =0
3				Column Totals: <u>130</u> (A) <u>185</u> (B)
4				Prevalence Index - B/A - 1.423076923(
5				Prevalence Index = B/A = 1.4230769230
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	r	$\underline{X}$ 2 - Dominance Test is >50%
5			1	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum     (Plot size:5)       1Typha latifolia	45	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2Lythrum salicaria			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Agrostis gigantea		Yes	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Eupatorium perfoliatum	5	No	FACW	be present, unless disturbed of problematic.
5				Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10	·			size, and woody plants less than 3.28 ft tall.
11	<u> </u>			<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	130	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1			<u> </u>	Hydrophytic
2	·			Vegetation
3				Present? Yes X No
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			
	-			

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#### SOIL

Profile Desc	ription: (Describe t	o the dept	n needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>.</u>	2		
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/2	95	2.5YR 3/4	5	Concer	PL	Silty clay loam	
-								
			<u> </u>					
-								
-								
-								
-								
						<u> </u>		
-								
-								
						·		
						. <u> </u>		
-								
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=I	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I		•	· · · ·					for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)	_	Polyvalue Belov	w Surface	(S8) ( <b>LRR</b>	8 R,	2 cm M	luck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic Ep	ipedon (A2)		MLRA 1498)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black His		-	Thin Dark Surfa					lucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	-	Loamy Mucky N			, L)		urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	-	Loamy Gleyed		)		-	ue Below Surface (S8) (LRR K, L)
	Below Dark Surface rk Surface (A12)		<ul> <li>Depleted Matrix</li> <li>X Redox Dark Su</li> </ul>					ark Surface (S9) ( <b>LRR K, L</b> ) anganese Masses (F12) ( <b>LRR K, L, R</b> )
	ucky Mineral (S1)	-	Depleted Dark St	. ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	-	Redox Depress		- /			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)	-		~ /				arent Material (F21)
Stripped	Matrix (S6)						Very SI	hallow Dark Surface (TF12)
Dark Sur	face (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (	Explain in Remarks)
3								
	hydrophytic vegetati	on and wet	land hydrology mus	st be prese	nt, unless	disturbed	or problematic	
	ayer (if observed):							
Туре:								
	hes):						Hydric Soil	Present? Yes X No
Remarks:								

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W-MJA-102221-02E



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmis	ssion Line Projec City/County: Gea	auga County	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Wetland LP-021S
Investigator(s): MJA	Section, Townshi	p, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave	e, convex, none): <u>Flat</u>	Slope (%): <u>0</u>
Subregion (LRR or MLRA): LRR R La	at: 41.630151616666667	Long: -81.17506549999999	Datum: WGS 1984
Soil Map Unit Name: EhD2: Ellsworth silt loam, 12 to	o 18 percent slopes, eroded	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes X	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	rs in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-021S
Remarks: (Explain alternative procedu	ares here or in a separate report.)	
PSS portion of a PEM/PSS complex al	ong an intermittent stream. Data poi	nt taken in maintained powerline easement.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required	d)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)	
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)	
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)	
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)	
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6) X Geomorphic Position (D2)	
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present? Yes No <u>X</u> Depth (inches):		
Water Table Present? Yes X No Depth (inches): 1		
$\frac{1}{1}$		
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes X No	
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)		_
Saturation Present? Yes X No Depth (inches): 0		_
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)		_
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Sampling Point: <u>Wetland LP-021S</u>

Trace Structures (Dictoring, 30	Absolute	Dominant In		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: <u>5</u> (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>5</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				
7				Prevalence Index worksheet:
/·				$\begin{array}{c c} \underline{\text{Total \% Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 45 & \text{x 1} = & 45 \\ \end{array}$
15		= Total Cove	r	OBL species         45         x 1 =         45           FACW species         125         x 2 =         250
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $15 \times 3 = 45$
1. Cornus alba	20	Yes	FACW	FACU species $21$ x 4 = $84$
2. Salix interior	40	Yes	FACW	UPL species $0 \times 5 = 0$
3. Frangula alnus	15	Yes	FAC	Column Totals: $206$ (A) $424$ (B)
4				
5				Prevalence Index = B/A = 2.058252427
6				Hydrophytic Vegetation Indicators:
				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
_	75	= Total Cove	r	$X$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Solidago canadensis	20	No	FACU	data in Remarks or on a separate sheet)
2. Eupatorium perfoliatum	15	No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Juncus effusus	35	Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Agrostis gigantea	50	Yes	FACW	be present, unless disturbed or problematic.
5 Dipsacus fullonum		No	FACU	Definitions of Vegetation Strata:
6. Carex lurida			OBL	Tree Mandy plants 2 in (7.6 am) or more in diameter
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	131	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				Hydrophytic
2		<u> </u>		Vegetation
3		·		Present? Yes X No
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			I

#### SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator o	or confirm	the absence of	of indicators.)
Depth	Matrix			x Features	<u>s</u>	2		
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/1	95	5YR 4/6	5	Concer	PL,M	Silty clay loam	
-								
		<u> </u>	,					
		<u> </u>						
-								
-								
						. <u> </u>		
-								
-								
-								
						<u> </u>		
-								
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils <sup>3</sup> :
<u> </u>		-	Polyvalue Belov		(S8) ( <b>LRR</b>	R,		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black His		-	Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) I Layers (A5)	-	Loamy Mucky N Loamy Gleyed I			, L)		urface (S7) ( <b>LRR K, L, M</b> ) ue Below Surface (S8) ( <b>LRR K, L</b> )
	Below Dark Surface	e (A11)	Depleted Matrix		)			ark Surface (S9) (LRR K, L)
	irk Surface (A12)		X Redox Dark Su					anganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	_	Depleted Dark S	Surface (F	7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)	-	Redox Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)							rent Material (F21)
	Matrix (S6)		<b>`</b>					nallow Dark Surface (TF12)
Dark Sur	face (S7) ( <b>LRR R, M</b>	ILRA 149B	)				Other (I	Explain in Remarks)
<sup>3</sup> Indicators of	hydrophytic vegetati	ion and wet	land hydrology mus	t be prese	nt unless	disturbed	or problematic	
	ayer (if observed):		and hydrology mad		int, amooo	alotarboa		
Type:	<b>,</b>							
	hes):						Hydric Soil I	Present? Yes X No
Remarks:							Tryane com	
Remarks.								

Wetland LP-021S



Soil

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W-MJA-102221-02S



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	e Projec City/County: Geauga C	ounty	Sampling Date: 10/	22/2021
Applicant/Owner: FirstEnergy		State: OH	_ Sampling Point: <sup>U</sup>	
Investigator(s): MJA	Section, Township, Ran	ge: N/A		
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (concave, conve	ex, none): <u>Convex</u>	Slope (	%) <u>:</u> 15
Subregion (LRR or MLRA): LRR R Lat: 41.63	0790833333336 Long	: -81.17395350000001	Datum:	WGS 1984
Soil Map Unit Name: EhD2: Ellsworth silt loam, 12 to 18 perce	ent slopes, eroded	NWI classifica	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes X No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed? Are "N	lormal Circumstances" pr	resent? Yes X	No
Are Vegetation, Soil, or Hydrology nate	urally problematic? (If nee	eded, explain any answer	s in Remarks.)	

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-020,021
Remarks: (Explain alternative proceed	lures here or ir	n a separate report.)	·
Upland data form for W-MJA-102221-	01and W-MJA	-102221-02. Data poin	it taken upslope of gully.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-020,021

Trac Stratum (Plat size) 30	Absolute	Dominant I		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata:4 (B)
4				Demonst of Deminant Species
				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	r	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 =0
				FAC species x 3 =0
1				FACU species x 4 = 280
2				UPL species 30 x 5 = 150
3				Column Totals: 100 (A) 430 (B)
4				
5				Prevalence Index = $B/A = 4.3$
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	20	Yes	FACU	data in Remarks or on a separate sheet)
2. Daucus carota	30	Yes	UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Trifolium pratense	20	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4Plantago lanceolata			FACU	be present, unless disturbed or problematic.
5. Symphyotrichum pilosum			FACU	Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb - All herbaceous (non-woody) plants, regardless of
				size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	100	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
3				Vegetation Present? Yes No <sup>X</sup>
4			<u> </u>	
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

SUIL
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Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the absence of ind	icators.)	
Depth	Matrix		Redo	x Features	6				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	i
0 <sup>-</sup> 18	10YR 4/3	95	10YR 5/8	5	Concer	М	Clay loam		
-							· · · · · · · · · · · · · · · · · · ·		
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_									
	ncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		Pore Lining, M=M	
Hydric Soil I							Indicators for Pr	-	
Histosol		_	Polyvalue Below		(S8) ( <b>LRR</b>	2 R,		A10) ( <b>LRR K, L, N</b>	
-	ipedon (A2)		MLRA 149B)					Redox (A16) (LR	
Black His		_	Thin Dark Surfa				-	Peat or Peat (S3)	
	n Sulfide (A4)	_	_ Loamy Mucky N	-		L)		(S7) ( <b>LRR K, L</b> ,	-
	Layers (A5)	(6.4.4)	Loamy Gleyed I		)			low Surface (S8)	
	l Below Dark Surface rk Surface (A12)	(A11) _	_ Depleted Matrix					rface (S9) (LRR I	
	ucky Mineral (S1)	-	Redox Dark Suit Depleted Dark \$	• • •	7)			ese Masses (F12) odplain Soils (F1	
	leyed Matrix (S4)		Redox Depress		()			c (TA6) ( <b>MLRA 14</b>	
-	edox (S5)	_						Aaterial (F21)	HA, 140, 140D)
-	Matrix (S6)							Dark Surface (TF	=12)
	face (S7) (LRR R, M	LRA 149B)						in in Remarks)	
		,							
<sup>3</sup> Indicators of	hydrophytic vegetati	on and wetl	and hydrology mus	t be prese	ent, unless	disturbed	or problematic.		
	ayer (if observed):		, ,,						
Type:	,								
	hes):						Hydric Soil Prese	nt? Vas	No X
							Tryane boirt rese	iit: 163	
Remarks:									

S



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga Count	у	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Wetland LP-022
Investigator(s): BCR Section, Township, Range:_	N/A	
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, n	ione): <u>Concave</u>	Slope (%): <u>4</u>
Subregion (LRR or MLRA): LRR R Lat: 41.62875933312719 Long: -8	1.17751000030655	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	_ (If no, explain in R	emarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Norm	nal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed	, explain any answe	rs in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-022
Remarks: (Explain alternative proced	ures here or in a separate report.)	

Wetland Hydrology Indicato	rs:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	of one is required;	check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2)		X Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Se	oils (C6)	X Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aeri	ial Imagery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Conc	ave Surface (B8)			X FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes No _	X Depth (inches):		
Water Table Dresent?	Voo No	X Depth (inches):		
Water Table Present?		<u> </u>		
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):		Hydrology Present? Yes X No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _			· · · <u> </u>
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		· · · <u> </u>

Trace Stratum (Distring) 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
		= Total Cove	r	OBL species x 1 =55
Sapling/Shrub Stratum (Plot size: 15 )				FACW species32 x 2 =64
1				FAC species x 3 =0
2				FACU species7 x 4 =28
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>94</u> (A) <u>147</u> (B)
4 5				Prevalence Index = B/A = 1.5638297872
6				Hydrophytic Vegetation Indicators:
				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
E E		= Total Cove	r	$\overline{X}$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5) 1. Impatiens capensis	30	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Persicaria sagittata		Yes		
3. Leersia oryzoides			OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Senecio hieraciifolius	5	No	FACU	
5. Lobelia inflata		No	FACU	Definitions of Vegetation Strata:
6. Eupatorium perfoliatum	2	No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Juncus effusus	10	No	OBL	at breast height (DBH), regardless of height.
8		·		<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
10		· ·		size, and woody plants less than 3.28 ft tall.
11		· ·		<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12	94	= Total Cove	r	height.
March Mine Charter (Plat size 30			1	
Woody Vine Stratum (Plot size: 30 )				
1		<u> </u>		Hydrophytic
2	. <u> </u>	·		Vegetation
3				Present? Yes X No
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>-</u> 1	. 2	-	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 4/1	95	5YR 4/6	5	Concer	PL	Silty clay	
-								
-								
-								
-								
-								
						·		
-								
-								
-								
	oncentration, D=Depl	etion, RM=R	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils <sup>3</sup> :
<u> </u>		—	_ Polyvalue Belov		(S8) ( <b>LRR</b>	R,		1uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic Ep	pipedon (A2)		MLRA 149B) Thin Dark Surfa	,		PA 1498)		Prairie Redox (A16) ( <b>LRR K, L, R</b> ) lucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	_	_ Loamy Mucky N					urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	_	_ Loamy Gleyed			_/		lue Below Surface (S8) ( <b>LRR K, L</b> )
Depleted	Below Dark Surface	e (A11) 🔰	C Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12)	_	_ Redox Dark Su		_`			anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) ileyed Matrix (S4)	_	Depleted Dark Redox Depress		7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> ) Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)		_ Redux Depress	50115 (FO)				arent Material (F21)
	Matrix (S6)							hallow Dark Surface (TF12)
	face (S7) ( <b>LRR R, M</b>	ILRA 149B)						Explain in Remarks)
3								
	hydrophytic vegetati ayer (if observed):	on and wetla	and hydrology mus	st be prese	nt, unless	disturbed	or problematic	
	ayer (il observeu).							
Type:	ches):						Hydric Soil	Present? Yes X No
Remarks:	nes)						Hyunc Son	
Remarks.								

General Site Photos W

Wetland LP-022



Soil

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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Gea	auga County Samp	oling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH Sa	mpling Point: Upland LP-022
Investigator(s): BCR Section, Townshi	p, Range: <sup>N/A</sup>	
Landform (hillslope, terrace, etc.): Footslope Local relief (concave	e, convex, none): <u>Flat</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): LRR R Lat: 41.62869033333333	_ Long: <u>-81.17752349999999</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification:	N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Remark	s.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present	? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in R	emarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX YesX No Yes NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-022
Remarks: (Explain alternative procedur	es here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Second	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Weter Table Dreserve Was No. Y Darth (inchas):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _ X
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Trac Stratum (Plat size) 30	Absolute	Dominant I		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2		<u> </u>		Total Number of Dominant
3		·		Species Across All Strata: <u>1</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Brend have beder under her ste
7				Prevalence Index worksheet:
· ·				Total % Cover of:Multiply by: OBL species 33 x 1 = 33
45		= Total Cove	ſ	
Sapling/Shrub Stratum (Plot size: 15 )				Row species x 2 =
1		·		FAC species $x_3 = 0$
2				FACO species X 4 =
3				150
4				Column Totals: <u>156</u> (A) <u>489</u> (B)
5				Prevalence Index = B/A = 3.134615384{
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Solidago canadensis	80	Yes	FACU	data in Remarks or on a separate sheet)
2. Juncus effusus	30	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Cyperus esculentus	10	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Symphyotrichum pilosum	05	No	FACU	be present, unless disturbed or problematic.
5. Eupatorium perfoliatum		No	FACW	Definitions of Vegetation Strata:
6Scirpus atrovirens	•	No	OBL	Tree Woody plants 2 in (7.6 cm) or more in diameter
· · · · · · · · · · · · · · · · · · ·				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		<u> </u>		<b>Werk</b> All both second (non-succeder) alongs and the of
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	156	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1			<u> </u>	Hydrophytic
2		· ·	<u> </u>	Vegetation
3		<u> </u>		Present? Yes <u>No</u> X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>-</u> 1	. 2	_	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 6/1	90	5YR 4/4	10	Concer	М	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
	oncentration, D=Depl	otion DM-D	aduaad Matrix M	-Maakad	Sond Cro	ine	<sup>2</sup> Leastion:	PL=Pore Lining, M=Matrix.
Hydric Soil I				5-IVIASKEU	Sanu Gra	1115.		for Problematic Hydric Soils <sup>3</sup> :
Histosol			_ Polyvalue Belov	v Surface	(S8) (L <b>R</b> R	R.		luck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	ipedon (A2)		MLRA 149B		()	,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black His	stic (A3)		Thin Dark Surfa	ace (S9) ( <b>L</b>	RR R, ML	.RA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky M			L)		urface (S7) ( <b>LRR K, L, M</b> )
	l Layers (A5)	. (	_ Loamy Gleyed		)			lue Below Surface (S8) (LRR K, L)
	l Below Dark Surface irk Surface (A12)	e (ATT) <u>/</u>	Depleted Matrix Redox Dark Su					ark Surface (S9) ( <b>LRR K, L</b> ) anganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	_	_ Depleted Dark		7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matrix (S4)		_ Redox Depress		,			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy R	edox (S5)						Red Pa	arent Material (F21)
	Matrix (S6)							hallow Dark Surface (TF12)
Dark Sur	face (S7) ( <b>LRR R, M</b>	ILRA 149B)					Other (	Explain in Remarks)
<sup>3</sup> Indicators of	hydrophytic vegetati	ion and woth	and hydrology mus	t ha praga	nt unloco	dicturbod	or problematic	
	ayer (if observed):		and frydrology filds	st be prese	ni, uniess	uistuibeu		
Type:								
	hes):						Hydric Soil	Present? Yes X No
Remarks:								
Remarks.								

General Site Photos

Upland LP-022



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Ge	eauga County	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-023
Investigator(s): BCR Section, Townsh	nip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Flat Local relief (concav	ve, convex, none): Concave	Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.62734866693466	Long: <u>-81.17912533288415</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" pro	esent? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-023
Remarks: (Explain alternative proced	ures here or in a separate report.)	

Wetland Hydrology Indicator	'S:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum o	f one is required; o	check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)		Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)		Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)		X Oxidized Rhizospheres on Living Roots	(C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C	$\frac{X}{2}$ Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aeria	al Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Conca	ave Surface (B8)		X FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No _	X Depth (inches):	
	., .,	V Danth (inches)	
Water Table Present?	Yes <u>No</u>	X Depth (inches):	
Water Table Present? Saturation Present? (includes capillary fringe)		,	land Hydrology Present? Yes <u>X</u> No
Saturation Present? (includes capillary fringe)	Yes No _		
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No _	X Depth (inches): Wet	

	Absolute	Dominant	Indicator	Deminence Technologie etc
<u>Tree Stratum</u> (Plot size: <u>30</u> )	% Cover	Species?	<u>Status</u>	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:5(A)
2				
3				Total Number of DominantSpecies Across All Strata:5(B)
				· · · · · · · · · · · · · · · · · · ·
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
5				
6			. <u> </u>	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	ər	OBL species X 1 =75
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 = 60
1. Frangula alnus	20	Yes	FAC	FAC species x 3 = 165
				FACU species x 4 =0
2				UPL species x 5 = 0
3				Column Totals: <u>160</u> (A) <u>300</u> (B)
4				Prevalence Index = R/A = 1.875
5			. <u> </u>	Prevalence Index = B/A = 1.875
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	20	= Total Cove	er	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				$X$ 3 - Prevalence Index is $\leq 3.0^1$
1 Solidago rugosa	30	Yes	FAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Persicaria sagittata	15	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Scirpus cyperinus	30	Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Juncus effusus		Yes	OBL	be present, unless disturbed or problematic.
5Agrostis gigantea	5	No	FACW	Definitions of Vegetation Strata:
	10	No	OBL	
··				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Elymus virginicus	20	Yes	FACW	
8. Geum canadense	5	No	FAC	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. Doellingeria umbellata	5	No	FACW	
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	140	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
*		= Total Cove		
Remarks: (Include photo numbers here or on a separate			51	
Tremarks. (include photo numbers here of on a separate	sneet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	indicator of	or confirm	the absence	of indicators	i.)		
Depth	Matrix			x Feature							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
0 - 14	10YR 4/1	85	5YR 4/6	15	Concer	PL,M	Silty clay				
14 <sup>-</sup> 18	2.5Y 6/2	70	5YR 5/8	30	Concer	PL,M	Silty clay				
			<u> </u>								
-											
-											
						·					
				. <u></u>							
-											
-											
-											
	oncentration, D=Deple	etion, RM=I	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location:	: PL=Pore Lir	ning, M=Matri	х.	
Hydric Soil I	ndicators:						Indicators	for Problema	atic Hydric S	oils³:	
Histosol		-	Polyvalue Belov		(S8) ( <b>LRF</b>	RR,		luck (A10) ( <b>Ll</b>			
-	pipedon (A2)		MLRA 149B					Prairie Redox			
Black Hi		-	Thin Dark Surfa					lucky Peat or		<b>R K, L, R</b> )	
	n Sulfide (A4) I Layers (A5)	-	Loamy Mucky M Loamy Gleyed	-		, L)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)				
	Below Dark Surface	(A11)	<u>X</u> Depleted Matrix		-)			ark Surface (S			
	ark Surface (A12)		Redox Dark Su		)			anganese Ma			
	lucky Mineral (S1)	-	Depleted Dark	. ,						MLRA 149B)	
Sandy G	leyed Matrix (S4)	_	Redox Depress	ions (F8)			Mesic S	Spodic (TA6)	(MLRA 144A	, 145, 149B)	
Sandy R	edox (S5)						Red Pa	arent Material	(F21)		
	Matrix (S6)							hallow Dark S		.)	
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149B)	)				Other (	Explain in Re	marks)		
<sup>3</sup> Indiantara of	f hydrophytic vegetati	on and wat	land hydrology mys	the pres	ant unloca	diaturbad	or problematic				
	-ayer (if observed):	on and wet	ianu nyurology mus	st be prese	ent, uniess	aistuibeu					
Type:	Layer (il observeu).										
							Hudria Sail	Present?	Vac X	No	
Depth (inc	ines).						Hydric Soli	Present?	res <u>^</u>	NO	
Remarks:											

Wetland LP-023



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga	County	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-024E
Investigator(s): BCR Section, Township, Ra	ange: N/A	
Landform (hillslope, terrace, etc.): Flat Local relief (concave, cor	nvex, none): <u>Concave</u>	Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.6271856666666666 Lot	ng: <u>-81.17944466666667</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$ No _	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are	"Normal Circumstances" pr	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If n	eeded, explain any answers	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-024E
Remarks: (Explain alternative procedu	ures here or in a separate report.)	

Wetland Hydrology Indicate	ors:		5	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil Cracks (B6)			
Surface Water (A1)		-	Drainage Patterns (B10)				
High Water Table (A2)		-	Moss Trim Lines (B16)				
Saturation (A3)		Marl Deposits (B15)	-	Dry-Season Water Table (C2)			
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	-	Crayfish Burrows (C8)			
Sediment Deposits (B2)		X Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)		Presence of Reduced Iron (C4)	-	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled So	oils (C6)	X Geomorphic Position (D2)			
Iron Deposits (B5)		Thin Muck Surface (C7)	-	Shallow Aquitard (D3)			
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Remarks)	-	Microtopographic Relief (D4)			
Sparsely Vegetated Cond	cave Surface (B8)		-	X_ FAC-Neutral Test (D5)			
Field Observations:							
Surface Water Present?	Yes No _	X Depth (inches):					
Water Table Present?	Vec No	X Depth (inches):					
water rable Present?		<u> </u>					
Saturation Present? (includes capillary fringe)		X Depth (inches):	Wetland Hy	vdrology Present? Yes X No			
Saturation Present? (includes capillary fringe)	Yes No _		-				
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):	-				

Sampling Point: <u>Wetland LP-024E</u>

Trac Stratum (Plat size) 30	Absolute	Dominant Ir		Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cover		OBL species x 1 = 85
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>10</u> x 2 = <u>20</u>
1				FAC species x 3 =0
2				FACU species20 x 4 =80
				UPL species x 5 =0
3				Column Totals: <u>115</u> (A) <u>185</u> (B)
4				$Prevalence Index = B/A = 1.608695652^{\circ}$
5				Prevalence Index = B/A = 1.608695652'
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover		$\underline{X}$ 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum         (Plot size:        )           1.         Scirpus cyperinus	50	Yes	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2 Solidago canadensis			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			FACW	
3. Agrostis gigantea				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Juncus effusus	20	Yes	OBL	
5. Mentha X piperita	5	No	OBL	Definitions of Vegetation Strata:
6. Lythrum salicaria	10	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
				Herb - All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	115	= Total Cover		
Woody Vine Stratum (Plot size:30)				
1				
				Hydrophytic
2				Vegetation Present? Yes <sup>X</sup> No
3				
4				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate	sheet.)			

### SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator o	or confirm	the absence o	f indicators.)
Depth	Matrix			x Feature	<u>s</u> • • • • 1	1 2	Tatta	Demoder
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/2	90	5YR 4/6	10	Concer	PL,M	Silty clay loam	
-								
-								
-								
-								
-								
-								
-								
		<u> </u>						
-								
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	I Sand Gra	ins.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							or Problematic Hydric Soils <sup>3</sup> :
Histosol		-	Polyvalue Below		(S8) ( <b>LRR</b>	2 R,		uck (A10) (LRR K, L, MLRA 149B)
Histic Ep Black Histic	vipedon (A2)		MLRA 149B) Thin Dark Surfa			DA 1/08		rairie Redox (A16) ( <b>LRR K, L, R</b> ) ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	-	Loamy Mucky N					rface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	-	Loamy Gleyed I			_,		ie Below Surface (S8) ( <b>LRR K, L</b> )
Depleted	I Below Dark Surface	(A11) _	X Depleted Matrix					rk Surface (S9) ( <b>LRR K, L</b> )
	rk Surface (A12)	-	Redox Dark Su					nganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	-	Depleted Dark S		-7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matrix (S4) edox (S5)	-	Redox Depress	1011S (FO)				podic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) rent Material (F21)
	Matrix (S6)							allow Dark Surface (TF12)
	face (S7) ( <b>LRR R, M</b>	LRA 149B	)					Explain in Remarks)
3								
	hydrophytic vegetati	on and wet	land hydrology mus	t be prese	ent, unless	disturbed	or problematic.	
	ayer (il observed):							
Type:	ches):						Hydric Soil F	Present? Yes <u>X</u> No
Remarks:	nes)						Hydric Soli F	
Remarks:								

General Site Photos

Wetland LP-024E



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga Cou	nty	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Wetland LP-024S
Investigator(s): BCR Section, Township, Range	<u>.</u> N/A	
Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex,	, none): <u>Rolling</u>	Slope (%): <u>1</u>
Subregion (LRR or MLRA): LRR R Lat: 41.626859667048265 Long:	81.17997999992694	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Nor	rmal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed	ed, explain any answe	rs in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-024S
Remarks: (Explain alternative procedu	res here or in a separate report.)	·

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes NoX Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: <u>Wetland LP-024S</u>

Tree Streture (Distring, 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species That Are OBL_EACW_or_EAC: 1 (A/B)
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	er	OBL species x 1 =40
Sapling/Shrub Stratum (Plot size: 15 )				FACW species50 x 2 =100
1. Frangula alnus	50	Yes	FAC	FAC species $50 \times 3 = 150$
2				FACU species x 4 =0
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>140</u> (A) <u>290</u> (B)
4 5				Prevalence Index = B/A = 2.0714285714
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		$\underline{X}$ 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)			51	<u>X</u> 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum         (Plot size:)           1.         Scirpus cyperinus	10	No	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Juncus effusus	20	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Carex scoparia		Yes	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
		<u> </u>	OBL	be present, unless disturbed or problematic.
······································				Definitions of Vegetation Strata:
5				
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	90	= Total Cove	er	
Woody Vine Stratum (Plot size:30)				
1,				
2				Hydrophytic
				Vegetation Present? Yes X No
3				
4		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate				
	,			

Profile Desc	ription: (Describe to	o the dep	th needed to docu	nent the i	ndicator o	or confirm	the absence	of indicator	rs.)	
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 8	10YR 4/2	70	5YR 4/6	30	Concer	PL,M	Silty clay			
8 <sup>-</sup> 14	2.5Y 6/4	70	10YR 5/8	30	Concer	М	Silty clay			
-										
-	,									
-										
-										
		·								
-										
-										
		<u> </u>								
-										
-										
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion. RM=	Reduced Matrix. M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore L	ining, M=Matr	ix.
Hydric Soil I		,	,						natic Hydric S	
<u> </u>	(A1)		Polyvalue Belo	w Surface	(S8) (LRR	R,	2 cm M	luck (A10) ( <b>I</b>	LRR K, L, MLF	RA 149B)
Histic Ep	pipedon (A2)		MLRA 149B				Coast F	Prairie Redo	x (A16) ( <b>LRR</b>	K, L, R)
Black Hi			Thin Dark Surfa				) 5 cm M	lucky Peat o	or Peat (S3) (L	RR K, L, R)
	n Sulfide (A4)		Loamy Mucky			L)			(LRR K, L, M)	
	Layers (A5)		Loamy Gleyed		2)				urface (S8) (LI	
-	Below Dark Surface	(A11)	X Depleted Matrix						(S9) (LRR K, I	
	ark Surface (A12) lucky Mineral (S1)		Redox Dark Su Depleted Dark						asses (F12) ( <b>L</b> in Soils (F19) (	
	leyed Matrix (S4)		Redox Depress		')				6) (MLRA 144A	
	edox (S5)							arent Materia		ų, 1.10, 1.10 <b>2</b> /
	Matrix (S6)								Surface (TF12	2)
	rface (S7) (LRR R, M	LRA 149E	<b>B</b> )					Explain in R		,
	hydrophytic vegetation	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	or problematic	•		
	_ayer (if observed):									
Type:										
	ches):						Hydric Soil	Present?	Yes X	No
Remarks:										

General Site Photos

Wetland LP-024S



Soil

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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga Count	у	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Upland LP-023,024
Investigator(s): BCR Section, Township, Range:_	N/A	
Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, n	one): <u>Convex</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.6271236666666666666666666666666666666666</u>	1.17936216666666	Datum: WGS 1984
Soil Map Unit Name: MgA: Mahoning silt loam, 0 to 2 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $X$ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed	, explain any answer	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX Yes NoX Yes NoX	
Remarks: (Explain alternative procedu	ures here or in a separate rep	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Water Table Present?       Yes No _X Depth (inches):         Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       No _X Depth (inches):	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-023,024

Trac Stratum (Plat aire) 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2		· ·		Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.5 (A/B)
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	r	OBL species $5 \times 1 = 5$
Sapling/Shrub Stratum (Plot size: 15 )				
1				FAC species $x_3 = \frac{1}{100}$
2				FACU species $x_4 = \frac{100}{100}$
3				UPL species $0 \times 5 = 0$
		·		Column Totals: <u>100</u> (A) <u>315</u> (B)
4 5				Prevalence Index = B/A = 3.15
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Solidago canadensis	30	Yes	FACU	data in Remarks or on a separate sheet)
2. Apocynum cannabinum	30	Yes	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Agrostis gigantea	10	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4Elymus virginicus	10	No	FACW	be present, unless disturbed or problematic.
5 Agrostis perennans		No	FACU	Definitions of Vegetation Strata:
	5	No	OBL	
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Lotus corniculatus	5	No	FACU	
8		·		<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11.				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cove	r	norgin.
20 N			1	
Woody Vine Stratum (Plot size: 30 )				
1		<u> </u>		Hydrophytic
2		·		Vegetation
3				Present? Yes No X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate		_		
	,			

|--|--|

Profile Descrip	otion: (Describe to	the depth	needed to docu	ment the i	ndicator o	or confirm	the absence of indi	cators.)	
Depth	Matrix		Redo	x Features	6				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 10	10YR 3/3						Silty clay loam		
·							<u> </u>		
-									
					<u> </u>		·		
-									
							·		
-									
							·		
-									
<u> </u>							·		
-									
<sup>1</sup> Type: C=Conc	centration, D=Deple	tion RM=R	Reduced Matrix M	S=Masked	Sand Gra	ains	<sup>2</sup> Location: PL=P	ore Lining M=M	atrix
Hydric Soil Ind							Indicators for Pro		
Histosol (A			_ Polyvalue Belo	w Surface	(S8) (L <b>RR</b>	R.		10) ( <b>LRR K, L, N</b>	
Histic Epipe			MLRA 149B		(00) (	,		Redox (A16) ( <b>LR</b>	
Black Histic			Thin Dark Surfa	,	RR R, ML	RA 149B)		Peat or Peat (S3)	
Hydrogen S			Loamy Mucky I				-	(S7) ( <b>LRR K, L,</b> I	
Stratified La			Loamy Gleyed					ow Surface (S8)	
Depleted B	elow Dark Surface	(A11)	Depleted Matrix				Thin Dark Sur	face (S9) ( <b>LRR Þ</b>	ζ, L)
Thick Dark	Surface (A12)		Redox Dark Su	irface (F6)			Iron-Mangane	se Masses (F12)	(LRR K, L, R)
	ky Mineral (S1)		Depleted Dark		7)			odplain Soils (F1	
	yed Matrix (S4)	_	Redox Depress	sions (F8)				(TA6) ( <b>MLRA 14</b>	4A, 145, 149B)
Sandy Red							Red Parent M		
Stripped Ma								Dark Surface (TF	12)
Dark Surfac	ce (S7) ( <b>LRR R, M</b>	LRA 149B)					Other (Explain	n in Remarks)	
3									
	vdrophytic vegetatio		and hydrology mus	st be prese	nt, unless	disturbed	or problematic.		
	/er (if observed):	X							
Type: Grave									
Depth (inche	es) <u>: 10</u>						Hydric Soil Preser	nt? Yes	NoX
Remarks:									

General Site Photos

Upland LP-023,024





SW

Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Cour	nty: <u>Geauga County</u> Sampling Date: <u>09/29/2021</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-025
Investigator(s): BCR Section,	Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Undulating Local relief (	concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR R Lat: 41.62460016714309	Long: <u>-81.1834820003154</u> Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	? Are "Normal Circumstances" present? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>X</u> Yes <u>X</u> Yes <u>X</u>	No No No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-025
Remarks: (Explain alternative procedu	ires here or in a	separate report)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
X Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)	

20	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	r	OBL species $75 \times 1 = 75$ EACW species $10 \times 2 = 20$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x_2 = 20$
1				$\frac{1}{10}$
2				FACU species X 4 =
3				
4				Column Totals: <u>110</u> (A) <u>180</u> (B)
5				Prevalence Index = B/A = 1.63636363636
6				Hydrophytic Vegetation Indicators:
7				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
· ·				$\underline{X}$ 2 - Dominance Test is >50%
5		= Total Cove	:[	<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum     (Plot size: 5)       1.     Scirpus atrovirens	5	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Juncus effusus	30	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Symphyotrichum pilosum		No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Cyperus esculentus		No	FACW	be present, unless disturbed or problematic.
		No	FAC	Definitions of Vegetation Strata:
		No	FAC	
· · · · · ·				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Ludwigia palustris	40	Yes	OBL	
8. Andropogon virginicus	5		FACU	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	110	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate		-		

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	n the absence o	f indicators.)	)	
Depth	Matrix		Redo	x Feature	<u>s</u>					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 8	10YR 4/2	95	10YR 3/4	5	Concer	М	Silty clay loam			
8 <sup>-</sup> 18	10YR 5/1	70	10YR 5/8	30	Concer	М	Silty clay			
-										
-										
-										
-						·				
		<u> </u>				·				
-										
-										
					. <u> </u>					
-										
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	I Sand Gra	ains.		PL=Pore Lini		
Hydric Soil I	ndicators:							or Problemat	-	
Histosol		_	Polyvalue Belov		(S8) ( <b>LRF</b>	RR,		ıck (A10) ( <b>LR</b>		
	pipedon (A2)		MLRA 149B)					rairie Redox (		
Black Hi		_	Thin Dark Surfa					icky Peat or F		<b>KR K, L, R</b> )
	n Sulfide (A4) I Layers (A5)	-	Loamy Mucky N Loamy Gleyed I			, L)		rface (S7) ( <b>Lf</b> le Below Surf		
	Below Dark Surface	(A11)	<u>Loanny Gleyeu 1</u> <u>X</u> Depleted Matrix		)		-	rk Surface (S		-
	ark Surface (A12)	(((II)) <u>-</u>	Redox Dark Su					nganese Mas		
	lucky Mineral (S1)	_	Depleted Dark S							MLRA 149B)
	ileyed Matrix (S4)	_	Redox Depress					podic (TA6) (I		
Sandy R	edox (S5)						Red Par	ent Material (	F21)	
	Matrix (S6)							allow Dark Su		)
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149B)					Other (E	xplain in Ren	narks)	
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and wet	and hydrology mus	t he prese	ent unless	disturbed	or problematic			
	_ayer (if observed):		and nyarology mae			alotarboa				
Type:										
	ches):						Hydric Soil P	resent? Y	es X	No
Remarks:										

Wetland LP-025



Soil

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W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Get	auga County Samp	oling Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: OH Sar	mpling Point: Upland LP-025
Investigator(s): BCR Section, Townsh	ip, Range: N/A	
Landform (hillslope, terrace, etc.): Undulating Local relief (concave	e, convex, none): Undulating	Slope (%): <u>2</u>
Subregion (LRR or MLRA): LRR R Lat: 41.624633499999995	_ Long: <u>-81.18322083333334</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification:	N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $X$	No (If no, explain in Remarks	s.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present	? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in R	emarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes No X Yes X No	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-025
Remarks: (Explain alternative procedur	res here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: Upland LP-025

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant I Species?		Dominance Test worksheet:			
1				Number of Dominant Species         That Are OBL, FACW, or FAC:       2         (A)			
2 3				Total Number of Dominant Species Across All Strata: <u>3</u> (B)			
4				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)			
6				Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
		= Total Cove	er	OBL species <u>50</u> x 1 = <u>50</u>			
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>1</u> x 2 = <u>2</u>			
1				FAC species $5 \times 3 = 15$			
2				FACU species $37$ x 4 = 148 UPL species 1 x 5 = 5			
3							
4							
5				Prevalence Index = B/A = 2.340425531			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
= Total C		= Total Cove	er	$\frac{X}{X}$ 2 - Dominance Test is >50%			
Herb Stratum (Plot size:5 )				$X$ 3 - Prevalence Index is $\leq 3.0^{1}$			
1. Scirpus atrovirens	30	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
2 Juncus effusus	20	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
3. Symphyotrichum pilosum	5	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must			
4. Schedonorus arundinaceus	30	Yes	FACU	be present, unless disturbed or problematic.			
5 Juncus tenuis	5	No	FAC	Definitions of Vegetation Strata:			
6. Daucus carota	1	No	UPL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter			
7. Trifolium pratense	2	No	FACU	at breast height (DBH), regardless of height.			
8. Dichanthelium clandestinum			FACW	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
9 10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
11 12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
		= Total Cove	er				
Woody Vine Stratum (Plot size:30)							
1				Deduce locks			
2				Hydrophytic Vegetation			
3				Present? Yes X No			
4							
= Total Cover							
Remarks: (Include photo numbers here or on a separate sheet.)							

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Feature	<u>s</u>					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	S	
0 - 8	10YR 4/2	100					Silty clay loam			
8 <sup>-</sup> 18	2.5Y 5/4	65	7.5YR 5/8	33	Concer	М	Silty clay			
-			5YR 3/4	2	Concer	PL				
-										
-										
-										
-										
-										
-										
							·			
				C-Maakaa			<sup>2</sup> Leastion: DL=Dar	a Lining M-N	Actrix	
Hydric Soil I	oncentration, D=Deple Indicators:	etion, RIVI	Reduced Matrix, Ma	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Por Indicators for Prob			
Histosol			Polyvalue Belov	w Surface	(S8) (I RE	R	2 cm Muck (A10	-		
	pipedon (A2)		MLRA 149B		(00) (111)	,	Coast Prairie Re			
Black His			Thin Dark Surfa	, ace (S9) ( <b>I</b>	.RR R, ML	RA 149B)				
Hydroge	n Sulfide (A4)		Loamy Mucky M	Mineral (F	1) ( <b>LRR K</b> ,	, L)	Dark Surface (S			
Stratified	l Layers (A5)		Loamy Gleyed	Matrix (F2	2)		Polyvalue Below	Surface (S8	) ( <b>LRR K, L</b> )	
Depleted	d Below Dark Surface	(A11)	Depleted Matrix	k (F3)			Thin Dark Surfa	ce (S9) ( <b>LRR</b>	K, L)	
	ark Surface (A12)		Redox Dark Su				Iron-Manganese Masses (F12) (LRR K, L, R)			
Sandy M	lucky Mineral (S1)		Depleted Dark	Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy G	Sandy Gleyed Matrix (S4) Redox Depressions (F8)						Mesic Spodic (T	A6) ( <b>MLRA 1</b>	44A, 145, 149B)	
Sandy Redox (S5)						Red Parent Material (F21)				
Stripped Matrix (S6)					Very Shallow Dark Surface (TF12)					
Dark Surface (S7) (LRR R, MLRA 149B)										
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and we	etland hydrology mus	st be prese	ent, unless	disturbed	or problematic.			
Restrictive L	ayer (if observed):									
Туре:										
Depth (inc	ches):						Hydric Soil Present	Yes	No	
Remarks:										

General Site Photos

Upland LP-025



Soil

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<sup>∋c</sup> City/County	Geauga County	Sampling	Date: 09/	29/2021
	State	OH Sampli	ng Point: <u>\</u>	Wetland LP-026
Section, To	wnship, Range: N/A			
Local relief (co	ncave, convex, none): <u>Co</u>	ncave	Slope	(%): <u>2</u>
00189364	Long: -81.187418	0001738	Datum:	WGS 1984
	N\	VI classification: N/A	١	
year? Yes X	No (If no, e	xplain in Remarks.)		
ntly disturbed?	Are "Normal Circum	stances" present?	res <u>X</u>	No
problematic?	(If needed, explain a	any answers in Rema	arks.)	
   	_ Section, To Local relief (co 00189364 year? Yes <u>X</u> tly disturbed?	Section, Township, Range:N/A Local relief (concave, convex, none): Con 00189364 Long: -81.1874180 NV year? Yes X No (If no, e tly disturbed? Are "Normal Circum	State:         OH         Sampli          Section, Township, Range:         N/A           Local relief (concave, convex, none):         Concave           00189364         Long:         -81.1874180001738          NVI classification:         N/A           year?         Yes         X           No         (If no, explain in Remarks.)           tly disturbed?         Are "Normal Circumstances" present?	State:       OH       Sampling Point:        Section, Township, Range:       N/A         Local relief (concave, convex, none):       Concave       Slope         00189364       Long:       -81.1874180001738       Datum:        NWI classification:       N/A         year?       Yes       X       No       (If no, explain in Remarks.)         tly disturbed?       Are "Normal Circumstances" present?       Yes       X

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-026			
Remarks: (Explain alternative procedures here or in a separate report.)					
Small depressional PEM wetland along	the edge of a maintained transmiss	sion line ROW.			

Wetland Hydrology Indicators:	Sec	ondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	_	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	ils (C6) <u>X</u>	Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	_	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>No X</u> Depth (inches):		
Water Table Present? Yes No X Depth (inches):		
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	Wetland Hydr	ology Present? Yes X No
Saturation Present? Yes No X Depth (inches):	•	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	•	

	Absolute	Dominant	Indicator	Dominance Test worksheet
<u>Tree Stratum</u> (Plot size: <u>30</u> )	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species         That Are OBL, FACW, or FAC:       2         (A)
2				
3				Total Number of DominantSpecies Across All Strata:2(B)
				· · · · · · · · · · · · · · · · · · ·
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
5				
6	. <u></u>		·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species <u>65</u> x 1 = <u>65</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species25 x 2 =50
1				FAC species x 3 =0
2				FACU species x 4 =0
				UPL species 0 x 5 = 0
3				Column Totals: <u>90</u> (A) <u>115</u> (B)
4				Prevalence Index = B/A = 1.294117647(
5				
6	<u> </u>			Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	er	X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5 )				—
1. Scirpus cyperinus	50	Yes	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Solidago gigantea	25	Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Carex vulpinoidea	10	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Carex lurida	_	No	OBL	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
	50	Yes	OBL	_
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Solidago gigantea	30	Yes	FACW	
8. Carex vulpinoidea	10	No	OBL	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. Carex Iurida	10	No	OBL	
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
· - ·	90	= Total Cov		neight.
30		- 10tai C0V		
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2				Vegetation
3				Present? Yes X No
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate s				1

Profile Desc	ription: (Describe t	o the depth	n needed to docun	nent the i	ndicator	or confirm	n the absence of i	indicators.)
Depth	Matrix			x Feature	<u>s</u>	2		
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/1	90	10YR 4/6	10	Concer	М	Silty clay loam	
0 - 18	10YR 3/1	90	10YR 4/6	10	Concer	М	Silty clay loam	
-								
·								
-								
-								
-								
-								
·								
-								
-								
-								
	oncentration, D=Deple	ation RM-F	Peduced Matrix M	S-Masker	I Sand Gra	ine	<sup>2</sup> Location: P	L=Pore Lining, M=Matrix.
Hydric Soil I						aii 15.		Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Belov	v Surface	(S8) (I RE	R		k (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2)	-	MLRA 149B)			,		irie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi			Thin Dark Surfa		RR R, ML	RA 149B		ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	_	Loamy Mucky M					ace (S7) ( <b>LRR K, L, M</b> )
Stratified	l Layers (A5)	_	Loamy Gleyed I	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
	Below Dark Surface	. , –	Depleted Matrix					Surface (S9) (LRR K, L)
	ark Surface (A12)	_	X Redox Dark Su	. ,				anese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	Depleted Dark S		7)			Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	-	Redox Depress	ions (F8)				odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)							nt Material (F21)
	Matrix (S6) rface (S7) ( <b>LRR R, M</b>						Very Shallow Dark Surface (TF12) Other (Explain in Remarks)	
		LKA 149D)						
	f hydrophytic vegetati	on and wetl	and hydrology mus	t be prese	ent, unless	disturbed	or problematic.	
Restrictive L	_ayer (if observed):							
Туре:								
	ches):						Hydric Soil Pre	esent? Yes <u>X</u> No
Remarks:								

Wetland LP-026



Soil









W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga C	County	Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-027
Investigator(s): BCR Section, Township, Rat	nge: N/A	
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, conv	vex, none): <u>Concave</u>	Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.62158616732672 Long	g: <u>-81.1881934995889</u>	Datum: WGS 1984
Soil Map Unit Name: Ho: Holly silt loam, frequently flooded	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "	Normal Circumstances" pr	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If ne	eded, explain any answer	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-027
Remarks: (Explain alternative procedu	res here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	es (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	or (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizosphere	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reductio	on in Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C	C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	narks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	

Trop Stratum (Blot size: 30)	Absolute	Dominant Species?		Dominance Test worksheet:
Tree Stratum (Plot size:)				Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant Species Across All Strata: 3 (B)
3				
4				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	. <u> </u>	= Total Cove	er	OBL species $25$ x 1 = $25$ EACW species $75$ x 2 = $150$
Sapling/Shrub Stratum (Plot size: 15)				FACW species       75 $x 2 =$ 150         FAC species       20 $x 3 =$ 60
1				FACU species $0 \times 4 = 0$
2	<u> </u>			UPL species $0 \times 5 = 0$
3			<u> </u>	Column Totals: <u>120</u> (A) <u>235</u> (B)
4				
5			<u> </u>	Prevalence Index = B/A = 1.9583333333
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	er	$\frac{X}{X}$ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1Agrostis gigantea	30	Yes	FACW	data in Remarks or on a separate sheet)
2. Carex lurida	10	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Symphyotrichum lanceolatum	15	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Eupatorium perfoliatum	10	No	FACW	be present, unless disturbed or problematic.
5 Scirpus cyperinus	-	No	OBL	Definitions of Vegetation Strata:
6. Juncus effusus	5	No	OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Phalaris arundinacea		Yes	FACW	at breast height (DBH), regardless of height.
8. Carex vulpinoidea		No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. Juncus tenuis		Yes	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
12	120	= Total Cove		height.
Woody Vine Stratum (Plot size:30)	120		51	
1			·	Hydrophytic
2				Vegetation
3	·		·	Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Depth         Matrix         Redox Features           (inches)         Color (moist)         %         Type1         Loc2         Texture         Remarks           0         4         10YR 4/1         95         5YR 3/4         5         Concer         PL         Silty clay loam           4         18         10YR 4/1         80         5YR 4/6         20         Concer         M         Silty clay loam           -
Color (moist)         %         Color (moist)         %         Type <sup>1</sup> Loc <sup>2</sup> Texture         Remarks           0 - 4         10YR 4/1         95         5YR 3/4         5         Concer         PL         Silty clay loam           4 - 18         10YR 4/1         80         5YR 4/6         20         Concer         M         Silty clay loam           -
4         18         10YR 4/1         80         5YR 4/6         20         Concer         M         Silty clay loam           -
· · · · · · · · · · · · · · · · · · ·
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·  · · · · · · · · · · · · · ·
-
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histosof (A1) Polyvalde Below Surface (S0) (ERR R, 2 cm Midok (A10) (ERR R, L, MERA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11) X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)Redox Dark Surface (F6)Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)         Dark Surface (S7) (LRR R, MLRA 149B)       Other (Explain in Remarks)
Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)         Dark Surface (S7) (LRR R, MLRA 149B)       Other (Explain in Remarks)

General Site Photos

Wetland LP-027



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec Ci	y/County: Geauga County Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: <sup>Upland LP-026,027</sup>
Investigator(s): BCR Set	ection, Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Shoulder slope Local	relief (concave, convex, none): Convex Slope (%): 1
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.6215905</u>	Long: -81.18815733333334 Datum: WGS 1984
Soil Map Unit Name: Ho: Holly silt loam, frequently flooded	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly di	sturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally probl	ematic? (If needed, explain any answers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX Yes NoX Yes NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-026,027
Remarks: (Explain alternative proced	dures here or in a separate report.)	

Sampling Point: Upland LP-026,027

Tree Stratum (Plat size: 30 )	Absolute	Dominant I		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1	<u> </u>	· ·		That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: $0$ (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	r	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACTV species $x_2 =$
1				FAC species $0 \times 3 = 0$
2				FACU species $x_4 = 0000$
3				UPL species $10 \times 5 = 50$
				Column Totals: <u>100</u> (A) <u>410</u> (B)
4 5				Prevalence Index = B/A = 4.1
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	50	Yes	FACU	data in Remarks or on a separate sheet)
2. Dactylis glomerata	5	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Agrostis perennans	5	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Solidago canadensis	10	No	FACU	be present, unless disturbed or problematic.
5. Daucus carota		No	UPL	Definitions of Vegetation Strata:
O see the strict second second		No	FACU	_
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Rubus allegheniensis	15	Yes	FACU	
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				Harb All harbosoons (non-monda) plants recordlass of
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	100	= Total Cove	r	
Woody Vine Stratum (Plot size: 30 )				
· · · · · · · · · · · · · · · · · · ·				
1				Hydrophytic
2		<u> </u>		Vegetation
3		<u> </u>		Present? Yes No <sup>×</sup>
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

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Profile Desc	ription: (Describe t	o the depth	needed to docu	ment the i	ndicator	or confirm	the absence of in	dicators.)	
Depth	Matrix		Redo	x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remar	ks
0 - 2	10YR 3/2	100					Silty loam		
_									
		<u> </u>							
-									
_									
-									
-									
-									
-									
-									
-									
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion RM=R	Reduced Matrix M	S=Masked	Sand Gra	ains	<sup>2</sup> Location: PL =	=Pore Lining, M=	Matrix
Hydric Soil I				e maenea			Indicators for P	roblematic Hyd	ric Soils <sup>3</sup> :
Histosol			Polyvalue Belo	w Surface	(S8) (I RE	R		(A10) ( <b>LRR K, L</b> ,	
	pipedon (A2)		MLRA 149B		(00) (111	,		e Redox (A16) ( <b>L</b>	,
Black Hi			Thin Dark Surfa	,	.RR R, ML	<b>RA 149B</b> )		Peat or Peat (S	,
	n Sulfide (A4)		Loamy Mucky I					e (S7) ( <b>LRR K</b> , L	
	Layers (A5)	_	Loamy Gleyed			. ,		elow Surface (S8	
Depleted	Below Dark Surface	e (A11)	Depleted Matrix				Thin Dark S	urface (S9) (LRF	R K, L)
Thick Da	ark Surface (A12)	_	Redox Dark Su	irface (F6)			Iron-Manga	nese Masses (F1	2) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)		Depleted Dark		7)				19) ( <b>MLRA 149B</b> )
-	leyed Matrix (S4)	_	_ Redox Depress	sions (F8)					144A, 145, 149B)
-	edox (S5)							Material (F21)	
	Matrix (S6)							w Dark Surface (	TF12)
Dark Su	rface (S7) ( <b>LRR R, M</b>	<b>LRA 149B</b> )					Other (Expla	ain in Remarks)	
31	· · · · · · · · · · · · · · · · · · ·								
	hydrophytic vegetati		and hydrology mus	st be prese	ent, unless	disturbed	or problematic.		
	_ayer (if observed):	Х							
Type: Ro		<u> </u>							
Depth (inc	ches): <u>2</u>						Hydric Soil Pres	ent? Yes	No
Remarks:									

Upland LP-026,027



NE

Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: Geauga County Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-028
Investigator(s): BCR	Section, Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Swale Loo	al relief (concave, convex, none): <u>Concave</u> Slope (%): <u>3</u>
Subregion (LRR or MLRA): LRR R Lat: 41.620934832	25011 Long: -81.18937816724288 Datum: WGS 1984
Soil Map Unit Name: Ho: Holly silt loam, frequently flooded	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro	olematic? (If needed, explain any answers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-028
Remarks: (Explain alternative procedu	res here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
$Mater Table Present? Tes Mo \underline{\sim} Depth (incres).$	
Saturation Present? Yes X No Depth (inches): 10	Wetland Hydrology Present? Yes X No
Saturation Present? Yes X No Depth (inches): 10 (includes capillary fringe)	
Saturation Present?       Yes       X       No       Depth (inches):       10         (includes capillary fringe)       0       0       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, prev	
Saturation Present? Yes X No Depth (inches): 10 (includes capillary fringe)	
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Saturation Present?       Yes       X       No       Depth (inches):       10         (includes capillary fringe)       0       0       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, prev	
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Tree Stretum (Plot size: 30 )	Absolute	Dominant		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	er	OBL species x 1 =00
Sapling/Shrub Stratum (Plot size:15)				FACW species $30$ x 2 = $60$
1				FAC species x 3 =0
				FACU species x 4 =0
2				UPL species x 5 =
3				Column Totals: <u>130</u> (A) <u>160</u> (B)
4				4 000700000
5				Prevalence Index = $B/A = 1.230769230$
6				Hydrophytic Vegetation Indicators:
				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
		= Total Cove	er	X 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Leersia oryzoides	100	Yes	OBL	data in Remarks or on a separate sheet)
2. Symphyotrichum lanceolatum	20	No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Impatiens capensis			FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
5				_
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cove		inigini.
20			51	
Woody Vine Stratum (Plot size: 30)				
1			. <u> </u>	Hadaa a ka dh
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cove		
Remarks: (Include photo numbers here or on a separate	sheet )		51	
Remarks. (include proto numbers here of on a separate	sneet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirm	the absence o	of indicators.)
Depth	Matrix			x Features	<u>s</u>	2		
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 8	10YR 3/2	100					Silty clay loam	
8 <sup>-</sup> 18	Gley 1 2.5/10Y	95	5YR 3/4	5	Concer	PL	Silty clay loam	With gravel
-								
-								
-						·		
-								
-								
-								
-								
-								
-								
1 <u>т о о</u>							21	
Hydric Soil	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Belov	v Surface	(S8) (I <b>D</b>	<b>D</b>		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	bipedon (A2)	-	MLRA 149B)		(00) (EN	<b>х іх</b> ,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi		-	Thin Dark Surfa		.RR R, MI	RA 149B)		ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	en Sulfide (A4)	-	Loamy Mucky M			, L)	Dark Su	urface (S7) ( <b>LRR K, L, M</b> )
	d Layers (A5)		X Loamy Gleyed I		)			ue Below Surface (S8) (LRR K, L)
	d Below Dark Surface	(A11)	Depleted Matrix					ark Surface (S9) (LRR K, L)
	ark Surface (A12) lucky Mineral (S1)	-	Redox Dark Sui Depleted Dark \$	• • •	7)			nganese Masses (F12) ( <b>LRR K, L, R</b> ) Int Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Bleyed Matrix (S4)	-	Redox Depress		')			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Redox (S5)	-						rent Material (F21)
-	Matrix (S6)							nallow Dark Surface (TF12)
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (I	Explain in Remarks)
3								
	f hydrophytic vegetati Layer (if observed):	on and wet	land hydrology mus	t be prese	ent, unless	disturbed	or problematic.	
	Layer (il observeu).							
Type:		<u> </u>					Hudria Sail I	Present? Yes <u>X</u> No
Depth (ind	cnes).						Hydric Soli I	Present? Yes X No
Remarks:								

Wetland LP-028



Soil

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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Ge	auga County Sampli	ng Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: <mark>OH</mark> Sam	pling Point: Wetland LP-029
Investigator(s): BCR Section, Townsh	ip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Lowland Local relief (concave	e, convex, none): <u>Concave</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): LRR R Lat: 41.620099833227265	_ Long: <u>-81.19056366673681</u>	Datum: WGS 1984
Soil Map Unit Name: EhD: Ellsworth silt loam, 12 to 18 percent slopes	NWI classification:	J/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Remarks.	.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present?	Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Re	marks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-029
Remarks: (Explain alternative proced	lures here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) X Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	oils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes <u>X</u> No
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)	
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective recorded Data (stream gauge, monitoring well, aerial photos, previous inspective re	
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Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Ir Species?		Dominance Test worksheet: Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				Provedona la deservado ha ste
7				Prevalence Index worksheet: Total % Cover of:Multiply by:
		= Total Cover		$\frac{1}{1} \frac{1}{1} \frac{1}$
Sapling/Shrub Stratum (Plot size:15)				FACW species $20$ x 2 = $40$
1,				FAC species x 3 = 0
2				FACU species x 4 =0
				UPL species x 5 =0
3				Column Totals: <u>100</u> (A) <u>120</u> (B)
4 5				Prevalence Index = B/A = 1.2
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
1 Typha angustifolia	40	Yes	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Leersia oryzoides	30	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3Persicaria sagittata		No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Symphyotrichum lanceolatum		No	FACW	be present, unless disturbed or problematic.
5 Impatiens capensis	5	No	FACW	Definitions of Vegetation Strata:
6Onoclea sensibilis	5	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12		<u> </u>		height.
	100	= Total Cover		
Woody Vine Stratum (Plot size: 30)				
1				Hydrophytic
2				Vegetation
3				Present? Yes X No
4				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	indicator of	or confirn	n the absence of indi	cators.)	
Depth	. Matrix			x Feature					
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 3	10YR 3/1	100					Silty clay loam		
3 <sup>-</sup> 14	Gley 1 3/_	70	Gley 1 6/10GY	10	Depleti	М	Silty clay loam		
-			7.5YR 4/6	20	Concer	М			
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<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion RM:	=Reduced Matrix M	S=Masker	Sand Gra	ains	<sup>2</sup> Location: PL=P	Pore Lining, M=Matrix.	
Hydric Soil								oblematic Hydric Soils <sup>3</sup> :	
Histosol			Polyvalue Belov		(S8) (LRF	R,		10) ( <b>LRR K, L, MLRA 149B</b> )	
	bipedon (A2)		MLRA 149B) Thin Dark Surfa			DA 440D		Redox (A16) (LRR K, L, R)	
Black Hi	n Sulfide (A4)		Loamy Mucky N					Peat or Peat (S3) ( <b>LRR K, L, R</b> ) (S7) ( <b>LRR K, L, M</b> )	
	Layers (A5)		X Loamy Gleyed			, ,		low Surface (S8) (LRR K, L)	
	Below Dark Surface	(A11)	Depleted Matrix					rface (S9) ( <b>LRR K, L</b> )	
	ark Surface (A12)		Redox Dark Su	. ,				ese Masses (F12) (LRR K, L, R)	
	lucky Mineral (S1) ileyed Matrix (S4)		Depleted Dark Redox Depress		-7)			odplain Soils (F19) ( <b>MLRA 149B</b> ) (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
	edox (S5)						Red Parent M		
-	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 1498	3)				Other (Explain	n in Remarks)	
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and we	atland hydrology mus	t be prese	ent unless	disturbed	l or problematic		
	_ayer (if observed):		siana nyarology mae			diotarboa			
Type: Ro	ck								
Depth (ind	ches): <u>14</u>						Hydric Soil Preser	nt? Yes X No	
Remarks:									





Е

Soil



S

Ν



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga Co	ounty	Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Upland LP-028,029
Investigator(s): BCR Section, Township, Range	ge: N/A	
Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, conve	ex, none): <u>Convex</u>	Slope (%): 4
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.620138666666666666666666666666666666666666</u>	: -81.19060283333334	Datum: WGS 1984
Soil Map Unit Name: EhD: Ellsworth silt loam, 12 to 18 percent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "N	lormal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If nee	eded, explain any answer	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX Yes NoX Yes NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-028,029
Remarks: (Explain alternative proced	ures here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)	

Sampling Point: Upland LP-028,029

Tree Stratum (Plot size: <sup>30</sup> )	Absolute % Cover	Dominant I Species?		Dominance Test worksheet:
,		<u>opecies :</u>	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3		. <u> </u>		Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove		$\begin{array}{c} \hline \hline \\ $
			1	FACW species $0 \times 2 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $x_2 = FAC species x_3 = 15$
1		<u> </u>		FACU species $140$ x 4 = $560$
2				$\begin{array}{c} \text{PACU Species} \\ \text{UPL species} \\ 0 \\ \text{x 5 = } \\ 0 \\ \end{array}$
3				Column Totals: $145$ (A) $575$ (B)
4				(A) = (A) = (A) = (A)
5				Prevalence Index = B/A = 3.965517241:
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7		·		2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Solidago canadensis	80	Yes	FACU	data in Remarks or on a separate sheet)
2. Rubus allegheniensis	10	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Desmodium canadense	5	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	50		FACU	be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
5				Demitions of Vegetation Otrata.
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				at bleast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	145	= Total Cove	r	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate			1	
	Sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docu	ment the i	ndicator	or confirm	the absence of inc	licators.)	
Depth	Matrix			x Features	<u> </u>				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	3
0 - 18	10YR 3/2	100					Silty clay loam		
-									
·							·		
-							<u> </u>		
-									
-									
·							·		
-									
-									
							· ·		
				. <u> </u>			<u> </u>		
-									
-									
·							· ·		
							·		
-									
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion RM=R	Reduced Matrix M	S=Masked	Sand Gra	ains	<sup>2</sup> Location PL =	Pore Lining, M=M	atrix
Hydric Soil I			<u></u>		euna en			roblematic Hydri	
Histosol			Polyvalue Belo	w Surface	(S8) ( <b>LRF</b>	R,		A10) ( <b>LRR K, L, N</b>	
	pipedon (A2)		MLRA 149B					e Redox (A16) ( <b>LF</b>	
Black His	stic (A3)		_ Thin Dark Surfa	ace (S9) (L	RR R, ML	RA 149B)	) 5 cm Mucky	Peat or Peat (S3)	(LRR K, L, R)
	n Sulfide (A4)	_	_ Loamy Mucky I			, L)		e (S7) ( <b>LRR K, L,</b>	
	Layers (A5)		_ Loamy Gleyed		)			elow Surface (S8)	
	Below Dark Surface	(A11)	_ Depleted Matrix					urface (S9) (LRR I	
	rk Surface (A12) lucky Mineral (S1)	-	Redox Dark Su Depleted Dark		7)		-	ese Masses (F12 podplain Soils (F1	
	leyed Matrix (S4)	_	Redox Depress		')			c (TA6) ( <b>MLRA 1</b> 4	
	edox (S5)	-						Material (F21)	,,
	Matrix (S6)							v Dark Surface (TI	=12)
Dark Sur	face (S7) (LRR R, M	LRA 149B)					Other (Expla	in in Remarks)	·
	hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	nt, unless	disturbed	or problematic.		
Restrictive L	ayer (if observed):								
Type:									
Depth (inc	ches):						Hydric Soil Prese	ent? Yes	No
Remarks:									

Upland LP-028,029





Soil

SW

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	ounty: <u>Geauga County</u> Sampling Date: <u>09/28/2021</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-030E
Investigator(s): BCR Secti	on, Township, Range: N/A
Landform (hillslope, terrace, etc.): Swale Local rel	ef (concave, convex, none): <u>Concave</u> Slope (%): <u>1</u>
Subregion (LRR or MLRA): LRR R Lat: 41.6188858333333	Long: -81.192654166666667 Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?	es X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	tic? (If needed, explain any answers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-030E
Remarks: (Explain alternative procedu	res here or in a separate report.	

Wetland Hydrology Indicato	ors:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
— High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)				Dry-Season Water Table (C2)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2)		X Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Sc	oils (C6)	X Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Cond	cave Surface (B8)			X FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes No _	X Depth (inches):		
Mater Table Developed	Vee Ne	Y Double (in shees):		
Water Table Present?	res No _	X Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):		lydrology Present? Yes <u>X</u> No
Saturation Present? (includes capillary fringe)	Yes No _			
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _	X Depth (inches):		

Sampling Point: <u>Wetland LP-030E</u>

Trac Stratum (Plat size) 30	Absolute	Dominant		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2			·	Total Number of Dominant
3			<u> </u>	Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove		$\frac{1}{10000000000000000000000000000000000$
Sapling/Shrub Stratum (Plot size: 15 )		- 10101 0000		FACW species $55 \times 2 = 110$
	10	Vaa	FAC	FAC species $25 \times 3 = 75$
1 Frangula alnus			FAC	FACU species $0   x 4 = 0$
2				UPL species $0 \times 5 = 0$
3				Column Totals: 130 (A) 235 (B)
4				4 007000074
5				Prevalence Index = B/A = 1.807692307(
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		$\underline{X}$ 2 - Dominance Test is >50%
			51	<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum         (Plot size:5)           1         Juncus effusus	30	Yes	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Solidago rugosa		No	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			OBL	
			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Apocynum cannabinum		No		
5. Symphyotrichum lanceolatum		No	FACW	Definitions of Vegetation Strata:
6. Carex scoparia	50	Yes	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	120	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2				Vegetation
3			<u> </u>	Present? Yes <u>X</u> No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			·

### SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the absence o	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 10	10YR 3/2	90	5YR 3/4	10	Concer	PL	Silty clay loam	
10 - 18	10YR 5/2	80	5YR 5/8	20		PL,M	Silty clay	
-								
					·			
					·			
-								
-								
-								
		<u> </u>			<u> </u>			
		<u> </u>			<u> </u>	·		
-		<u> </u>						
-								
-					·			
1							2	
Type: C=Co Hydric Soil I	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Histosol			Polyvalue Belov	v Surface	(S8) (I RE	R		uck (A10) (LRR K, L, MLRA 149B)
	vipedon (A2)	-	MLRA 149B)			,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black His		_	Thin Dark Surfa		.RR R, ML	.RA 149B)		ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	-	Loamy Mucky N			L)		ırface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)		Loamy Gleyed I		.)			ue Below Surface (S8) (LRR K, L)
	Below Dark Surface		Depleted Matrix					Irk Surface (S9) (LRR K, L)
	rk Surface (A12) lucky Mineral (S1)	-	X Redox Dark Su Depleted Dark S	. ,				nganese Masses (F12) ( <b>LRR K, L, R</b> ) nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	ileyed Matrix (S4)	-	Redox Depress		')			Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)	-						rent Material (F21)
	Matrix (S6)							allow Dark Surface (TF12)
Dark Sur	face (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (E	Explain in Remarks)
<sup>3</sup> Indicators of	hydrophytic vegetati	on and wet	land hydrology mus	t be prese	ent, unless	disturbed	or problematic.	
Restrictive L	ayer (if observed):			-				
Type:								
Depth (inc	ches):						Hydric Soil F	Present? Yes X No
Remarks:								

General Site Photos

Wetland LP-030E



Soil

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S

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga County	Sa	mpling Date: 09/28/2021
Applicant/Owner: FirstEnergy	State: OH S	Sampling Point: <sup>Wetland LP-030S</sup>
Investigator(s): BCR Section, Township, Range: N	J/A	
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, no	one): <u>Concave</u>	Slope (%): <u>1</u>
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.619429166666666</u> Long: <u>-81.</u>	.19178916666665	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification	n: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	(If no, explain in Rema	arks.)
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Norma	al Circumstances" prese	ent? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-030S
Remarks: (Explain alternative procedu	res here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	g Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled	Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Descent ONE No. No. No. Y. Desth (in sheet)	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	

Sampling Point: <u>Wetland LP-030S</u>

Trac Stratum (Plat size) 30	Absolute	Dominant		Dominance Test worksheet:			
Tree Stratum         (Plot size:)           1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)			
2 3				Total Number of Dominant         Species Across All Strata:         6         (B)			
4				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC: $0.66666666666$ (A/B)			
6							
7				Prevalence Index worksheet:			
/·				$\begin{array}{c c} \underline{\text{Total \% Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 40 & \text{x 1} = 40 \end{array}$			
45		= Total Cove	er				
Sapling/Shrub Stratum (Plot size: 15 )				FACTV species $x_2 = \frac{10}{10}$			
1. Frangula alnus	50	Yes	FAC	FAC species $x_3 = 210$			
2. Rubus allegheniensis	15	Yes	FACU	racu species x 4 =			
3							
4				Column Totals: <u>155</u> (A) <u>410</u> (B)			
5				Prevalence Index = $B/A = 2.645161290$			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
· ·				X 2 - Dominance Test is >50%			
F	00	= Total Cove	er	<u>X</u> 3 - Prevalence Index is $\leq 3.0^{1}$			
Herb Stratum         (Plot size:5)           1Juncus effusus	40	Yes	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>			
			FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
3. Symphyotrichum lanceolatum			bo prosent unless disturbed or problematic	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
4. Solidago canadensis		Yes	FACU				
5 Frangula alnus	15	Yes	FAC	Definitions of Vegetation Strata:			
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter			
7				at breast height (DBH), regardless of height.			
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
9							
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in			
12				height.			
	90	= Total Cove	er				
Woody Vine Stratum (Plot size: 30 )							
1							
				Hydrophytic			
2				Vegetation Present? Yes <sup>X</sup> No			
3							
4							
		= Total Cove	er				
Remarks: (Include photo numbers here or on a separate	Remarks: (Include photo numbers here or on a separate sheet.)						

I

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirn	n the absence o	of indicators.)			
Depth	Matrix			x Feature	<u>s</u>						
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Re	marks		
0 - 6	10YR 3/2	95	5YR 3/4	5	Concer	PL	Silty loam				
6 - 18	2.5Y 6/4	70	5YR 5/8	30	Concer	М	Silty clay loam				
-											
-											
					·		·				
							·				
-											
-											
-								-			
		<u> </u>					·			<u> </u>	
							- <u> </u>				
-											
-											
			<u> </u>								
	<u> </u>	<u> </u>									
	oncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore Lining,		L- <sup>3</sup> .	
Hydric Soil I			Daharahan Dalar					or Problematic	-		
<u> </u>	(AT) bipedon (A2)	-	Polyvalue Belov MLRA 149B		(58) ( <b>LRF</b>	К К,		uck (A10) ( <b>LRR k</b> Prairie Redox (A10			
Black His			Thin Dark Surfa	,	.RR R. ML	.RA 149B					
	n Sulfide (A4)	-	Loamy Mucky N				) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M)				
Stratified	Layers (A5)	-	Loamy Gleyed	Matrix (F2	2)		Polyvalue Below Surface (S8) (LRR K, L)				
	Below Dark Surface		Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)				
	ark Surface (A12)	-	X Redox Dark Su				Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)				
	lucky Mineral (S1) ileyed Matrix (S4)	-	Depleted Dark Redox Depress		-7)			nt Floodplain Sol Spodic (TA6) ( <b>ML</b> I			
	edox (S5)	-	Redux Depress	sions (F0)						145, 1450)	
	Matrix (S6)						Red Parent Material (F21) Very Shallow Dark Surface (TF12)				
	rface (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (Explain in Remarks)				
<u>^</u>											
	hydrophytic vegetati	on and wet	land hydrology mus	st be prese	ent, unless	disturbed	l or problematic.				
	_ayer (if observed):										
Type:									× .		
	ches):						Hydric Soil I	Present? Yes	<u> </u>	NO	
Remarks:											

General Site Photos

Wetland LP-030S



Soil

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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga C	County	Sampling Date: 09/28/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Upland LP-030
Investigator(s): BCR Section, Township, Ran	nge: N/A	
Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, conve	ex, none): <u>Convex</u>	Slope (%): 2
Subregion (LRR or MLRA): LRR R Lat: 41.6192731666666666 Long	g: <u>-81.19200216666665</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$ No	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "N	Normal Circumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If nee	eded, explain any answers	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX Yes NoX Yes NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-030
Remarks: (Explain alternative proce		

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)		
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)		
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)		
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Second	C6) Geomorphic Position (D2)		
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)		
Field Observations:			
Surface Water Present? Yes <u>No X</u> Depth (inches):			
Water Table Present? Yes No <u>X</u> Depth (inches):			
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective			

Tree Stratium (Plat aize: 30)	Absolute	Dominant		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2			·	Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				
7				Prevalence Index worksheet:
· ·				$\begin{array}{c c} \underline{\text{Total \% Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 0 & \text{x 1 = } & 0 \\ \end{array}$
		= Total Cove	er	OBL species0 $x \ 1 = 0$ FACW species10 $x \ 2 = 20$
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $10 \times 3 = 30$
1				FACU species $112$ x 4 = $448$
2			<u> </u>	UPL species $x = 0$
3				Column Totals: $132$ (A) $498$ (B)
4				
5				Prevalence Index = B/A = 3.77272727272
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
-		= Total Cove	er	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)	60	Vee	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Solidago canadensis		Yes		data in Remarks or on a separate sheet)
2. Frangula alnus		No	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Symphyotrichum lanceolatum	10	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Cichorium intybus	2	No	FACU	be present, unless disturbed or problematic.
5. Schedonorus arundinaceus	40	Yes	FACU	Definitions of Vegetation Strata:
6. Potentilla indica	1	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Melilotus officinalis	2	No	FACU	at breast height (DBH), regardless of height.
8. Plantago major		No	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
9 Taraxacum officinale			FACU	and greater than or equal to 3.28 ft (1 m) tall.
			FACU	Herb – All herbaceous (non-woody) plants, regardless of
	1			size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	132	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic
3				Vegetation Present? Yes No <sup>X</sup>
4				
Remarks: (Include photo numbers here or on a separate		= Total Cove	er	
	sneet.)			

Profile Description: (D	escribe to the d	epth needed to docu	ment the i	ndicator	or confirm	the absence	of indicator	s.)	
	Matrix		ox Features	<u>s</u>					
(inches) Color (n	noist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	·
0 <sup>-</sup> 3 10YR	3/2 100					Silty loam			
-									
-									
·									
-									
-									
-									
-									
<sup>1</sup> Type: C=Concentration	, D=Depletion, R	M=Reduced Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore L		
Hydric Soil Indicators:						Indicators	for Problem	natic Hydrid	: Soils°:
Histosol (A1)		Polyvalue Belo		(S8) ( <b>LRF</b>	RR,				ILRA 149B)
Histic Epipedon (A2)	)	MLRA 149B	,				Prairie Redo		-
Black Histic (A3)		Thin Dark Surfa					-		(LRR K, L, R)
Hydrogen Sulfide (A		Loamy Mucky			, L)		urface (S7) (		
Stratified Layers (A5		Loamy Gleyed		)		Polyvalue Below Surface (S8) (LRR K, L)			
Depleted Below Dar		Depleted Matri					ark Surface (		
Thick Dark Surface		Redox Dark Su	• • •	7)			-		(LRR K, L, R)
Sandy Mucky Minera		Depleted Dark		7)					9) ( <b>MLRA 149B</b> )
Sandy Gleyed Matri: Sandy Redox (S5)	x (34)	Redox Depress	sions (Fo)				irent Materia		4 <b>A</b> , 145, 149B)
Stripped Matrix (S6)							nallow Dark		-12)
Dark Surface (S7) (							Explain in Re		12)
	INN N, WILNA I	<b>19</b> D)						eniaris)	
<sup>3</sup> Indicators of hydrophytic	c vegetation and	wetland hydrology mu	st be prese	nt. unless	disturbed	or problematic			
Restrictive Layer (if ob	-					 			
Type: Rocky									
Depth (inches): <u>3</u>						Hydric Soil	Procont?	Voc	<u>No X</u>
							resent:	163	
Remarks:									

Upland LP-030



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga C	County	Sampling Date: 09/28/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-031
Investigator(s): BCR Section, Township, Ra	inge: N/A	
Landform (hillslope, terrace, etc.): Swale Local relief (concave, con-	vex, none): <u>Concave</u>	Slope (%): 2
Subregion (LRR or MLRA): LRR R Lat: 41.61459416681998 Lon	ng: <u>-81.20062416730163</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $X$ No No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are '	"Normal Circumstances" pr	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If ne	eeded, explain any answer	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-031
Remarks: (Explain alternative procedu	ires here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	oots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Second	oils (C6) X Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? Yes <u>No X</u> Depth (inches):				
Water Table Present? Yes <u>No X</u> Depth (inches):				
Water Table Present?       Yes No _X Depth (inches):         Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Yes No _X Depth (inches):	Wetland Hydrology Present? Yes X No			
Saturation Present? Yes No X Depth (inches):				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				
Saturation Present?       Yes NoX Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)				

Sampling Point: <u>Wetland LP-031</u>

Trac Stratum (Plat size) 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum         (Plot size:)           1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2				
3				Total Number of Dominant         Species Across All Strata:         3         (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
				Prevalence Index worksheet:
7				
		= Total Cove	er.	OBL species         5         x 1 =         5           FACW species         120         x 2 =         240
Sapling/Shrub Stratum (Plot size: 15 )	-	Maa	540	FAC species $20 \times 3 = 60$
1 Frangula alnus			FAC	FACU species $10 \times 4 = 40$
2				UPL species $0 \times 5 = 0$
3				Column Totals: (A) 345 (B)
4				Prevalence Index = B/A = 2.225806451(
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				$\underline{X}$ 2 - Dominance Test is >50%
_	5	= Total Cove	er	$X$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum         (Plot size:5)           1         Phragmites australis	40	Yes	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
	10		FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			FACW	
3.     Phalaris arundinacea       4.     Rosa multiflora	- 10	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5 Juncus effusus		No	OBL	Definitions of Vegetation Strata:
		No	FAC	
			FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH
· · · · · · · · · · · · · · · · · · ·			FACW	and greater than or equal to 3.28 ft (1 m) tall.
9. Euthamia graminifolia		No	FAC	Herb – All herbaceous (non-woody) plants, regardless of
10Verbena hastata	5	No	FACW	size, and woody plants less than 3.28 ft tall.
11 12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12		= Total Cove		height.
Weedy Vine Stretum (Plateize: 30)			71	
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2				Vegetation
3				Present? Yes X No
4	. <u> </u>			
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

SOIL	S	0		
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Profile Desc	ription: (Describe t	o the dept	h needed to docum	nent the i	indicator of	or confirm	the absence	of indicato	rs.)		
Depth	Matrix			<u>Feature</u>		. 2	<b>-</b> .				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	(S	
0 - 3	10YR 4/2	100					Silty clay loam				
3 - 10	10YR 4/2	95	5YR 3/4	5	Concer	PL,M	Silty clay loam				
10 <sup>-</sup> 18	10YR 5/1	85	7.5YR 4/6	15	Concer	М	Silty clay loam				
-											
-											
-		·									
		·			· <u> </u>						
		·			· <u> </u>						
-											
-											
-											
-		·									
$^{1}$ Type: C=C	oncentration, D=Deple	tion RM=	Reduced Matrix MS	=Masker	Sand Gra	ains	<sup>2</sup> Location	PL=Pore I	l ining M=	Matrix	
Hydric Soil				mashee			Indicators	for Probler	matic Hyd	ric Soils <sup>3</sup> :	
Histosol			Polyvalue Below		(S8) (LRF	2 R,				MLRA 149B)	
	bipedon (A2)		MLRA 149B)					Coast Prairie Redox (A16) (LRR K, L, R)			-
Black Hi	stic (A3) en Sulfide (A4)		Thin Dark Surface				<ul> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li>Dark Surface (S7) (LRR K, L, M)</li> <li>Polyvalue Below Surface (S8) (LRR K, L)</li> <li>Thin Dark Surface (S9) (LRR K, L)</li> </ul>			R)	
	d Layers (A5)	•	Loamy Gleyed N			-/					
-	d Below Dark Surface	(A11)	X Depleted Matrix								
	ark Surface (A12)	-		Redox Dark Surface (F6) Depleted Dark Surface (F7)						2) (LRR K, L,	
	lucky Mineral (S1) Gleyed Matrix (S4)		Depleted Dark S		-7)			Piedmont Floodplain Soils (F19) (MLRA 149B)			
	Redox (S5)			0113 (1 0)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) Red Parent Material (F21)				<b>3D</b> )
	Matrix (S6)						Very Shallow Dark Surface (TF12)				
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149B	3)				Other (Explain in Remarks)				
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and we	tland hydrology must	the nree	ant unless	disturbed	or problematic				
	Layer (if observed):		liand hydrology mus	t be prese	ent, unices	uistuibeu		·			
Type:											
Depth (ind	ches):						Hydric Soil	Present?	Yes X	No	
Remarks:											

General Site Photos

Wetland LP-031



Soil



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County:	Geauga County	Sampling Date: 09/28/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Upland LP-031
Investigator(s): BCR Section, Tor	wnship, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Footslope Local relief (con	ncave, convex, none): <u>Flat</u>	Slope (%): 10
Subregion (LRR or MLRA): LRR R Lat: 41.61459883333333	Long: <u>-81.20049016666665</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" pr	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-031
Remarks: (Explain alternative proce	dures here or in a	a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes No _X Depth (inches):	
Water Table Present?       Yes No _X Depth (inches):         Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: Upland LP-031

Trac Stratum (Plat size) 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum         (Plot size:)           1)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				Total Number of Dominant
3				Species Across All Strata:6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.3333333333 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	er	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 = 20
1. Cornus alba	5	Yes	FACW	FAC species x 3 =24
2Rosa multiflora	_	Yes	FACU	FACU species $120   x 4 = 480$
3Viburnum dentatum			FAC	UPL species $10 \times 5 = 50$
4				Column Totals: <u>148</u> (A) <u>574</u> (B)
5				Prevalence Index = $B/A = 3.878378378$ ;
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		2 - Dominance Test is >50%
		- 10tai 000	51	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum         (Plot size:5)           1Schedonorus arundinaceus	60	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2 Plantago lanceolata	15	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Symphyotrichum pilosum			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4Potentilla indica		Yes	FACU	be present, unless disturbed or problematic.
5. Daucus carota		No	UPL	Definitions of Vegetation Strata:
6Solidago gigantea		No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	130	= Total Cove	er	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
3				Vegetation Present? Yes No <sup>X</sup>
4		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate				

Profile Desc	ription: (Describe f	to the dept	h needed to docun	nent the i	ndicator	or confirn	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 14	10YR 3/2	100					Silty clay loam	
14 <sup>-</sup> 18	10YR 4/2	70	10YR 5/8	30	Concer	М	Silty clay loam	
-								
-								
-								
-								
-								
-								
1							2	
Hydric Soil I	oncentration, D=Depl Indicators:	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Below	v Surface	(S8) (I RE	R		luck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	bipedon (A2)	-	MLRA 149B)		(00) (ER	<b>х іх</b> ,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi		_	Thin Dark Surfa	ice (S9) ( <b>L</b>	RR R, MI	_RA 149B		lucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)	-	Loamy Mucky M	/lineral (F	1) ( <b>LRR K</b>	, L)	Dark S	urface (S7) ( <b>LRR K, L, M</b> )
	l Layers (A5)	-	Loamy Gleyed I		2)			lue Below Surface (S8) ( <b>LRR K, L</b> )
	d Below Dark Surface	e (A11)	Depleted Matrix					ark Surface (S9) ( <b>LRR K, L</b> )
	ark Surface (A12)	-	Redox Dark Su	. ,				anganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	Depleted Dark S		7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Bleyed Matrix (S4)	-	Redox Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)							arent Material (F21)
	Matrix (S6)							hallow Dark Surface (TF12)
Dark Sui	rface (S7) ( <b>LRR R, N</b>	ILRA 149B	)				Other (	Explain in Remarks)
	f hydrophytic vegetat	ion and wet	land hydrology mus	t be prese	ent, unless	s disturbed	l or problematic	
	_ayer (if observed):							
Type:	-h ).						Undria Cail	Processt2 Yes No. Y
Depth (ind Remarks:	cnes):						Hydric Soli	Present? Yes <u>No X</u>
Remarks.								

Upland LP-031



Soil



SW

Project/Site: Leroy Center-Mayfield 138 kV Transmi	ssion Line Projec City/County: Geauga C	ounty	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Wetland LP-032
Investigator(s): MJA	Section, Township, Ran	ige: N/A	
Landform (hillslope, terrace, etc.): Gulch or Gully	Local relief (concave, conv	ex, none): <u>Concave</u>	Slope (%): <u>0</u>
Subregion (LRR or MLRA): LRR R L	at: 41.61346533333334 Long	g: <u>-81.20175666666666</u>	Datum: WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to	70 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "N	Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If nee	eded, explain any answe	rs in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-032
Remarks: (Explain alternative procedu	res here or in a separate report.)	
PEM wetland in maintained powerline e	asement. Two intermittent stream	s flow south from wetland.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	oils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Mater Table Present? Fes No Depth (incres).	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: Wetland LP-032

Tree Streture (Distring 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.66666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove		$\frac{1}{\text{OBL species}} = \frac{65}{5} \times 1 = \frac{65}{5}$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species 65 x 2 = 130
				FAC species $2 \times 3 = 6$
1				FACU species 30 x 4 = 120
2				UPL species 0 x 5 = 0
3				Column Totals: <u>162</u> (A) <u>321</u> (B)
4				Prevalence Index = B/A = 1.9814814814
5				
6				Hydrophytic Vegetation Indicators:
7			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
		= Total Cove	er	X 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Phalaris arundinacea	50	Yes	FACW	data in Remarks or on a separate sheet)
2. Solidago canadensis	30	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Lythrum salicaria	15	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Typha angustifolia	10	No	OBL	be present, unless disturbed or problematic.
5 Agrimonia parviflora	2	No	FAC	Definitions of Vegetation Strata:
6 Juncus effusus	15	No	OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Symphyotrichum lanceolatum	5	No	FACW	at breast height (DBH), regardless of height.
8. Scirpus cyperinus	5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. Carex lurida	20	Yes	OBL	and greater than or equal to 3.28 ft (1 m) tall.
10. Agrostis gigantea		No	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	162	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
				Hydrophytic
2				Vegetation Present? Yes X No
3				
4	. <u></u>			
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

### SOIL

Profile Descr	iption: (Describe t	o the dept	th needed to docun	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>s</u>	2		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 10	10YR 4/1	90	5YR 3/4	10	Concer	PL,M	Silty clay	
-								
-								
							·	
-								
							·	
-								
-								
							·	
-								
							·	
		etion, RM=	Reduced Matrix, MS	S=Masked	I Sand Gra	ains.		: PL=Pore Lining, M=Matrix.
Hydric Soil In	dicators:						Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol (/			Polyvalue Belov		(S8) (LRR	RR,		1uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pedon (A2)		MLRA 149B)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hist			Thin Dark Surfa					lucky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Loamy Mucky M			, L)		urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)		Loamy Gleyed I		2)		-	lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)
	k Surface (A12)		Redox Dark Sur					anganese Masses (F12) ( <b>LRR K, L, R</b> )
	icky Mineral (S1)		Depleted Dark S		•7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	eyed Matrix (S4)		Redox Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Re								arent Material (F21)
	Matrix (S6)						-	hallow Dark Surface (TF12)
Dark Suna	ace (S7) ( <b>LRR R, M</b>	LKA 1490	•)					Explain in Remarks)
<sup>3</sup> Indicators of I	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent unless	disturbed	or problematic	
	ayer (if observed):		lana nyarology mas	t be prese		alotarbea		•
Type: Roc		^						
							Usudaia Cail	Dressent2 Vec X No
Depth (inch	1es): <u>0</u>						Hydric Soli	Present? Yes X No
Remarks:								

General Site Photos

Wetland LP-032



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Cour	nty: <u>Geauga County</u> Sampling Date: <u>10/20/2021</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-0:
Investigator(s): MJA Section,	Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Terrace Local relief (	(concave, convex, none): <u>Flat</u> Slope (%): <u>0</u>
Subregion (LRR or MLRA): LRR R Lat: 41.61296083333333	Long: <u>-81.20254383333334</u> Datum: WGS 194
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	d? Are "Normal Circumstances" present? Yes X 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       X       No	Is the Sampled Are within a Wetland? If yes, optional Wetla	ea Yes X No and Site ID: Wetland LP-033
HYDROLOGY		Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
	) dor (C1) res on Living Roots (C3 ed Iron (C4) on in Tilled Soils (C6) C7)	<ul> <li>Drainage Patterns (B10)</li> <li>Moss Trim Lines (B16)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> </ul>
Water Table Present?     Yes X     No Depth (inches):	5	
Saturation Present? Yes X No Depth (inches): (includes capillary fringe)	0 Wetland	d Hydrology Present? Yes <u>X</u> No
Remarks:	evious inspections), if a	available:

Trac Stratum (Distaire) 30	Absolute	Dominant I		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				
				Prevalence Index worksheet:
7			<u> </u>	$\begin{array}{c c} \underline{\text{Total } \% \text{ Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 25 & \text{x 1 = } 25 \end{array}$
		= Total Cove	r	
Sapling/Shrub Stratum (Plot size: 15 )				FACTOr species $x_2 = \frac{100}{100}$
1				FAC species $0 \times 3 = 0$
2				TACO species X4
3				
4				Column Totals: <u>117</u> (A) <u>213</u> (B)
5				Prevalence Index = $B/A = 1.820512820!$
6				Hydrophytic Vegetation Indicators:
				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
_		= Total Cove	r	X 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)	90	Yes	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Lythrum salicaria			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Scirpus cyperinus	10	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	2	No	FACU	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9		<u> </u>		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
10		<u> </u>		size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	117	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1/				
				Hydrophytic
2			<u> </u>	Vegetation Present? Yes X No
3			<u> </u>	Present? Yes <u>^</u> No
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redo	x Features	6					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	6	
0 - 3	10YR 2/2	100					Silty clay loam			
3 <sup>-</sup> 18	2.5Y 4/1	80	5YR 3/4	20	Concer	М	Clay loam			
-										
-										
							·			
							<u> </u>			
-										
-										
-										
-							·			
		<u> </u>					·			
-		<u> </u>			<u> </u>					
-										
-										
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion RM=	Reduced Matrix M	S=Masked	Sand Gra	ains	<sup>2</sup> Location: PL	_=Pore Lining, M=N	latrix	
Hydric Soil I				e maonea				Problematic Hydri		
Histosol	(A1)	-	Polyvalue Belo	w Surface	(S8) ( <b>LRR</b>	R,	2 cm Muck	(A10) ( <b>LRR K, L, I</b>	MLRA 149B)	
Histic Ep	pipedon (A2)		MLRA 149B	)			Coast Prai	rie Redox (A16) ( <b>LF</b>	RR K, L, R)	
Black Hi		-	Thin Dark Surfa							
	n Sulfide (A4)	-	Loamy Mucky			, L)	Dark Surface (S7) (LRR K, L, M)			
	Layers (A5)		Loamy Gleyed		)		Polyvalue Below Surface (S8) (LRR K, L)			
	Below Dark Surface		Depleted Matrix				Thin Dark Surface (S9) ( <b>LRR K, L</b> ) Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b> )			
	ark Surface (A12)	-	X Redox Dark Su	. ,	7)		-			
	lucky Mineral (S1) ileyed Matrix (S4)	-	Depleted Dark Redox Depress		7)		<ul> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> </ul>			
	edox (S5)	-	Redux Depress					t Material (F21)	44A, 145, 149D)	
	Matrix (S6)							ow Dark Surface (T	F12)	
	rface (S7) (LRR R, M	LRA 149B	)					lain in Remarks)	)	
			,					,		
	f hydrophytic vegetati	ion and wet	land hydrology mus	st be prese	nt, unless	disturbed	or problematic.			
	_ayer (if observed):									
Type:		<u> </u>								
Depth (inc	ches):						Hydric Soil Pres	sent? Yes <u>X</u>	No	
Remarks:										

General Site Photos

Wetland LP-033



Soil



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S

Project/Site: Leroy Center-Mayfield 138 kV Tra	ansmission Line Projec City/County: G	eauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Upland LP-032,033
Investigator(s): MJA	Section, Towns	ship, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Mound	Local relief (conca	ive, convex, none): <u>Convex</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): LRR R	Lat: 41.61346548333332	Long: <u>-81.20174188333334</u>	Datum: WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam,	25 to 70 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site t	ypical for this time of year? Yes <u>X</u>	_ No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrolo	gy significantly disturbed?	Are "Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrolo	gy naturally problematic?	(If needed, explain any answe	rs in Remarks.)
Investigator(s): MJA Landform (hillslope, terrace, etc.): Mound Subregion (LRR or MLRA): LRR R Soil Map Unit Name: EhF: Ellsworth silt loam, Are climatic / hydrologic conditions on the site t Are Vegetation, Soil, or Hydrologic	Local relief (conca Lat: <u>41.61346548333332</u> 25 to 70 percent slopes ypical for this time of year? Yes <u>X</u> pgy significantly disturbed?	ship, Range: <u>N/A</u> ive, convex, none): <u>Convex</u> Long: <u>-81.20174188333334</u> NWI classific No (If no, explain in R Are "Normal Circumstances" p	Slope (%): 5 Datum:WGS 19 ation:N/A emarks.) present?_YesXNo

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>X</u> No <u>X</u> NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-032,033
Remarks: (Explain alternative proced Upland data form for W-MJA-102021-0		1 1 /	

Sampling Point: Upland LP-032,033

Tree Stratum (Plot size: <sup>30</sup> )	Absolute	Dominant Species?		Dominance Test worksheet:
/				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4		<u> </u>		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6			<u> </u>	Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	er	OBL species         2         x 1 =         2
Sapling/Shrub Stratum (Plot size:15)				FACW species20 x 2 =40
1				FAC species x 3 =0
2				FACU species <u>121</u> x 4 = <u>484</u>
				UPL species x 5 =
3				Column Totals: <u>143</u> (A) <u>526</u> (B)
4				Prevalence Index = $B/A = 3.678321678$ ;
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				<ul> <li>3 - Prevalence Index is ≤3.0<sup>1</sup></li> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting</li> </ul>
1 Solidago canadensis	60	Yes	FACU	data in Remarks or on a separate sheet)
2. Schedonorus arundinaceus	55	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	15	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Dichanthelium clandestinum			FACW	be present, unless disturbed or problematic.
		No	FACU	Definitions of Vegetation Strata:
		No	OBL	
· ···				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Liriodendron tulipifera			FACU	
8			<u> </u>	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		·		
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			<u> </u>	<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	143	= Total Cove	er	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
3				Vegetation Present? Yes No <sup>X</sup>
0				
4				
Remarks: (Include photo numbers here or on a separate		= Total Cove	er	
Remarks. (include proto numbers here of on a separate	sneet.)			

Profile Desc	ription: (Describe t	o the dept	n needed to docur	ment the i	ndicator	or confirm	the absence of indic	cators.)		
Depth	Matrix			x Features	<u>S</u>	. 0		_		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 18	10YR 3/2	100					Sandy clay loam			
-										
-										
-										
·							·			
						. <u> </u>				
-										
						·				
-										
-										
<u> </u>										
-										
-										
·			<u> </u>			······································	· ·			
-										
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.		ore Lining, M=Matrix.		
Hydric Soil I	ndicators:						Indicators for Pro	blematic Hydric Soils <sup>3</sup> :		
Histosol	(A1)	_	Polyvalue Belov	w Surface	(S8) ( <b>LRF</b>	R,		10) ( <b>LRR K, L, MLRA 149B</b> )		
Histic Ep	oipedon (A2)		MLRA 149B	,				Redox (A16) ( <b>LRR K, L, R</b> )		
Black His		-	Thin Dark Surfa				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)	-	Loamy Mucky N	-		, <b>L</b> )	Dark Surface (S7) (LRR K, L, M)			
	l Layers (A5)	-	Loamy Gleyed		)		Polyvalue Below Surface (S8) (LRR K, L)			
	Below Dark Surface	(A11)	Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)			
	rk Surface (A12)	-	Redox Dark Su	• • •			Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b> )			
	lucky Mineral (S1)	-	Depleted Dark		()		Piedmont Floodplain Soils (F19) (MLRA 149B)			
	leyed Matrix (S4)	-	Redox Depress	sions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) Red Parent Material (F21)			
	edox (S5)									
	Matrix (S6)							Dark Surface (TF12)		
Dark Sur	face (S7) ( <b>LRR R, M</b>	LKA 149D)					Other (Explain	In Remarks)		
<sup>3</sup> Indicators of	hydrophytic vegetati	on and wet	and hydrology mus	st he prese	nt unless	disturbed	or problematic			
	ayer (if observed):		and nyarology mat			alotarbea				
Type:										
	2hoo);						Hudria Sail Draaan	ta Na X		
Depth (inc	cnes):						Hydric Soll Presen	t? Yes <u>No X</u>		
Remarks:										



NE

Soil

Sampling Date: 10/20/2021
_ Sampling Point: Wetland LP-034
Slope (%): 0
Datum: WGS 1984
tion: N/A
marks.)
esent? Yes X No
s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

HYDROLOGY Wetland Hydrology Indicators: Secondary Indicator	ors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Cracks (B6) erns (B10) es (B16) /ater Table (C2) wws (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2) ard (D3) ohic Relief (D4)
Field Observations:         Surface Water Present?       Yes No Depth (inches):         Water Table Present?       YesX No Depth (inches):       14         Saturation Present?       YesX No Depth (inches):       8       Wetland Hydrology Present?         (includes capillary fringe)       Depth (inches):       8       Wetland Hydrology Present?         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:         Standing water near pit       Standing water near pit	? Yes <u>X</u> No

Tree Stratum (Distaine) 30	Absolute	Dominant		Dominance Test worksheet:				
		Species?		Number of Dominant Species				
1				That Are OBL, FACW, or FAC:4 (A)				
2				Total Number of Dominant Species Across All Strata: 4 (B)				
3				Species Across All Strata:4 (B)				
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)				
5								
6			<u> </u>	Prevalence Index worksheet:				
7			<u> </u>	Total % Cover of: Multiply by:				
		= Total Cove	er	OBL species $52 \times 1 = 52$				
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $124$ x 2 = $248$				
1 Frangula alnus	5	Yes	FAC	FAC species $5 \times 3 = 15$				
2. Cornus alba	2	Yes	FACW	FACU species X 4 =				
3								
4				Column Totals: <u>181</u> (A) <u>315</u> (B)				
5				Prevalence Index = B/A = 1.740331491				
6				Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
/		= Total Cove		X 2 - Dominance Test is >50%				
Had Obstance (Distained 5		- Total Cove		X 3 - Prevalence Index is ≤3.0 <sup>1</sup>				
Herb Stratum (Plot size: 5) 1. Phragmites australis	50	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting				
			FACW	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
3. Carex lurida		<u>No</u>	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
4. Juncus effusus		No	OBL					
5 Eutrochium maculatum	2	No	OBL	Definitions of Vegetation Strata:				
6. Eupatorium perfoliatum	2	No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter				
7			. <u> </u>	at breast height (DBH), regardless of height.				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
9				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of				
				size, and woody plants less than 3.28 ft tall.				
11				Woody vines – All woody vines greater than 3.28 ft in				
12	174	= Total Cove	er	height.				
Woody Vine Stratum (Plot size: 30 )								
/								
1			·	Hydrophytic				
2				Vegetation Present? Yes <sup>X</sup> No				
3			·					
4								
		= Total Cove	er					
Remarks: (Include photo numbers here or on a separate	sneet.)							

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the i	ndicator	or confirm	the absence o	f indicator	rs.)	
Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 18	2.5Y 4/1	92	10YR 4/6	8	Concer	М	Clay loam			
		·								
-										
		<u> </u>								
-										
-										
-										
-										
-										
_										
-										
-										
1							2			
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.			ining, M=Matri	
Hydric Soil I									natic Hydric S	
Histosol		_	_ Polyvalue Below		(S8) ( <b>LRF</b>	RR,			LRR K, L, MLF	
	vipedon (A2)		MLRA 149B)						x (A16) ( <b>LRR I</b>	
Black His		_	Thin Dark Surfa					-	or Peat (S3) ( <b>LF</b>	<b>R K, L, R</b> )
	n Sulfide (A4)	-	_ Loamy Mucky M			, L)			(LRR K, L, M)	
	l Layers (A5)	(444)	_ Loamy Gleyed I	)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)				
-	l Below Dark Surface irk Surface (A12)	(ATT) <u>-</u>	Contraction Depleted Matrix Redox Dark Sur			Iron-Manganese Masses (F12) (LRR K, L, R)				
	lucky Mineral (S1)	_	_ Depleted Dark Sul	7)						
	leyed Matrix (S4)		Redox Depress		")		<ul> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> </ul>			
	edox (S5)	_						ent Materia		, 140, 1400)
	Matrix (S6)								Surface (TF12	2
	face (S7) ( <b>LRR R, M</b>	I RA 149B)						xplain in R		,
		21011102)							ionnamo)	
<sup>3</sup> Indicators of	hydrophytic vegetati	on and wetla	and hvdroloav mus	t be prese	nt. unless	disturbed	or problematic.			
	ayer (if observed):				,					
Type:	· · · · · · · · · · · · · · · · · · ·									
	abos):						Hydric Soil P	rocont?	Yes X	No
	ches):						Hyunc Soli P	resent:		NO
Remarks:										

**General Site Photos** 

Wetland LP-034



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W

County: Geauga County Sampling Date: 10/20/2021
State: OH Sampling Point: Upland LP-034
ion, Township, Range: <u>N/A</u>
elief (concave, convex, none): Flat Slope (%):0
7 Long: -81.20360483333334 Datum: WGS 1984
NWI classification: N/A
Yes X No (If no, explain in Remarks.)
rbed? Are "Normal Circumstances" present? Yes X No
natic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydric Soil Present?	Yes Yes	No X No X	Is the Sampled Area within a Wetland? Yes No		
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: Upland LP-034		
Remarks: (Explain alternative procedures here or in a separate report.)					
Upland data form for W-MJA-102021-03. Data point in maintained powerline easement.					

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that	apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Water-	Stained Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2) Aquatic	Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl De	eposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrog	en Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidize	d Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presen	ce of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Recent	Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)			
Iron Deposits (B5) Thin M	uck Surface (C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (	Explain in Remarks)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present? Yes No X Depth	(inches):				
Water Table Present? Yes No X Depth	(inches):				
Saturation Present? Yes <u>No X</u> Depth (includes capillary fringe)	(inches): Wetland H	lydrology Present? Yes No _ X			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Tree Stratum (Plat size: 30 )	Absolute	Dominant I		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata:4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Description of the description of the
7				Prevalence Index worksheet:
· ·				$\begin{array}{c c} \underline{\text{Total \% Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 0 & \text{x 1 = } & 0 \\ \end{array}$
15		= Total Cove	ſ	
Sapling/Shrub Stratum (Plot size: 15 )				FACW species15 $x 2 = 30$ FAC species0 $x 3 = 0$
1				FACU species $155$ x 4 = $620$
2				UPL species         10 $x 5 = 50$
3				Column Totals: <u>180</u> (A) <u>700</u> (B)
4				
5				Prevalence Index = B/A = 3.88888888888888888888888888888888888
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Cove	r	$3 - Prevalence Index is \leq 3.0^1$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	35	Yes	FACU	data in Remarks or on a separate sheet)
2. Dactylis glomerata	20	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Phleum pratense	20	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Poa pratensis	50	Yes	FACU	be present, unless disturbed or problematic.
5. Phalaris arundinacea	15	No	FACW	Definitions of Vegetation Strata:
	15	No	FACU	Tree Mandu plants 2 in (7.0 am) as more in dispersion
			UPL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Daucus carota				
8. Solidago canadensis			FACU	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		·		
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	180	= Total Cove	r	
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2				Vegetation
3	<u> </u>	·		Present? Yes No X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Description: (Describe to the de	pth needed to docu	ment the i	ndicator	or confirm	the absence of	indicators.)	
Depth <u>Matrix</u>		ox Features	<u>s</u>				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	S
0 <sup>-</sup> 5 10YR 3/2 100					Silty clay loam		
					<u> </u>		
-							
					·		
-							
-							
-							
-							
<sup>1</sup> Type: C=Concentration, D=Depletion, RM	-Roducod Matrix M	S-Mackad	Sand Gr	aine	<sup>2</sup> Location:	PL=Pore Lining, M=N	Antrix
Hydric Soil Indicators:		S-Maskeu	Sanu Gra	anis.		r Problematic Hydr	
	Dobacelue Dolo	w Surface				-	
Histosol (A1) Histic Epipedon (A2)	Polyvalue Belo		(58) ( <b>LRF</b>	КК,		k (A10) ( <b>LRR K, L</b> ,	
	MLRA 149B Thin Dark Surfa	,		DA 440D)		airie Redox (A16) (L	
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky I					ky Peat or Peat (S3 ace (S7) ( <b>LRR K, L</b>	
Stratified Layers (A5)	Loamy Gleyed			, L)		Below Surface (S8	
Depleted Below Dark Surface (A11)	Depleted Matrix		)			Surface (S9) (LRR	
Thick Dark Surface (A12)	Redox Dark Su					ganese Masses (F1	
Sandy Mucky Mineral (S1)	Depleted Dark	• • •	7)			Floodplain Soils (F	
Sandy Gleyed Matrix (S4)	Redox Depress		• /			odic (TA6) ( <b>MLRA 1</b>	
Sandy Redox (S5)						nt Material (F21)	
Stripped Matrix (S6)						llow Dark Surface (1	F12)
Dark Surface (S7) (LRR R, MLRA 149	B)					plain in Remarks)	1 12)
	-)					plain in Romano)	
<sup>3</sup> Indicators of hydrophytic vegetation and w	etland hydrology mu	st be prese	nt unless	disturbed	or problematic		
Restrictive Layer (if observed): $\chi$	<u></u>		,	alotanooa			
Type: Rock							
	-						
Depth (inches): <u>5</u>	-				Hydric Soil Pr	esent? Yes	No <u>X</u>
Remarks:							

Upland LP-034



Soil



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Li	ine Projec City/County:	Geauga County	Sa	ampling Date: 10/2	20/2021
Applicant/Owner: FirstEnergy			State: OH	Sampling Point: W	/etland LP-035
Investigator(s): MJA	Section, Tow	nship, Range: <u>N//</u>	Α		
Landform (hillslope, terrace, etc.): Gulch or Gully	Local relief (con	cave, convex, non	e): <u>Concave</u>	Slope (	%): <u>3</u>
Subregion (LRR or MLRA): LRR R Lat: 41.6	61149050000001	Long: <u>-81.2</u>	05251166666666	Datum:	WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 perc	cent slopes		NWI classification	on: N/A	
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes X	No (I	lf no, explain in Rem	arks.)	
Are Vegetation, Soil, or Hydrologysi	ignificantly disturbed?	Are "Normal	Circumstances" pres	sent? Yes <u>X</u>	No
Are Vegetation, Soil, or Hydrology na	aturally problematic?	(If needed, ex	xplain any answers i	n Remarks.)	

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-035					
Remarks: (Explain alternative procedures here or in a separate report.)							
PEM wetland in maintained powerline the southwest portion of the wetland.	easement. Water flows under atv acc	cess road via two separate culverts. An ephemeral stream flows south from					

#### HYDROLOGY

Wetland Hydrology Indicators:	S	econdary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)		_ Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (B9)		_ Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)		Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iron (C4)		_ Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) <u>×</u>	_ Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	_	_ Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	_	_ Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X	_ FAC-Neutral Test (D5)				
Field Observations:						
Surface Water Present? Yes <u>No X</u> Depth (inches):						
Water Table Present? Yes X No Depth (inches): 16						
Water Table Tresent: Tes $\underline{-\pi}$ No $\underline{-\pi}$ Depth (increas).						
Saturation Present? Yes X No Depth (inches): 0	Wetland Hyd	lrology Present? Yes <u>X</u> No				
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)	•					
Saturation Present? Yes X No Depth (inches): 0	•					
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)	•					
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					
Saturation Present?       Yes       X       No       Depth (inches):       0         (includes capillary fringe)       0       0       0       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect       0       0	•					

Sampling Point: Wetland LP-035

Tree Stratum (Distaire) 30	Absolute	Dominant I		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove		$\frac{1}{\text{OBL species}} = \frac{95}{95} \times 1 = \frac{95}{95}$
Sapling/Shrub Stratum (Plot size:15)				FACW species $10$ x 2 = $20$
	5	Yes	FACU	FAC species 5 x 3 = 15
			FAC	FACU species <u>5</u> x 4 = <u>20</u>
2. Frangula alnus				UPL species x 5 =0
3				Column Totals: <u>115</u> (A) <u>150</u> (B)
4				Prevalence Index = $B/A = 1.3043478260$
5 6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
· ·				X 2 - Dominance Test is >50%
5		= Total Cove	er.	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum     (Plot size:5)       1Leersia oryzoides	80	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Scirpus cyperinus	10	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
<b>T</b>		No	OBL	be present, unless disturbed or problematic.
			FACW	Definitions of Vegetation Strata:
5. Eupatorium perfoliatum				
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	105	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				Hydrophytic
2				Vegetation Present? Yes <u>X</u> No
3				
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence of	of indicators.)
Depth	Matrix		Redo	x Features	<u>s</u>			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 <sup>-</sup> 18	2.5Y 4/1	90	7.5YR 3/4	10	Concer	PL,M	Sandy clay	
							·	
-								
-								
							·	
			<u> </u>					
-								
-								
-								
							. <u></u>	
-								
-								
1							2	
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I				o (	(00) <b>(1 5 5</b>	_		for Problematic Hydric Soils <sup>3</sup> :
Histosol		-	Polyvalue Belov		(58) ( <b>LR</b> F	К К,		uck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2)		MLRA 149B Thin Dark Surfa	,		PA 1498		Prairie Redox (A16) ( <b>LRR K, L, R</b> ) ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	-	Loamy Mucky N					urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	-	Loamy Gleyed					ue Below Surface (S8) ( <b>LRR K, L</b> )
	Below Dark Surface	e (A11)	X Depleted Matrix		/			ark Surface (S9) ( <b>LRR K, L</b> )
-	rk Surface (A12)		Redox Dark Su					anganese Masses (F12) ( <b>LRR K, L, R</b> )
Sandy M	ucky Mineral (S1)	_	Depleted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
-	leyed Matrix (S4)	-	Redox Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)							rent Material (F21)
	Matrix (S6)							nallow Dark Surface (TF12)
Dark Sur	face (S7) ( <b>LRR R, M</b>	ILRA 149B	)				Other (I	Explain in Remarks)
<sup>3</sup> Indiantara of	budrophytic vogstati	ion and wat	land hydrology my	the prese	nt unloca	diaturbad	or problematic	
	hydrophytic vegetati ayer (if observed):	ion and wet	iand hydrology mus	st be prese	ent, uniess	aisturbea	or problematic.	·
	ayer (il observeu).							
Type:	l )							
	hes):						Hydric Soil I	Present? Yes X No
Remarks:								

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W-MJA-102021-04

Wetland LP-035



Soil

ounty	Sampling Date: 10/20/2021
State: OH	_ Sampling Point: Upland LP-035
ge: N/A	
ex, none): <u>Flat</u>	Slope (%): 1
-81.205283666666667	Datum: WGS 1984
NWI classifica	ation: N/A
(If no, explain in Re	emarks.)
ormal Circumstances" p	resent? Yes X No
ded, explain any answer	s in Remarks.)
	State: OH 

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No <u></u>	If yes, optional Wetland Site ID: Upland LP-035
Remarks: (Explain alternative proced	ures here or in	a separate report.)	
Upland data form for W-MJA-102021-	04. Data point :	situated on mowed she	oulder of atv access path.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres on Living R	Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes <u>No X</u> Depth (inches):					
Water Table Present? Yes <u>No X</u> Depth (inches):					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					

Tree Stretum (Distaire) 30	Absolute	Dominant Ir		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0% (A/B)
6				<b>-</b>
				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $2 \times 2 = 2$
1				FAC species x 3 =
2		<u> </u>		FACU species $x 4 = 000$
3				UPL species $10 \times 5 = 50$ Column Totals: $90$ (A) $370$ (B)
4				Column Totals: <u>90</u> (A) <u>370</u> (B)
				Prevalence Index = B/A = 4.11
5				Hydronhytic Vagatation Indicators:
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cover		$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 )				<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting</li> </ul>
1. Schedonorus arundinaceus	80	Yes	FACU	data in Remarks or on a separate sheet)
2. Securigera varia	10	No	UPL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Vegetation Strata:
5				Demittons of Vegetation Strata.
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
				size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	90	= Total Cover		
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes <u>No</u> X
4				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate s				
	sneet.)			

Profile Description: (Describe to the de	epth needed to docu	ment the indi	cator or o	confirm	the absence of	f indicators.)	
Depth Matrix	Redo	ox Features					
(inches) Color (moist) %	Color (moist)	<u>%</u> T	ype <sup>1</sup> L		Texture	Re	emarks
0 <sup>-</sup> 12 10YR 3/2 100					Sandy loam		
-							
· · · ·							
-							
<u> </u>							
· _ · _ ~ _							
-							
-							
-							
-							
		<u> </u>			·		
-							
		0 Martin 1 0			21		NA NA tuin
<sup>1</sup> Type: C=Concentration, D=Depletion, R Hydric Soil Indicators:	M=Reduced Matrix, M	S=Masked Sa	and Grains	5.		PL=Pore Lining or Problematic	
	Debaseles Deb	0					-
Histosol (A1)	Polyvalue Belo		3) (LRR R	,			K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B Thin Dark Surfa	,		A 440D)			16) ( <b>LRR K, L, R</b> )
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky			-		face (S7) ( <b>LRR</b>	at (S3) ( <b>LRR K, L, R</b> )
Stratified Layers (A5)	Loamy Gleyed		LRRR, L)				e (S8) ( <b>LRR K, L</b> )
Depleted Below Dark Surface (A11)	Depleted Matri					k Surface (S9)	
Thick Dark Surface (A12)	Redox Dark Su						s (F12) ( <b>LRR K, L, R</b> )
Sandy Mucky Mineral (S1)	Depleted Dark					-	ils (F19) ( <b>MLRA 149B</b> )
Sandy Gleyed Matrix (S4)	Redox Depress						_RA 144A, 145, 149B)
Sandy Redox (S5)	'	( - )				ent Material (F2	-
Stripped Matrix (S6)						allow Dark Surfa	-
Dark Surface (S7) (LRR R, MLRA 14	9B)					xplain in Remai	
	,						,
<sup>3</sup> Indicators of hydrophytic vegetation and	wetland hydrology mu	st be present,	unless dis	sturbed	or problematic.		
Restrictive Layer (if observed): $\chi$		-					
Type:_Rocky							
Depth (inches): 12	_				Hydric Soil P	resent? Yes	No X
Remarks:	_						
Remarks.							

General Site Photos

Upland LP-035





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Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: G	Geauga County g	Sampling Date: 10	/20/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point:	Wetland LP-036
Investigator(s): MJA	Section, Towns	ship, Range: <u>N/A</u>		
Landform (hillslope, terrace, etc.): Floodplain Loo	ocal relief (conca	ave, convex, none): Undulating	Slope	(%):_10
Subregion (LRR or MLRA): LRR R Lat: 41.609836833	333333	Long: -81.20666766666668	Datum:	WGS 1984
Soil Map Unit Name: Tg: Tioga loam, frequently flooded		NWI classificat	tion: N/A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X	No (If no, explain in Rei	marks.)	
Are Vegetation, Soil, or Hydrology significantly	/ disturbed?	Are "Normal Circumstances" pre	esent? Yes <u>X</u>	No
Are Vegetation, Soil, or Hydrology naturally pro	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?       Yes       X       No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-036
HYDROLOGY	
Drift Deposits (B3)	3)      Moss Trim Lines (B16)         a)      Dry-Season Water Table (C2)         b)      Crayfish Burrows (C8)         ceres on Living Roots (C3)      Saturation Visible on Aerial Imagery (C9)         ded Iron (C4)      Stunted or Stressed Plants (D1)         tion in Tilled Soils (C6)       XGeomorphic Position (D2)         (C7)      Shallow Aquitard (D3)
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes _X No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, pi         Remarks:       Remarks:	1     Wetland Hydrology Present? Yes X No       irrevious inspections), if available:

Tree Stratum (Plat size: 30)	Absolute	Dominant Ir Species?		Dominance Test worksheet:
Tree Stratum (Plot size:)				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1(A/B)
5				
6		<u> </u>		Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cover	r	OBL species $70 \times 1 = 70$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $45$ x 2 = $90$
1				FAC species $0 \times 3 = 0$
2				FACU species X 4 =
3				
4				Column Totals: <u>115</u> (A) <u>160</u> (B)
5				Prevalence Index = B/A = 1.391304347{
6				Hydrophytic Vegetation Indicators:
7				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
1				X 2 - Dominance Test is >50%
5		= Total Cover		X 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum     (Plot size: 5)       1.     Carex tribuloides	25	Yes	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Phalaris arundinacea			FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Scirpus atrovirens	70		OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
				-
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10	·			size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12		<u> </u>		height.
	115	= Total Cover	r	
Woody Vine Stratum (Plot size: 30 )				
1		· ·		
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cover	·	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicator	rs.)	
Depth	Matrix		Redo	x Features	5					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 4	10YR 3/2	98	7.5YR 4/4	2	Concer	М	Silt	N	Mucky and san	dy
4 <sup>-</sup> 18	Gley 1 10Y 2.5/1	100					Sandy loam			
				·						
					<u> </u>					
-										
-										
-										
-										
		<u> </u>								
-										
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.			_ining, M=Matr	
Hydric Soil I									natic Hydric S	
<u> </u>		-	Polyvalue Belov		(S8) ( <b>LRF</b>	RR,				
	bipedon (A2)		MLRA 149B)			DA 440B)			ox (A16) ( <b>LRR</b>	
Black His	n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky N					-	or Peat (S3) (L (LRR K, L, M)	KKK,L,K)
	I Layers (A5)	-	X Loamy Gleyed I			, ⊑)			urface (S8) ( <b>LI</b>	RRKI)
	Below Dark Surface		Depleted Matrix		/				(S9) (LRR K, I	
	ark Surface (A12)	()	Redox Dark Su						lasses (F12) ( <b>L</b>	
	lucky Mineral (S1)	-	Depleted Dark S		7)				in Soils (F19) (	
	leyed Matrix (S4)	-	Redox Depress		,				6) (MLRA 144A	
	edox (S5)	_		. ,				rent Materia		,
	Matrix (S6)								Surface (TF12	2)
Dark Su	face (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (I	Explain in R	Remarks)	
2										
	hydrophytic vegetati	on and wet	land hydrology mus	t be prese	ent, unless	disturbed	or problematic.			
	ayer (if observed):									
Type:	-1 <b>)</b>							<b>.</b>	No. V	NI -
	ches):						Hyaric Soli I	Present?	Yes X	NO
Remarks:										

General Site Photos

Wetland LP-036



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: Ge	eauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		State: OH	_ Sampling Point: Upland LP-036
Investigator(s): MJA	Section, Townsh	hip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Hillside Loo	cal relief (concav	ve, convex, none): Undulating	Slope (%): <u>20</u>
Subregion (LRR or MLRA): LRR R Lat: 41.609844333	333333	Long: <u>-81.20655983333332</u>	Datum: WGS 1984
Soil Map Unit Name: FcB: Fitchville silt loam, 2 to 6 percent slopes		NWI classificat	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X	_ No (If no, explain in Rei	marks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed?	Are "Normal Circumstances" pre	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro	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? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>X</u> No <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>No</u> If yes, optional Wetland Site ID: Upland LP-036
Remarks: (Explain alternative proce	dures here or ir	n a separate report.)	
Upland data point on steep hillslope in	n maintained p	owerline easement.	

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	pils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	

Trac Stratum (Plat aiza: 30 )	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: <sup>3</sup> (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
5				
6		·		Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
		= Total Cove	r	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1				FAC species $10 \times 3 = 30$
2				FACU species $95 \times 4 = 380$
3				UPL species $10 \times 5 = 50$
				Column Totals: <u>115</u> (A) <u>460</u> (B)
4				Prevalence Index = $B/A = 4$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7		·		2 - Dominance Test is >50%
		= Total Cove	r	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum     (Plot size:5)       1Schedonorus arundinaceus	20	Yes	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		<u>Yes</u>		
3. Poa pratensis			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Frangula alnus			FAC	
5. Daucus carota	10	No	UPL	Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		. <u></u> .		and greater than of equal to 3.26 it (1 m) tail.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				size, and woody plants less than 5.26 it tail.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cove		noight.
Woody Vine Stratum (Plot size:30)				
1				Hydrophytic
2				Vegetation
3		·	<u> </u>	Present? Yes <u>No</u> X
4	. <u> </u>	·		
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Description: (Describe to the	e depth needed to doc	ument the indica	tor or confirm	the absence of ind	licators.)
Depth <u>Matrix</u>	Red	dox Features			
(inches) Color (moist) %	6 Color (moist)	% Typ	e <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0 <sup>-</sup> 14 10YR 3/3 10	00			Sandy loam	
-					
-					
· · · ·					
-					
-					
-					
<u> </u>					
· · · · ·					
-					
-					
· ·					
<sup>1</sup> Type: C=Concentration, D=Depletion	, RM=Reduced Matrix, I	MS=Masked Sand	Grains.		Pore Lining, M=Matrix.
Hydric Soil Indicators:				Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
Histosol (A1)		ow Surface (S8) (	LRR R,		A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic Epipedon (A2)	MLRA 149	,			Redox (A16) ( <b>LRR K, L, R</b> )
Black Histic (A3)		rface (S9) ( <b>LRR R</b>		-	Peat or Peat (S3) ( <b>LRR K, L, R</b> )
Hydrogen Sulfide (A4)		/ Mineral (F1) ( <b>LR</b>	R K, L)		e (S7) ( <b>LRR K, L, M</b> )
Stratified Layers (A5)	Loamy Gleye			-	elow Surface (S8) ( <b>LRR K, L</b> )
Depleted Below Dark Surface (A1					ırface (S9) ( <b>LRR K, L</b> )
Thick Dark Surface (A12)	Redox Dark S			-	ese Masses (F12) ( <b>LRR K, L, R</b> )
Sandy Mucky Mineral (S1)		k Surface (F7)			oodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy Gleyed Matrix (S4)	Redox Depre	ssions (F8)			c (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Redox (S5)					Material (F21)
Stripped Matrix (S6)					/ Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA	149B)			Other (Explai	in in Remarks)
3					
<sup>3</sup> Indicators of hydrophytic vegetation ar	nd wetland hydrology m	ust be present, un	less disturbed	or problematic.	
Restrictive Layer (if observed): $\chi$					
Type: Gravel					
Depth (inches): <u>14</u>				Hydric Soil Prese	ent? Yes <u>No X</u>
Remarks:					

Upland LP-036



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Trans	mission Line Projec City/County: Geau	iga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Wetland LP-037
Investigator(s): MJA	Section, Township	, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave,	convex, none): Concave	Slope (%): <u>2</u>
Subregion (LRR or MLRA): LRR R	Lat: 41.60892533333334	Long: -81.20865400000001	Datum: WGS 1984
Soil Map Unit Name: EhD2: Ellsworth silt loam, 1	2 to 18 percent slopes, eroded	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typi	ical for this time of year? Yes $\underline{X}$ N	lo (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic?	If needed, explain any answe	rs in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-037			
Remarks: (Explain alternative procedures here or in a separate report.)					
PEM wetland surrounding T-line stucture in maintained powerline easement.					

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	oply) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stain	ined Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fau	auna (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposi	sits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen S	Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rh	Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of	of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron	n Reduction in Tilled Soils (C6) $\underline{X}$ Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck S	Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Expla	plain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	$\underline{\times}$ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inch	ches):
Water Table Present? Yes <u>No X</u> Depth (inch	ches):
Saturation Present? Yes <u>No X</u> Depth (inch (includes capillary fringe)	ches): Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	photos, previous inspections), if available:
Remarks:	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inch Water Table Present? Yes No X Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (inch Saturation Present? Yes No X Depth (inch Depth (in	Surface (C7)      Shallow Aquitard (D3)         Dain in Remarks)      Microtopographic Relief (D4)         X       FAC-Neutral Test (D5)         ches):      Ketland Hydrology Present? Yes No

Sampling Point: Wetland LP-037

Taxa Strature (Distaire) 30	Absolute	Dominant In		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2		· ·	<u> </u>	Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Description of the description of the
7				Prevalence Index worksheet:
		= Total Cove		Total % Cover of:        Multiply by:           OBL species        30         x 1 =30
0 1 (0) 1 0 ( ) (0) 1 1 <b>1</b> 5				FACW species $60 \times 2 = 120$
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $5 \times 3 = 15$
1		<u> </u>		FACU species $30 \times 4 = 120$
2				UPL species $0 \times 5 = 0$
3				Column Totals: <u>125</u> (A) <u>285</u> (B)
4				
5				Prevalence Index = $B/A = 2.28$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		X 2 - Dominance Test is >50%
5		- Total Cove		X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum     (Plot size: 5)       1.     Carex bromoides	40	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Juncus effusus	25	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			FACW	
			OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Scirpus atrovirens		No		
5. Frangula alnus		No	FAC	Definitions of Vegetation Strata:
6Solidago rugosa	2	No	FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Poa pratensis	30	Yes	FACU	at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12	105			height.
	125	= Total Cove	-	
Woody Vine Stratum (Plot size: 30 )				
1			<u> </u>	I hadron ha dia
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cove	-	
Remarks: (Include photo numbers here or on a separate				1

Profile Desc	ription: (Describe t	o the depth	needed to docum	nent the i	ndicator	or confirm	the absence of	indicators.)
Depth	Matrix			x Features	<u>s</u>	2		
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 6	10YR 4/1	95	5YR 3/4	5	Concer	PL,M	Silty clay loam	
6 - 18	10YR 5/3	100					Silty clay loam	With gravel
-								
-								
		<u> </u>					<u> </u>	
-								
-								
-								
-								
-								
-								
1 <del></del>								
Hydric Soil	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	5=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix. r Problematic Hydric Soils <sup>3</sup> :
Histosol			_ Polyvalue Belov	v Surfaco	(S8) /I DE	Б		k (A10) (LRR K, L, MLRA 149B)
	bipedon (A2)		MLRA 149B)		(30) (LRF	х <b>п</b> ,		airie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi	,		_ Thin Dark Surfa		.RR R, ML	RA 149B		ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	_	Loamy Mucky M				-	ace (S7) (LRR K, L, M)
	l Layers (A5)	_	_ Loamy Gleyed I		)			Below Surface (S8) (LRR K, L)
-	Below Dark Surface	(A11) <u>&gt;</u>	C Depleted Matrix					Surface (S9) (LRR K, L)
	ark Surface (A12)	_	_ Redox Dark Su					ganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) ileyed Matrix (S4)	_	_ Depleted Dark \$ _ Redox Depress		()			Floodplain Soils (F19) ( <b>MLRA 149B</b> ) odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)		_ Redux Depress	10115 (FO)				nt Material (F21)
-	Matrix (S6)							llow Dark Surface (TF12)
	rface (S7) (LRR R, M	LRA 149B)						plain in Remarks)
								, ,
	f hydrophytic vegetati ayer (if observed):	on and wetla	and hydrology mus	t be prese	ent, unless	disturbed	or problematic.	
Type:	Layer (il observed).							
	ches):						Hydric Soil Pre	esent? Yes <u>X</u> No
Remarks:								

General Site Photos

Wetland LP-037



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: _	Geauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-038
Investigator(s): MJA Section, Town	nship, Range: N/A	
Landform (hillslope, terrace, etc.): Depression Local relief (cond	cave, convex, none): <u>Concave</u>	Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.60789616666666	Long: -81.20963366666666	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answer	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydric Soil Present? Yes X No wit	he Sampled Area hin a Wetland? Yes <u>X</u> No es, optional Wetland Site ID: Wetland LP-038
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Moss Trim Lines (B16)         Dry-Season Water Table (C2)         1)       Crayfish Burrows (C8)         1 Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         1 (C4)       Stunted or Stressed Plants (D1)         Tilled Soils (C6)       X Geomorphic Position (D2)         Shallow Aquitard (D3)
Field Observations:         Surface Water Present?       Yes No Depth (inches):         Water Table Present?       YesX No Depth (inches):       16         Saturation Present?       YesX No Depth (inches):       10         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	Wetland Hydrology Present? Yes X No
Remarks:	

Trace Structure (Dictoring) 30	Absolute	Dominant I		Dominance Test worksheet:			
Tree Stratum (Plot size:)		Species?		Number of Dominant Species			
1				That Are OBL, FACW, or FAC: (A)			
2				Total Number of Dominant			
3				Species Across All Strata: (B)			
4				Percent of Dominant Species			
5	. <u> </u>	·		That Are OBL, FACW, or FAC: (A/B)			
6				Prevalence Index worksheet:			
7				Total % Cover of:Multiply by:			
		= Total Cove	r	OBL species <u>5</u> x 1 = <u>5</u>			
Sapling/Shrub Stratum (Plot size:15)				FACW species110 x 2 =220			
1				FAC species x 3 =0			
2				FACU species10 x 4 =40			
				UPL species x 5 =0			
3				Column Totals: <u>125</u> (A) <u>265</u> (B)			
4				Prevalence Index = $B/A = 2.12$			
5	<u> </u>	·		· · · · · · · · · · · · · · · · · · ·			
6		·		Hydrophytic Vegetation Indicators:			
7		·		X 1 - Rapid Test for Hydrophytic Vegetation			
		= Total Cove	r	X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting			
1. Phragmites australis	100	Yes	FACW	data in Remarks or on a separate sheet)			
2 Rubus allegheniensis	5	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
3. Onoclea sensibilis		No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must			
4 Persicaria sagittata		No	OBL	be present, unless disturbed or problematic.			
5Solidago canadensis	5		FACU	Definitions of Vegetation Strata:			
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
7				Sapling/shrub – Woody plants less than 3 in. DBH			
8				and greater than or equal to 3.28 ft (1 m) tall.			
9 10				Herb - All herbaceous (non-woody) plants, regardless of			
11				size, and woody plants less than 3.28 ft tall.			
				Woody vines – All woody vines greater than 3.28 ft in			
12	105			height.			
20	120	= Total Cove	r				
Woody Vine Stratum (Plot size: 30 )							
1		·		Hydrophytic			
2		·		Vegetation			
3				Present? Yes X No			
4							
		= Total Cove	r				
Remarks: (Include photo numbers here or on a separate	sheet.)						

Profile Desc	ription: (Describe to	o the dept	h needed to docun	nent the i	indicator	or confirm	n the absence	of indicators.)			
Depth	Matrix	<u> </u>		x Feature		0					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0 - 6	10YR 3/2	95	5YR 4/4	5	Concer	PL	Silty clay loam				
6 - 18	2.5Y 5/2	80	5YR 5/6	20	Concer	PL,M	Clay loam				
-											
-											
-											
-											
-											
-		<u> </u>									
-											
-											
-											
$^{1}$ Type: C=Cc	oncentration, D=Deple	tion RM=	Reduced Matrix MS	S=Masker	Sand Gra	ains	<sup>2</sup> Location	. PL=Pore Lining, M=Matrix.			
Hydric Soil I								for Problematic Hydric Soils <sup>3</sup> :			
Histosol	(A1)	_	Polyvalue Below	v Surface	(S8) ( <b>LRF</b>	R,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)			
	oipedon (A2)		MLRA 149B)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )			
Black Hi		-	Thin Dark Surfa								
	n Sulfide (A4) I Layers (A5)	-	Loamy Mucky M Loamy Gleyed I			, L)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)				
	d Below Dark Surface	(A11) -	X Depleted Matrix		-)		Thin Dark Surface (S9) (LRR K, L)				
-	ark Surface (A12)		Redox Dark Su		1		Iron-Manganese Masses (F12) (LRR K, L, R)				
	lucky Mineral (S1)	-	Depleted Dark S		-7)		Piedmont Floodplain Soils (F19) (MLRA 149B)				
	Bleyed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )				
	edox (S5) Matrix (S6)							arent Material (F21) hallow Dark Surface (TF12)			
	rface (S7) (LRR R, M	LRA 149B	)					Explain in Remarks)			
	f hydrophytic vegetatio	on and wet	land hydrology mus	t be prese	ent, unless	disturbed	or problematic				
	_ayer (if observed):										
Type:		,					Hudria Cail	Present? Yes X No			
Depth (ind	ches).						Hydric Soli				
Remarks:											

General Site Photos

Wetland LP-038



Soil

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ounty	Sampling Date: 10/2	20/2021
State: OH	Sampling Point: <sup>U</sup>	pland LP-037,038
<sub>je:</sub> N/A		
ex, none): <u>Convex</u>	Slope (	%) <u>:</u> 3
-81.20856303333333	Datum:	WGS 1984
NWI classifica	ation: N/A	
(If no, explain in Re	emarks.)	
ormal Circumstances" p	resent? Yes X	No
ded, explain any answer	s in Remarks.)	
	State:         OH           e:         N/A           x, none):         Convex           -81.20856303333333            NWI classifica            (If no, explain in Reported to compare tocompare to compare to compa	State: OH Sampling Point: U e: N/A x, none): Convex Slope (

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Yes Yes Yes	NoX NoX NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-037,038
dures here or in	a separate report.)	
-06 and W-MJA-	-102021-07. Data poir	nt taken near corner of T-line structure.
	Yes Yes edures here or in	Yes No X Yes No X edures here or in a separate report.)

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? Yes <u>No X</u> Depth (inches):				
Water Table Present? Yes No _X_ Depth (inches):				
water rable Present? $\operatorname{res}_{}$ No $$ Depth (inclies).				
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX			
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect				

Sampling Point: Upland LP-037,038

Tree Stratum (Plot size: <sup>30</sup> )	Absolute	Dominant Ir Species?		Dominance Test worksheet:
				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3			<u> </u>	Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 (A/B)
6				Prevalence Index worksheet:
7				
		= Total Cover		$\begin{array}{c c} \underline{\text{Total \% Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & \underline{3} & x \ 1 = \underline{3} \\ \end{array}$
Dealing (Oberla Oberland, Oberland, 15				FACW species $5$ $x 2 = 10$
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $0 \times 3 = 0$
1				FACU species $145$ x 4 = $580$
2				UPL species $0 \times 5 = 0$
3				Column Totals: $153$ (A) $593$ (B)
4				
5				Prevalence Index = B/A = 3.8758169934
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Cover	-	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	30	No	FACU	data in Remarks or on a separate sheet)
2. Poa pratensis	60	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Solidago canadensis	40	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Potentilla simplex	4.5		FACU	be present, unless disturbed or problematic.
5. Juncus effusus			OBL	Definitions of Vegetation Strata:
6. Dichanthelium clandestinum	5	No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
7				
8			<u> </u>	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			<u> </u>	
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	153	= Total Cover		
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2				Vegetation
3				Present? Yes No X
4				
		= Total Cover	-	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docur	ment the i	ndicator	or confirm	the absence of	indicators	s.)	
Depth	Matrix			x Features	<u>s</u>	0				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 <sup>-</sup> 14	10YR 4/3	100					Sandy clay loam			
-										
·							· · ·			
-										
-										
							·			·
-										
-										
-										
					·					
-										
-										
·										
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.			ning, M=Mat	
Hydric Soil	ndicators:						Indicators for		-	
Histosol		_	Polyvalue Belov		(S8) ( <b>LRF</b>	RR,		. , .	.RR K, L, ML	,
-	oipedon (A2)		MLRA 149B	,					(A16) ( <b>LRR</b>	
Black Hi		-	Thin Dark Surfa					-	r Peat (S3) ( <b>L</b>	
	n Sulfide (A4)	-	Loamy Mucky M	-		, L)			LRR K, L, M	
	Layers (A5)		Loamy Gleyed		)		-		Irface (S8) (L	-
-	Below Dark Surface	(A11) _	_ Depleted Matrix						S9) ( <b>LRR K</b> ,	-
	ark Surface (A12)	-	Redox Dark Su	• • •	7)			-		LRR K, L, R)
	lucky Mineral (S1)	-	Depleted Dark		7)					(MLRA 149B)
	ileyed Matrix (S4) edox (S5)	-	Redox Depress	sions (F8)				ent Material		A, 145, 149B)
	Matrix (S6)								Surface (TF1	2)
	rface (S7) ( <b>LRR R, M</b>	I DA 1400)						plain in Re		2)
		LNA 143D)							siliaiks)	
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and wetl	and hydrology mus	st he prese	nt unless	disturbed	or problematic			
	_ayer (if observed):		and nyarology mad			alotarbou				
Type: Gra		Λ								
Depth (inc							Hydric Soil Pr	ocont?	Voc	No <u>X</u>
	5163). <u> </u>						Tiyune Son Pi	esent:	163	
Remarks:										

#### General Site Photos Upland LP-037,038

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Soil

U-MJA-102021-06,07

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geauga Co	ounty	Sampling Date: 10/2	20/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: <sup>M</sup>	/etland LP-039
Investigator(s): MJA Section, Township, Rang	je: N/A		
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, conve	x, none): <u>Concave</u>	Slope (	%): <u>2</u>
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.606959366666666</u> Long:	-81.21175475	Datum:	WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percent slopes	NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "N	ormal Circumstances" p	resent? Yes <u>X</u>	No
Are Vegetation, Soil, or Hydrology naturally problematic? (If need	ded, explain any answer	s in Remarks.)	

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?       Yes       X       No       Is the Sampled Area         Hydric Soil Present?       Yes       X       No       If yes, optional Wetland?       Yes       X       No         Wetland Hydrology Present?       Yes       X       No       If yes, optional Wetland Site ID:       Wetland LP-039         Remarks:       (Explain alternative procedures here or in a separate report.)       PEM wetland at base of gully, next to stream.       Feature	
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)	Moss Trim Lines (B16)         Dry-Season Water Table (C2)         crayfish Burrows (C8)         es on Living Roots (C3)         Saturation Visible on Aerial Imagery (C9)         I Iron (C4)         n in Tilled Soils (C6)         X         Geomorphic Position (D2)         C7)
Surface Water Present?       Yes No _X Depth (inches):         Water Table Present?       Yes No _X Depth (inches):         Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev         Remarks:       Remarks:	Wetland Hydrology Present? Yes X No

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Ir Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cover		OBL species75 x 1 =75
Sapling/Shrub Stratum (Plot size: 15 )				FACW species55 x 2 =110
1 Frangula alnus	5	Yes	FAC	FAC species $5 \times 3 = 15$
2				FACU species X 4 =
3				
4				Column Totals: <u>138</u> (A) <u>212</u> (B)
5				Prevalence Index = $B/A = 1.5362318840$
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover		X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
1, Carex lurida	20	No	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Dichanthelium clandestinum	55	Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Persicaria sagittata	30	Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4Carex vulpinoidea		No	OBL	be present, unless disturbed or problematic.
5 Scirpus cyperinus	10	No	OBL	Definitions of Vegetation Strata:
6 Dipsacus fullonum	3	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	133	= Total Cover		
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic
3				Vegetation Present? Yes X No
4.				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate s	sheet.)			

### SOIL

Profile Desc	ription: (Describe t	to the depth	needed to docu	ment the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			ox Features	<u>.</u> <b>.</b> 1	1 2	Tartan	Demode
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/2	95	2.5YR 4/6	5	Concer	PL	Silty clay loam	
-								
-								
-								
							·	
-								
-								
-								
							·	
-								
-								
-								
$^{1}$ Type: C=Cc	oncentration, D=Depl	etion RM=F	Reduced Matrix M	S=Masked	Sand Gra	ains		PL=Pore Lining, M=Matrix.
Hydric Soil I					ound one			for Problematic Hydric Soils <sup>3</sup> :
<u> </u>	(A1)	_	Polyvalue Belo	w Surface	(S8) ( <b>LRF</b>	R,	2 cm M	luck (A10) ( <b>LRR K, L, MLRA 149B</b> )
-	oipedon (A2)		MLRA 149B	,				Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi	stic (A3) n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky I					lucky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	_	Loamy Gleyed			, ⊑)		lue Below Surface (S8) (LRR K, L)
	d Below Dark Surface	e (A11)	Depleted Matri		/			ark Surface (S9) ( <b>LRR K, L</b> )
	ark Surface (A12)		X_ Redox Dark Su	. ,				anganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	_	_ Depleted Dark		7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
-	ileyed Matrix (S4) edox (S5)	-	Redox Depress	SIONS (FO)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) arent Material (F21)
-	Matrix (S6)							hallow Dark Surface (TF12)
	rface (S7) ( <b>LRR R, M</b>	ILRA 149B)						Explain in Remarks)
3								
	hydrophytic vegetati ayer (if observed):	ion and wet	and hydrology mu	st be prese	ent, unless	disturbed	or problematic	
Type:	Layer (il observed).							
Depth (inc	ches):						Hvdric Soil	Present? Yes X No
Remarks:							,	

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W-MJA-102021-08



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geau	Jga County Sampling [	Date: 10/20/2021
Applicant/Owner: FirstEnergy	State: OH Sampling	g Point <u>: Upland LP-039</u>
Investigator(s): MJA Section, Township	, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Terrace Local relief (concave,	convex, none): Flat	_ Slope (%): <u>8</u>
Subregion (LRR or MLRA): LRR R Lat: 41.60685811666667	Long: -81.211732066666667	Datum: WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percent slopes	NWI classification: R4SI	BC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X	No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignificantly disturbed?	Are "Normal Circumstances" present? Ye	es X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remar	ks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u>X</u> No X	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: Upland LP-039
Remarks: (Explain alternative proced	ures here or in	a separate report.)	
Upland data form for W-MJA-102021-0	)8. Data point ta	aken alongside grave	l access road.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes <u>No X</u> Depth (inches):					
Water Table Present? Yes <u>No X</u> Depth (inches):					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _ X				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect					

Trac Stratum (Plat size: 30 )	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2	. <u></u>	<u> </u>		Total Number of Dominant
3		·		Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				
7				Prevalence Index worksheet:
r				<u>Total % Cover of:</u> <u>Multiply by:</u>
45		= Total Cove	r	
Sapling/Shrub Stratum (Plot size: 15 )				FACTV species $\underline{\qquad}$ $x = \underline{\qquad}$
1				FAC species $x_3 = 0$
2				racu species x 4 =
3				
4				Column Totals: <u>130</u> (A) <u>500</u> (B)
5				Prevalence Index = B/A = 3.846153846 <sup>-</sup>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		2 - Dominance Test is >50%
5			I	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum       (Plot size:5)         1Schedonorus arundinaceus	80	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
Solidago canadensis		Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			FACW	
3.     Phalaris arundinacea       4.			FACIV	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	130	= Total Cove	r	
Weather View Chatter (Distained 30 )		- 101010000	1	
Woody Vine Stratum (Plot size: 30 )				
1	·	·	<u> </u>	Hydrophytic
2	·	·		Vegetation
3	<u> </u>			Present? Yes No X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Description: (Describe to the de	oth needed to docu	ment the i	ndicator	or confirm	the absence of	indicators.)	
Depth Matrix	Redo	x Features	5				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remar	ks
0 <sup>-</sup> 4 10YR 3/2 100					Silty loam		
				·			
-							
· · · · · · · · · · · · · · · · · · ·							
· · · · ·							
-							
<u> </u>							
					<u> </u>		
-							
-							
-							
		C-Maakad			<sup>2</sup> 1 + i		Matrix
<sup>1</sup> Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators:	=Reduced Matrix, M	S=Iviasked	Sand Gra	ains.		PL=Pore Lining, M= r Problematic Hyd	
	Debaseles Deba	0				-	
Histosol (A1) Histic Epipedon (A2)	Polyvalue Belo MLRA 149B		(58) ( <b>LRF</b>	κκ,		k (A10) ( <b>LRR K, L</b> ,	
Black Histic (A3)	Thin Dark Surfa	/		DA 4400		airie Redox (A16) ( <b>I</b> ky Peat or Peat (S	
Hydrogen Sulfide (A4)	Loamy Mucky					face (S7) ( <b>LRR K, I</b>	
Stratified Layers (A5)	Loamy Gleyed			, ⊑)		Below Surface (St	
Depleted Below Dark Surface (A11)	Depleted Matrix		)			Surface (S9) (LRF	
Thick Dark Surface (A12)	Redox Dark Su					ganese Masses (F1	
Sandy Mucky Mineral (S1)	Depleted Dark		7)			Floodplain Soils (F	
Sandy Gleyed Matrix (S4)	Redox Depress		,			odic (TA6) ( <b>MLRA</b>	
Sandy Redox (S5)		. ,				nt Material (F21)	· · · ·
Stripped Matrix (S6)						llow Dark Surface (	(TF12)
Dark Surface (S7) (LRR R, MLRA 149	<b>B</b> )				Other (Ex	plain in Remarks)	
<sup>3</sup> Indicators of hydrophytic vegetation and w	etland hydrology mus	st be prese	ent, unless	disturbed	or problematic.		
Restrictive Layer (if observed): $\chi$							
Type:_Gravel							
Depth (inches): <u>4</u>					Hydric Soil Pr	esent? Yes	<u>No X</u>
Remarks:							
itemarts.							



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Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Project	City/County: Geauga County Sa	ampling Date: <u>10/21/2021</u>
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Wetland LP-040
Investigator(s): MJA	Section, Township, Range: N/A	
Landform (hillslope, terrace, etc.): Floodplain	ocal relief (concave, convex, none): Flat	Slope (%): 2
Subregion (LRR or MLRA): LRR R Lat: 41.605755	Long: -81.2132795	Datum: WGS 1984
Soil Map Unit Name: Ho: Holly silt loam, frequently flooded	NWI classification	on: N/A
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes X No (If no, explain in Rem	arks.)
Are Vegetation X_, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" pres	ent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers i	n Remarks.)
Subregion (LRR or MLRA):       LRR R       Lat:       41.605755         Soil Map Unit Name:       Ho: Holly silt loam, frequently flooded         Are climatic / hydrologic conditions on the site typical for this time of year         Are Vegetation       X       , Soil       , or Hydrology	Long:         -81.2132795            NWI classification           rear?         Yes X         No (If no, explain in Rem           y disturbed?         Are "Normal Circumstances" press	Datum: WGS 198 on: N/A arks.) sent? Yes X No

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-040
dures here or in a separate report.)	
ermittent stream. Much of the westerr	n portion overlaps with a residential yard and is mowed regularly.
	Yes X No Yes X No dures here or in a separate report.)

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)       Water-Stained Leaves (B9)         High Water Table (A2)       Aquatic Fauna (B13)         Saturation (A3)       Marl Deposits (B15)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2)       X         Oxidized Rhizospheres on Living         Drift Deposits (B3)       Presence of Reduced Iron (C4)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Sc         Iron Deposits (B5)       Thin Muck Surface (C7)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)	Image Patterns (B10)         Image Patterns (B10)
Sparsely Vegetated Concave Surface (B8) Field Observations:	X FAC-Neutral Test (D5)
Surface Water Present?       Yes No _X Depth (inches):         Water Table Present?       Yes No _X Depth (inches):         Saturation Present?       Yes No _X Depth (inches):	Wetland Underland Procent? Yes Y
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present?       Yes X       No         .tions), if available:

Sampling Point: Wetland LP-040

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant I Species?		Dominance Test worksheet:
1,				Number of Dominant Species           That Are OBL, FACW, or FAC:         4         (A)
2				Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.8 (A/B)
5				
6 7				Prevalence Index worksheet:
7		= Total Cove		$\frac{\text{Total \% Cover of:}}{\text{OBL species}} \frac{\text{Multiply by:}}{x \ 1} = 80$
Sapling/Shrub Stratum (Plot size: 15 )		- 10101 0010	71	FACW species $\frac{80}{2}$ x 2 = $\frac{160}{2}$
1				FAC species x 3 =0
2				FACU species25 x 4 =100
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>185</u> (A) <u>340</u> (B)
5				Prevalence Index = B/A = 1.8378378378
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	ər	X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1Typha latifolia	40	Yes	OBL	data in Remarks or on a separate sheet)
2. Scirpus cyperinus	25	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Juncus effusus	15	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Onoclea sensibilis	15	No	FACW	be present, unless disturbed or problematic.
5. Eupatorium perfoliatum	10	No	FACW	Definitions of Vegetation Strata:
6. Symphyotrichum lanceolatum		Yes	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Agrostis gigantea	25	Yes	FACW	
Schedonorus arundinaceus  9	25		FACU	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	185	= Total Cove	÷r	
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2			·	Vegetation Present? Yes <sup>X</sup> No
3				
4		= Total Cove		
Remarks: (Include photo numbers here or on a separate			<u> </u>	
	,			

### SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix			ox Features	<u>s</u> - 1	. 2	<b>-</b> /	5
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/2	95	2.5YR 3/4	5	Concer	PL	Silty clay loam	
-								
-								
							·	
-								
-								
-								
-								
-								
							·	
1							2	
Hydric Soil I	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Histosol			Polyvalue Belo	w Surface	(S8) ( <b>I RE</b>	R		luck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)	-	MLRA 149B		(00) (111)	,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi		-	Thin Dark Surfa					lucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I			, L)		urface (S7) ( <b>LRR K, L, M</b> )
	l Layers (A5) l Below Dark Surface	-	Loamy Gleyed Depleted Matrix		)			ue Below Surface (S8) ( <b>LRR K, L</b> ) ark Surface (S9) ( <b>LRR K, L</b> )
	ark Surface (A12)		X Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	-	Depleted Dark	. ,	7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
-	ileyed Matrix (S4)	-	Redox Depress	sions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)							arent Material (F21)
	Matrix (S6) rface (S7) ( <b>LRR R, M</b>	II DA 1408						hallow Dark Surface (TF12) Explain in Remarks)
<sup>3</sup> Indicators of	f hydrophytic vegetati	ion and wet	and hydrology mu	st be prese	nt, unless	disturbed	or problematic	
Restrictive L	_ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes <u>X</u> No
Remarks:								

Wetland LP-040



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: Geauga County Sampling Date: 10/21/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-041
Investigator(s): MJA	Section, Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Flat Loo	al relief (concave, convex, none): FlatSlope (%):_0
Subregion (LRR or MLRA): LRR R Lat: 41.605297	Long: <u>-81.21423250000001</u> Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes X No (If no, explain in Remarks.)
Are Vegetation X_, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro	blematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-041				
Remarks: (Explain alternative procedures here or in a separate report.)						
PEM wetland in maintained powerline	easement. Recently mowed.					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Second	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	

Sampling Point: <u>Wetland LP-041</u>

Tree Stratum (Plat size) 30	Absolute	Dominant In		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1			<u> </u>	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	r	OBL species x 1 =75
Sapling/Shrub Stratum (Plot size: 15 )				FACW species25 x 2 =50
1				FAC species $0 \times 3 = 0$
2				FACU species x 4 =0
				UPL species x 5 =0
3				Column Totals: <u>100</u> (A) <u>125</u> (B)
4				Prevalence Index = B/A = 1.25
5				Prevalence Index = B/A = 1.20
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	r	$\underline{X}$ 2 - Dominance Test is >50%
Hark Strature (Distained 5				<u>X</u> 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum       (Plot size:5)         1       Phalaris arundinacea	20	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2Lythrum salicaria			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
· · · · · · · · · · · · · · · · · · ·			OBL	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Persicaria sagittata	5	No	OBL	
5. Onoclea sensibilis	5	No	FACW	Definitions of Vegetation Strata:
6. Carex vulpinoidea	50	Yes	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9 10.				Herb - All herbaceous (non-woody) plants, regardless of
			<u> </u>	size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	100	= Total Cove	r	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic
		· ·		Vegetation Present? Yes <sup>X</sup> No
3	·	· ·		
4		<u> </u>		
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

	ription: (Describe t	o the dep <sup>.</sup>	th needed to docur	nent the	indicator (	or confirn	n the absence of	indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 16	10YR 4/2	90	2.5YR 3/4	10	Concer	PL	Silty clay loam	
16 <sup>-</sup> 18	2.5Y 5/3	90	5YR 4/6	10	Concer	М	Clay loam	
-							· <u> </u>	
					. <u> </u>		·	
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			·		·			
-					<u> </u>		·	
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·					·		·	
					<u> </u>		· <u> </u>	
-								
$^{1}$ Type: C=Cc	oncentration, D=Depl	etion RM=	Reduced Matrix M	S=Maske	d Sand Gra	ains	<sup>2</sup> Location E	PL=Pore Lining, M=Matrix.
Hydric Soil I			noucou matrix, m					r Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Belov	w Surface	(S8) ( <b>LRF</b>	R.		k (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2)		MLRA 149B		. , .			airie Redox (A16) ( <b>LRR K, L, R</b> )
Black His	stic (A3)		Thin Dark Surfa	ace (S9) (	LRR R, MI	_RA 149B	) 5 cm Muc	ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)		Loamy Mucky M			, L)		ace (S7) ( <b>LRR K, L, M</b> )
	l Layers (A5)		Loamy Gleyed		2)		-	Below Surface (S8) ( <b>LRR K, L</b> )
·	Below Dark Surface	(A11)	X Depleted Matrix					Surface (S9) ( <b>LRR K, L</b> )
	ark Surface (A12)		Redox Dark Su					ganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)		Depleted Dark		-7)			Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Condy C	loved Metrix (C1)						iviesic sp	odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)		Redox Depress	sions (1 0)				
Sandy R	edox (S5)		Redox Depress				Red Pare	nt Material (F21)
Sandy R Stripped	edox (S5) Matrix (S6)	LRA 149E		sions (1 0)			Red Pare Very Shal	nt Material (F21) llow Dark Surface (TF12)
Sandy R Stripped	edox (S5)	LRA 149E					Red Pare Very Shal	nt Material (F21)
Sandy R Stripped Dark Sur	edox (S5) Matrix (S6)		3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of	dedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b>		3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b>	eedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati		3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of Restrictive L Type:	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	eedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of Restrictive L Type:	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	s disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)
Sandy R Stripped Dark Sur <sup>3</sup> Indicators of <b>Restrictive L</b> Type: Depth (inc	aedox (S5) Matrix (S6) rface (S7) ( <b>LRR R, M</b> hydrophytic vegetati <b>Layer (if observed):</b>	on and we	3)		ent, unless	disturbed	Red Pare Very Shal Other (Ex	nt Material (F21) llow Dark Surface (TF12) plain in Remarks)

General Site Photos

Wetland LP-041



Soil



W

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W-MJA-102121-02



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	Projec City/County: Gea	auga County	Sampling Date: 10/21/2021
Applicant/Owner: FirstEnergy		State: OH	_ Sampling Point: Upland LP-040,041
Investigator(s): MJA	Section, Townshi	ip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Flat	Local relief (concave	e, convex, none): <u>Convex</u>	Slope (%): 0
Subregion (LRR or MLRA): LRR R Lat: 41.605	39716666668	_ Long: -81.21412183333335	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent s	slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes X	No (If no, explain in Re	emarks.)
Are Vegetation X_, Soil, or Hydrology signi	ficantly disturbed?	Are "Normal Circumstances" p	esent? Yes X No
Are Vegetation, Soil, or Hydrology nature	rally problematic?	(If needed, explain any answer	s in Remarks.)
Landform (hillslope, terrace, etc.): Flat Subregion (LRR or MLRA): LRR R Lat: 41.605 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent s Are climatic / hydrologic conditions on the site typical for this tim Are Vegetation X, Soil , or Hydrology signi	Local relief (concave 39716666668 slopes ne of year? Yes <u>X</u> ficantly disturbed?	e, convex, none): <u>Convex</u> _ Long: <u>-81.21412183333335</u> NWI classifica No (If no, explain in Re Are "Normal Circumstances" p	Datum: WGS 19 ation: N/A emarks.) resent? Yes X No

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes No X	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-040,041				
Remarks: (Explain alternative procedures here or in a separate report.) Upland data form for W-MJA-102121-01 and W-MJA-102121-02. Recently mowed.						
	Tanu W-WJA-102121-02. Recently	mowed.				

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _ X
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-040,041

Tree Stratum (Distaire) 30	Absolute	Dominant		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	er	$\overline{\text{OBL species}} \qquad 30 \qquad \text{x 1} = 30$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species 5 x 2 = 10
1				FAC species65 x 3 =195
				FACU species60 x 4 =240
2				UPL species <u>3</u> x 5 = <u>15</u>
3				Column Totals: <u>163</u> (A) <u>490</u> (B)
4				Prevalence Index = B/A = 3.006134969(
5				Prevalence Index = B/A = 0.00010 10000
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	er	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )				3 - Prevalence Index is ≤3.0 <sup>1</sup>
1 Oxalis dillenii	10	No	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2 Fragaria virginiana		No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Onoclea sensibilis	_	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4 Juncus effusus	10	No	OBL	be present, unless disturbed or problematic.
5. Daucus carota	3	No	UPL	Definitions of Vegetation Strata:
6. Frangula alnus	15	No	FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. Solidago canadensis	40	No	FACU	at breast height (DBH), regardless of height.
8. Schedonorus arundinaceus		Yes	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
9. Carex vulpinoidea		Yes	OBL	and greater than or equal to 3.28 ft (1 m) tall.
10. Panicum capillare		Yes	FAC	Herb - All herbaceous (non-woody) plants, regardless of
				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	163	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docum	nent the i	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 16	10YR 4/2	98	5YR 4/6	2	Concer	М	Silty clay loam	
16 <sup>-</sup> 18	10YR 5/3	85	10YR 5/8	15	Concer	М	Clay loam	
-								
-								
-								
-								
-								
-								
		·						
-								
-								
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol	<b>\</b> /	_	Polyvalue Below		(S8) ( <b>LRF</b>	RR,		/luck (A10) ( <b>LRR K, L, MLRA 149B</b> )
·	oipedon (A2)		MLRA 149B)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi		—	_ Thin Dark Surfa					Aucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky N			, L)		Surface (S7) ( <b>LRR K, L, M</b> )
	l Layers (A5)	(444)	_ Loamy Gleyed I		<u>(</u> )			lue Below Surface (S8) (LRR K, L)
-	d Below Dark Surface ark Surface (A12)	(ATT) <u>^</u>	Depleted Matrix Redox Dark Sul					ark Surface (S9) ( <b>LRR K, L</b> ) anganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	_ Depleted Dark Su					ont Floodplain Soils (F12) ( <b>MLRA 149B</b> )
	Bleyed Matrix (S4)		_ Redox Depress		')			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	ledox (S5)							arent Material (F21)
-	Matrix (S6)							shallow Dark Surface (TF12)
	rface (S7) (LRR R, M	LRA 149B)						(Explain in Remarks)
								· · ·
	f hydrophytic vegetati _ayer (if observed):	on and wetla	and hydrology mus	t be prese	ent, unless	disturbed	l or problematic	D
Type:	Layer (il observeu).							
· · ·	ches):						Hydric Soil	Present? Yes X No
Remarks:							injunio com	
rtemanto.								

**General Site Photos** 

Upland LP-040,041



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Cour	nty: <u>Geauga County</u> Sar	npling Date: <u>10/19/2021</u>
Applicant/Owner: FirstEnergy	State: OH S	Campling Point: Wetland LP-042
Investigator(s): MJA Section,	Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Toeslope Local relief (	(concave, convex, none): <u>Concave</u>	Slope (%): 0
Subregion (LRR or MLRA): LRR R Lat: 41.60356400000001	Long: <u>-81.216301</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification	n: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Rema	rks.)
Are Vegetation, Soil, or Hydrology X significantly disturbed	? Are "Normal Circumstances" prese	nt? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-042					
Remarks: (Explain alternative procedures here or in a separate report.)							
PEM wetland in maintained powerline	easement. Gravel access road cros	ses through wetland, influencing hydrology.					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two	equired)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)	
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)	
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)	
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)	
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	oots (C3) Saturation Visible on Aerial Imager	(C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ls (C6) X Geomorphic Position (D2)	
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present? Yes <u>No X</u> Depth (inches):		
Water Table Present? Yes X No Depth (inches): 10		
Water Table Present? $\operatorname{Pes}_{\mathcal{N}}$ No Depth (inches).		
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		
Saturation Present? Yes No X Depth (inches):		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		<u> </u>
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		

Trace Stratum (Distring, 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:4 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
5			·	That Are OBL, FACW, or FAC: (A/B)
6			·	Prevalence Index worksheet:
7	. <u></u>		·	Total % Cover of:Multiply by:
		= Total Cov	rer	OBL species <u>30</u> x 1 = <u>30</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $\frac{75}{8}$ x 2 = $\frac{150}{24}$
1 Viburnum lentago	8	Yes	FAC	FAC species $\frac{8}{0}$ x 3 = $\frac{24}{0}$
2. Fraxinus pennsylvanica	5	Yes	FACW	rAcu species x 4 =
3 Salix amygdaloides	2	No	FACW	UPL species $0$ x 5 = $0$ Column Totals: $113$ (A) $204$ (B)
4				$\begin{array}{c} \text{Column rotals.} \underline{\qquad } \text{(A)} \underline{\qquad } \underline{\qquad } \text{(B)} \end{array}$
5				Prevalence Index = B/A = 1.805309734
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/		= Total Cov		X 2 - Dominance Test is >50%
Hart Otrature (Distained 5		= Total Cov	er	<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
<u>Herb Stratum</u> (Plot size: 5)	45	Nie	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Typha latifolia		<u>No</u>	·	data in Remarks or on a separate sheet)
2. Onoclea sensibilis			FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Scirpus cyperinus			OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Persicaria sagittata	5	No	OBL	
5. Pycnanthemum virginianum	3	No	FACW	Definitions of Vegetation Strata:
6. Symphyotrichum lanceolatum	20	Yes	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. Symphyotrichum novae-angliae	5	No	FACW	at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			·	
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			·	<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12			·	height.
	98	= Total Cov	rer	
Woody Vine Stratum (Plot size: 30 )				
1			·	
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			I

### SOIL

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>s</u> - 1	. 2	<b>-</b> .	5
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	10YR 3/2	92	5YR 3/4	8	Concer	М	Silty clay loam	
-								
-								
-								
-								
-								
-								
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	iins.		: PL=Pore Lining, M=Matrix.
Hydric Soil I			Delvarelue Belev	v Curfaga				for Problematic Hydric Soils <sup>3</sup> :
Histosol Histic En	ipedon (A2)	_	Polyvalue Belov MLRA 149B)		(30) ( <b>LKK</b>	к,		1uck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black His		_	_ Thin Dark Surfa		.RR R, ML	.RA 149B)		lucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	_	Loamy Mucky N					urface (S7) (LRR K, L, M)
	Layers (A5)	_	_ Loamy Gleyed I		)		Polyva	lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	e (A11)	C Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12)	—	_ Redox Dark Su		7)			anganese Masses (F12) ( <b>LRR K, L, R</b> )
	ucky Mineral (S1) leyed Matrix (S4)	-	Depleted Dark \$ Redox Depress		7)			ont Floodplain Soils (F19) ( <b>MLRA 149B</b> ) Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)	_	_ Redux Depress	10115 (FO)				arent Material (F21)
-	Matrix (S6)							hallow Dark Surface (TF12)
	face (S7) ( <b>LRR R, M</b>	ILRA 149B)						Explain in Remarks)
	hydrophytic vegetat	on and wetl	and hydrology mus	t be prese	nt, unless	disturbed	or problematic	
	ayer (if observed):							
Type:								
	hes):						Hydric Soil	Present? Yes X No
Remarks:								

General Site Photos

Wetland LP-042



Soil

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W-MJA-101921-11



Ν

inty	Sampling Date: 10/	19/2021
State: OH	Sampling Point: V	Vetland LP-043
e: N/A		
, none): <u>Concave</u>	Slope	<u>%):</u> 1
-81.21671249996679	Datum:	WGS 1984
NWI classific	ation: N/A	
(If no, explain in R	emarks.)	
rmal Circumstances" p	resent? Yes <u>X</u>	No
ed, explain any answe	rs in Remarks.)	
	State: OH : N/A . none): Concave -81.21671249996679 	State: OH Sampling Point: V : N/A , none): Concave Slope (

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-043
Remarks: (Explain alternative proced	ures here or in a separate report.)	
PEM wetland adjacent to gravel acces	s road in maintained powerline ease	ment.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	pils (C6) $\underline{X}$ Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: Wetland LP-043

Tura Charlenny (Distainer 30	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 3 (B)
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.66666666666 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove	•	OBL species $60 \times 1 = 60$
Sapling/Shrub Stratum (Plot size: 15 )				ACW species X2 =
1. Frangula alnus	10	Yes	FAC	$\frac{1}{20}$
2				FACU species $30$ $x 4 =$ $120$ UPL species0 $x 5 =$ 0
3				Column Totals: $120$ (A) $250$ (B)
4				
5				Prevalence Index = $B/A = 2.08333333333333333333333333333333333333$
6				Hydrophytic Vegetation Indicators:
7			_	1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	ŕ	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
1Solidago canadensis	30	Yes	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Carex vulpinoidea	50	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Onoclea sensibilis	20	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Persicaria sagittata	5	No	OBL	be present, unless disturbed or problematic.
5. Lythrum salicaria	-	No	OBL	Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cove	 r	
Woody Vine Stratum (Plot size: 30 )		_ 10tal 00vel		
,				
1		·		Hydrophytic
2				Vegetation Present? Yes <sup>X</sup> No
3		·		
4	<u> </u>	·		
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	n the absence of	indicators.)
Depth	Matrix		Redo	x Features	5			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 <sup>-</sup> 18	10YR 3/2	95	7.5YR 4/4	5	Concer	PL,M	Silty loam	
-								
							·	
-								
-								
							<u> </u>	
-								
-								
						<u> </u>		
-								
				·		·	<u> </u>	
-								
-								
1							2	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I								r Problematic Hydric Soils <sup>3</sup> :
Histosol		-	Polyvalue Belov		(S8) ( <b>LRR</b>	RR,		k (A10) ( <b>LRR K, L, MLRA 149B</b> )
-	ipedon (A2)		MLRA 149B					airie Redox (A16) ( <b>LRR K, L, R</b> )
Black His		-	Thin Dark Surfa					ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	-	Loamy Mucky N			, L)		ace (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	-	Loamy Gleyed		)		-	Below Surface (S8) (LRR K, L)
	l Below Dark Surface irk Surface (A12)		Depleted Matrix X Redox Dark Su					: Surface (S9) ( <b>LRR K, L</b> ) ganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	Depleted Dark St	. ,	7)			Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matrix (S4)	-	Redox Depress		')			odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
-	edox (S5)	-						nt Material (F21)
-	Matrix (S6)							llow Dark Surface (TF12)
	face (S7) ( <b>LRR R, M</b>	LRA 149B	)					plain in Remarks)
			/					
<sup>3</sup> Indicators of	hydrophytic vegetati	ion and wet	and hydrology mus	t be prese	ent. unless	disturbed	or problematic.	
	ayer (if observed):		, ,,		,			
Type:	<b>,</b>							
•••	hes):						Hydric Soil Dr	esent? Yes <u>X</u> No
	nes).						Hyunc Son Fre	
Remarks:								

General Site Photos

Wetland LP-043



Soil

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W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Gear	uga County Sam	pling Date: 10/19/2021
Applicant/Owner: FirstEnergy	State: OH S	ampling Point: Upland LP-042,043
Investigator(s): MJA Section, Township	o, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave,	convex, none): <u>Flat</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): LRR R Lat: 41.6035681666666666	Long: -81.21636199999999	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification	N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X	No (If no, explain in Remar	ks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" prese	nt? Yes <u>X</u> 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? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX YesX No YesX No	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-042,043
Remarks: (Explain alternative proceed	Jures here or in a separate report.)	
Upland data form for W-MJA-101921-	10 and W-MJA-101921-11. Data p	oint adjacent to gravel access road in maintained powerline easement.
		, ,
Remarks: (Explain alternative proceed	dures here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living I	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
, , , ,	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-042,043

Tree Stratum (Distaire) 30	Absolute	Dominant		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant Species Across All Strata: 1 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cov	er	OBL species 2 x 1 = 2
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $20   x^2 = 40$
1				FAC species $0 \times 3 = 0$
2				
3				UPL species         0         x 5 =         0           Column Totals:         112         (A)         402         (B)
4				
5				Prevalence Index = B/A = 3.5892857142
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size:5)			CI	$3$ - Prevalence Index is $\leq 3.0^1$
Nerror Stratum         (Flot size.           1.         Schedonorus arundinaceus	70	Yes	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Carex Iurida			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Solidago canadensis			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Symphyotrichum novae-angliae		No	FACW	be present, unless disturbed or problematic.
		No	FACU	Definitions of Vegetation Strata:
	10	No	FACU	-
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
8			·	and greater than or equal to 3.28 ft (1 m) tall.
9			·	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	112	= Total Cov	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

#### SOIL

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)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 <sup>-</sup> 10 10YR 4/1 90	5YR 3/4	10	Concer	PL,M	Silty clay loam	
-						
	<u> </u>	·				
-						
<u>-</u>						
	<u> </u>	·				
-						
		·				
-						
-						
-						
<u> </u>						
· · ·		·				
<sup>1</sup> Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Polyvalue Belo	w Surface	(S8) ( <b>LRF</b>	R,	2 cm M	luck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic Epipedon (A2)	MLRA 149E					Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Histic (A3)	Thin Dark Surf	ace (S9) ( <b>L</b>	.RR R, ML	RA 149B)	) 5 cm M	lucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
Hydrogen Sulfide (A4)	Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L)					urface (S7) ( <b>LRR K, L, M</b> )
Stratified Layers (A5)	Loamy Gleyed		)			ue Below Surface (S8) ( <b>LRR K, L</b> )
Depleted Below Dark Surface (A11) X Depleted Matrix (F3)					ark Surface (S9) ( <b>LRR K, L</b> )	
Thick Dark Surface (A12) Redox Dark Surface (F6)					anganese Masses (F12) ( <b>LRR K, L, R</b> )	
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)					ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)					Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Redox (S5)						arent Material (F21)
Stripped Matrix (S6)						hallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 1	49B)				Other (	Explain in Remarks)
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
Restrictive Layer (if observed): X	rwettand nydrology mu	si be piese	int, unicoo	usuibeu		•
Type: Rocky						
Depth (inches): <u>10</u>					Hydric Soil	Present? Yes X No
Remarks:						

General Site Photos

Upland LP-042,043



Soil



SW

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Cour	ty: <u>Geauga County</u> Sampling Date: <u>10/19/2021</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-044
Investigator(s): MJA Section,	Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Hillside Local relief (	concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.60311150000004	Long: -81.21695483333332 Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	? Are "Normal Circumstances" present? Yes X 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? Hydric Soil Present?	Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X
Wetland Hydrology Present?	If yes, optional Wetland Site ID: Wetland LP-044	
Remarks: (Explain alternative proced PEM wetland in maintained powerline	,	
HYDROLOGY		
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is	required; check all that apply) Water-Stained Leav Aquatic Fauna (B13 Marl Deposits (B15	3) Moss Trim Lines (B16)
Water Marks (B1)     Sediment Deposits (B2)     Drift Deposits (B3)     Algal Mat or Crust (B4)     Iron Deposits (B5)     Inundation Visible on Aerial Image     Sparsely Vegetated Concave Sur	Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface ery (B7) Other (Explain in Red	dor (C1)       Crayfish Burrows (C8)         eres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         ed Iron (C4)       Stunted or Stressed Plants (D1)         ion in Tilled Soils (C6)       Geomorphic Position (D2)         (C7)       Shallow Aquitard (D3)
Field Observations:		
Water Table Present? Yes _	No         X         Depth (inches):           No         X         Depth (inches):           No         X         Depth (inches):	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:		

Tree Stratum (Distaine) 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:4 (A)
2				Total Number of Dominant
3				Species Across All Strata:4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
				Prevalence Index worksheet:
7				$\begin{array}{c c} \underline{\text{Total \% Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 67 & \text{x 1} = 67 \end{array}$
45		= Total Cove	er	
Sapling/Shrub Stratum (Plot size: 15 )				FACTV species $\underline{\qquad}$ x z = $\underline{\qquad}$
1. Cornus alba	10	Yes	FACW	2 42
2				FACU species $x 4 = $
3				100
4				Column Totals: <u>120</u> (A) <u>179</u> (B)
5				Prevalence Index = B/A = 1.4916666666
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
·				X 2 - Dominance Test is >50%
5		= Total Cove	er	<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum     (Plot size: 5)       1.     Carex lurida	40	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Juncus effusus	20	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		No	FACW	
-		<u>No</u>	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
5. Onoclea sensibilis		Yes	FACW	Deminions of Vegetation Strata.
6. Persicaria sagittata	2	No	OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Agrostis gigantea	10	No	FACW	at bleast height (DBH), regardless of height.
8. Lythrum salicaria	5	No	OBL	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9. Pycnanthemum virginianum	5	No	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	110	= Total Cove	er	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
				Vegetation Present? Yes X No
3				
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe to	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of	indicators.)
Depth	Matrix		Redo	x Features	6			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 18	2.5Y 4/1	96	5YR 4/6	4	Concer	М	Silty clay loam	
-								
-								
<u> </u>								
-								
-								
<u> </u>								
-								
-								
						·		
-								
-								
<u> </u>			<u> </u>					
-								
-								
			<u> </u>					
-								
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I			· · · · ·					r Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Belov	w Surface	(S8) ( <b>LRF</b>	R.	2 cm Mu	ck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	vipedon (A2)	-	MLRA 149B		() (	,		airie Redox (A16) ( <b>LRR K, L, R</b> )
Black His			Thin Dark Surfa	,	RR R. MI	_RA 149B)		cky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)	-	Loamy Mucky M					face (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)	-	Loamy Gleyed			, _,		e Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix		/		-	k Surface (S9) ( <b>LRR K, L</b> )
	irk Surface (A12)	() _	Redox Dark Su					ganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	Depleted Dark		7)			t Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matrix (S4)	-	Redox Depress		,			odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)	_		( )				ent Material (F21)
	Matrix (S6)							Illow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)						xplain in Remarks)
	, (, (, ,,	,						·····,
<sup>3</sup> Indicators of	hydrophytic vegetatio	on and wetl	and hydrology mus	st be prese	nt, unless	disturbed	or problematic.	
Restrictive L	ayer (if observed):							
Type:								
	hes):						Hydric Soil Pr	resent? Yes X No
Remarks:								
Remarks.								

Wetland LP-044



Soil

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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Co	Inty: Geauga County Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-045
Investigator(s): MJA Section	Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relie	(concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.602525833333324	Long: -81.217463666666666 Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	d? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problemat	? (If needed, explain any answers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?		No	Is the Sam within a We		Yes <sup>X</sup> No
Hydric Soil Present?	Yes X	No			
Wetland Hydrology Present?     Yes X     No     If yes, optional Wetland Site ID: Wetland LP-045					Site ID: Wetland LP-045
Remarks: (Explain alternative pro PEM wetland in maintained power		i separate report.)			
HYDROLOGY					
Wetland Hydrology Indicators:					Secondary Indicators (minimum of two required)
Primary Indicators (minimum of or	<u>ne is required; check</u>	all that apply)			Surface Soil Cracks (B6)
Surface Water (A1)	י	Water-Stained Leave	s (B9)		Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13)			Moss Trim Lines (B16)
Saturation (A3)	!	Marl Deposits (B15)			Dry-Season Water Table (C2)
Water Marks (B1)					Crayfish Burrows (C8)
Sediment Deposits (B2)		Oxidized Rhizosphere	•	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)				Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5)		Thin Muck Surface (C			Shallow Aquitard (D3)
Inundation Visible on Aerial In		Other (Explain in Ren	narks)		Microtopographic Relief (D4)
Sparsely Vegetated Concave	Surface (B8)				X FAC-Neutral Test (D5)
Field Observations:					
	es <u>No X</u>				
	es No _X				
Saturation Present? Ye (includes capillary fringe)	es NoX	Depth (inches):		Wetland H	lydrology Present? Yes X No
Describe Recorded Data (stream)	gauge, monitoring w	ell, aerial photos, pre	vious inspect	ions), if ava	ilable:
			·		
Remarks:					

Sampling Point: Wetland LP-045

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species         That Are OBL, FACW, or FAC:       2         (A)
23				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7				
Oralia (Ohmah Ohmahan) (Dhahaina 15		= Total Cove	ər	OBL species         45         x 1 =         45           FACW species         85         x 2 =         170
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $\begin{array}{c} 0 \\ x 3 = \end{array}$
1				FACU species $20$ x 4 = $80$
2				UPL species $0 \times 5 = 0$
3				Column Totals: (A) (B)
4				Prevalence Index = B/A = 1.96666666666
5				Hydrophytic Vegetation Indicators:
6				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
r.		= Total Cove	ər	$\overline{X}$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5) 1. Phalaris arundinacea	50	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Scirpus cyperinus		No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
· · · ·	10	No	FACU	
		<u>No</u>	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 Juncus effusus 5 Carex lurida	10	No	OBL	Definitions of Vegetation Strata:
A graatia gigantaa		Yes	FACW	
		No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
			FACW	Sapling/shrub – Woody plants less than 3 in. DBH
8Onoclea sensibilis 9			FACW	and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	150	= Total Cove	ər	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
3.				Vegetation Present? Yes <sup>X</sup> No
4		- Total Cav		
Remarks: (Include photo numbers here or on a separate		= Total Cove	er	
	Sheet.)			

Depth         Matrix         Redox Features           (incles)         Color (moist)         %         Type <sup>1</sup> Loc <sup>2</sup> Texture         Remarks           0         3         10YR 3/2         98         5YR 4/4         2         Concer         M         Silty loam           3         18         2.5Y 4/1         90         5YR 4/6         10         Concer         PLM         Silty day loam           -
0         3         10YR 3/2         98         5YR 4/4         2         Concer         M         Silty Joam           3         18         2.5Y 4/1         90         5YR 4/6         10         Concer         PL,M         Silty day Joam           -
3       18       2.5Y 4/1       90       5YR 4/6       10       Concer       PL,M       Siliy day loam         -
.       .       .         .       .       .       .         .       .       .       .       .         .       .       .       .       .         .       .       .       .       .       .         .       .       .       .
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Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
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Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)       Polyvalue Below Surface (S8) (LRR R,       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S7) (LRR K, L, M)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       X Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Stripped Matrix (S6)       Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)
Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S7) (LRR K, L, M)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       X Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L)         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S7) (LRR K, L, M)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       X       Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L)         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)       Very Shallow Dark Surface (TF12)
Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       X       Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L)         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)       Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)
Sandy Redox (S5)       Red Parent Material (F21)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Sunace (S7) (LKK R, WILKA 149D) Other (Explain in Remarks)
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Туре:
Depth (inches):         Hydric Soil Present?         Yes         X         No
Remarks:

Wetland LP-045



Soil

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ity	Sampling Date: 10/19/20	21
State: OH	Sampling Point: <sup>Upland L</sup>	P-044,045
N/A		
none): Flat	Slope (%): <u>3</u>	8
31.21754250000001	Datum: WC	GS 1984
NWI classific	cation: N/A	
_ (If no, explain in R	Remarks.)	
mal Circumstances" p	oresent? Yes <u>X</u> No	
d, explain any answe	ers in Remarks.)	
	State: OH N/A none): <u>Flat</u> 31.21754250000001 NWI classific (If no, explain in F nal Circumstances" ;	State: OHSampling Point: <sup>Upland I</sup> N/A none): FlatSlope (%): 3

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes YesX YesX	_ No <u>X</u> _ No _ No	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-044,045
Remarks: (Explain alternative proce Upland data form for W-MJA-101921		,	nt in maintained powerline easement.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Liv	ing Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4	<ol> <li>Stunted or Stressed Plants (D1)</li> </ol>
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled	d Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Descent O Var Na V Desth (in the s)	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	

Sampling Point: \_\_\_\_\_\_\_\_\_

Trac Stratum (Plat size) 30	Absolute	Dominant In		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2			<u> </u>	Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				
7				Prevalence Index worksheet:
/·				$\begin{array}{c c} \underline{\text{Total } \% \text{ Cover of:}} & \underline{\text{Multiply by:}} \\ \hline \text{OBL species} & 0 & \text{ x 1 = } & 0 \\ \end{array}$
45		= Total Cove	r	
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $2^{-1}$ x 2 = $2^{-1}$
1				FAC species x 3 =
2	. <u></u>			raco species x 4 =
3				450 505
4				Column Totals: <u>150</u> (A) <u>585</u> (B)
5				Prevalence Index = B/A = 3.9
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7			<u> </u>	2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	65	Yes	FACU	data in Remarks or on a separate sheet)
2. Poa pratensis	30	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Solidago canadensis	20	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Euthamia graminifolia	15	No	FAC	be present, unless disturbed or problematic.
5 Fragaria virginiana	10	No	FACU	Definitions of Vegetation Strata:
6. Lotus corniculatus	10	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10	. <u></u>	<u> </u>	<u> </u>	size, and woody plants less than 3.28 ft tall.
11		<u> </u>		<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12		<u> </u>		height.
	150	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
				Vegetation Present? Yes No <sup>X</sup>
3		· ·		
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	n needed to docur	nent the i	ndicator	or confirm	the absence of inc	dicators.)	
Depth	Matrix			x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 8	10YR 4/2	95	7.5YR 4/4	5	Concer	М	Silty loam		
8 - 18	5Y 5/1	90	7.5YR 5/6	10	Concer	PL,M	Clay		
-									
							·		
							·		
-									
-									
							·		
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-									
							·		
							·		
-									
-									
	oncentration, D=Deple	tion DM-E		C-Maakaa		line	<sup>2</sup> l contion: DL -	Pore Lining, M=Mati	
Hydric Soil I		etion, RIVI=F	Reduced Matrix, Ma	5=Ivlasked	a Sand Gra	ains.	Indicators for P	roblematic Hydric \$	nx. Soils <sup>3,</sup>
Histosol			Polyvalue Belov	w Surface	(S8) (I RE	R		A10) ( <b>LRR K, L, ML</b>	
	pipedon (A2)	_	MLRA 149B			х IX,		e Redox (A16) ( <b>LRR</b>	
Black Hi			Thin Dark Surfa	,	RR R, ML	RA 149B)		Peat or Peat (S3) (L	
	n Sulfide (A4)		Loamy Mucky N					e (S7) (LRR K, L, M)	
Stratified	Layers (A5)	_	Loamy Gleyed	Matrix (F2	2)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
Depleted	d Below Dark Surface	(A11)	X Depleted Matrix	k (F3)					
	ark Surface (A12)	_	Redox Dark Su	. ,			Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b> )		
	lucky Mineral (S1)	_	Depleted Dark		7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	leyed Matrix (S4)	_	Redox Depress	sions (F8)				c (TA6) ( <b>MLRA 144</b>	A, 145, 149B)
	edox (S5)							Material (F21)	2)
	Matrix (S6) rface (S7) ( <b>LRR R, M</b>	DA 1408)	B)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
		LKA 149D)							
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	ent, unless	disturbed	or problematic.		
	ayer (if observed):		, ,,	•	,				
Type:									
Depth (inc	ches):						Hydric Soil Prese	ent? Yes <u>X</u>	No
Remarks:	,								
r tomanto.									

General Site Photos

Upland LP-044,045



Soil



W

.y	Sampling Date: 10/2	19/2021
State: OH	Sampling Point: V	/etland LP-046
N/A		
none): <u>Concave</u>	Slope (	%): <u>1</u>
1.218643833333333	Datum:	WGS 1984
NWI classific	ation: N/A	
_ (If no, explain in R	emarks.)	
nal Circumstances" p	resent? Yes <u>X</u>	No
, explain any answei	rs in Remarks.)	
	State: OH N/A one): Concave 1.21864383333333 NWI classifica NWI classifica If no, explain in Re nal Circumstances" p	State: OHSampling Point: W N/A one): ConcaveSlope ( 1.21864383333333Datum: NWI classification: N/A

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-046						
Remarks: (Explain alternative procedures here or in a separate report.)								
PEM wetland adjacent to atv access road in maintained powerline easement.								

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sol	ils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes X No Depth (inches): 12	Wetland Hydrology Present? Yes X No
Saturation Present? Yes X No Depth (inches): 12 (includes capillary fringe)	
Saturation Present? Yes X No Depth (inches): 12	
Saturation Present? Yes X No Depth (inches): 12 (includes capillary fringe)	
Saturation Present? Yes X No Depth (inches): 12 (includes capillary fringe)	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes X       No       Depth (inches):       12         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Trace Other (Distring, 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:5 (A)
2				Total Number of Dominant Species Across All Strata: 5 (B)
3				
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	. <u></u>	= Total Cove	er	OBL species $70 \times 1 = 70$ EACW species $62 \times 2 = 124$
Sapling/Shrub Stratum (Plot size: 15 )				
1 Salix amygdaloides	10	Yes	FACW	FAC species x 3 =
2. Populus deltoides	5	Yes	FAC	FACU species         15         x 4 =         60           UPL species         0         x 5 =         0
3		·		Column Totals: <u>152</u> (A) <u>269</u> (B)
4				
5				Prevalence Index = B/A = 1.769736842 <sup>-</sup>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	er	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
1. Pycnanthemum virginianum	5	No	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2 Juncus effusus	20	Yes	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3Lythrum salicaria	4.5	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Rosa palustris		No	OBL	be present, unless disturbed or problematic.
5. Verbena hastata	2	No	FACW	Definitions of Vegetation Strata:
6. Eupatorium perfoliatum		No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7Carex vulpinoidea		Yes	OBL	at breast height (DBH), regardless of height.
8. Agrostis gigantea		Yes	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
9 Phalaris arundinacea	10	No	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. Solidago canadensis	10	No	FACU	Herb – All herbaceous (non-woody) plants, regardless of
11. Schedonorus arundinaceus	5	No	FACU	size, and woody plants less than 3.28 ft tall.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	137	= Total Cove	er	
Woody Vine Stratum (Plot size:30)				
1				Hydrophytic
2		·		Vegetation Present? Yes X No
3				
4				
Remarks: (Include photo numbers here or on a separate		= Total Cove	er	
	511001.)			

Depth (inches)         Matrix         Redox Features Color (moist)         Type <sup>1</sup> Loc <sup>2</sup> Texture         Remarks           0         -         14         10YR 4/1         95         10YR 4/4         5         Concer         M         Clay loam           14         -         18         2.5Y 5/2         70         7.5YR 5/8         30         Concer         M         Clay loam           -
0       -       14       10YR 4/1       95       10YR 4/4       5       Concer       M       Clay loam         14       18       2.5Y 5/2       70       7.5YR 5/8       30       Concer       M       Clay loam         -       -       -       -       -       -       -       -         -       -       -       -       -       -       -       -         -       -       -       -       -       -       -       -       -         -
14       18       2.5Y 5/2       70       7.5YR 5/8       30       Concer       M       Clay loarn         -       -       -       -       -       -       -       -       -         -
-     -
-     -
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Thirk Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches):         Hydric Soil Present?         Yes         X         No           Remarks:         Remarks:         No         N



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W-MJA-101921-06

Wetland LP-046



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Coun	ty: <u>Geauga County</u> Sampling Date: <u>10/19/2021</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-047
Investigator(s): MJA Section, T	Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Toeslope Local relief (c	concave, convex, none): <u>Concave</u> Slope (%): <u>1</u>
Subregion (LRR or MLRA): LRR R Lat: 41.602000666666667	Long: <u>-81.21909433333335</u> Datum: WGS 1984
Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to 12 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly disturbed	? Are "Normal Circumstances" present? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? If yes, optional Wetlan	Yes X No No Site ID: Wetland LP-047	
Remarks: (Explain alternative procedu	· · · /			
PEM wetland in maintained powerline e	asement.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is	required; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	Water-Stained Leave	es (B9)	Drainage Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)	
Saturation (A3)		Dry-Season Water Table (C2)		
Water Marks (B1)	lor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	X Oxidized Rhizospher	• • • •		
Drift Deposits (B3) Algal Mat or Crust (B4)	Presence of Reduce Recent Iron Reduction	( )	Stunted or Stressed Plants (D1) X_ Geomorphic Position (D2)	
Iron Deposits (B5)	Thin Muck Surface (		Shallow Aquitard (D3)	
Inundation Visible on Aerial Image			Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surfa	• • • • •	,	X FAC-Neutral Test (D5)	
Field Observations:				
Surface Water Present? Yes	No <u>X</u> Depth (inches):			
Water Table Present? Yes	No <u>X</u> Depth (inches):			
Saturation Present? Yes	No X Depth (inches):	Wetland	Hydrology Present? Yes X No	
(includes capillary fringe) Describe Recorded Data (stream gaug	a manitaring wall parial photos, pr	vious inspections) if av	ailabla	
Describe Recorded Data (Stream gaug	e, monitoring weil, aenai photos, pre	evious inspections), if av		
Remarks:				

Sampling Point: Wetland LP-047

Trac Stratum (Plat size) 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum         (Plot size:)           1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				
3				Total Number of Dominant         Species Across All Strata:         2         (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	er	OBL species $20 \times 1 = 20$ EACW species $105 \times 2 = 210$
Sapling/Shrub Stratum (Plot size: 15 )				r AGW species x 2 =
1 Frangula alnus	5	Yes	FAC	TAC species X 3 =
2				TACO species X4
3				
				Column Totals: <u>135</u> (A) <u>265</u> (B)
4 5				Prevalence Index = B/A = 1.9629629629
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
· ·		= Total Cove		X 2 - Dominance Test is >50%
5			1	<u>X</u> 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum     (Plot size:5)       1     Phalaris arundinacea	90	Yes	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. Thelypteris palustris		No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Onoclea sensibilis			FACW	
		No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
5. Scirpus cyperinus			OBL	Demitions of Vegetation Strata.
6. Solidago canadensis	5	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. Lythrum salicaria	5	No	OBL	at bleast height (DBH), regardless of height.
8 Impatiens capensis			FACW	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10				Herb - All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
· · · · · · · · · · · · · · · · · · ·				
1	. <u></u>			Hydrophytic
2				Vegetation
3			. <u></u>	Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	indicator	or confirn	n the absence o	of indicators.)		
Depth	Matrix		Redo	x Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 8	10YR 3/1	98	5YR 4/4	2	Concer	M,PL	Silty loam			
8 <sup>-</sup> 12	10YR 4/1	98	7.5YR 5/4	2	Concer	М	Silty clay loam			
-										
-							·			
-										
							·			
							·			
-										
-										
							·			
							·			
-										
·		·					·			
-										
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil	ndicators:							for Problematic Hydric Soils <sup>3</sup> :		
<u> </u>	(A1)		Polyvalue Below	w Surface	(S8) (LRF	RR,	2 cm M	uck (A10) ( <b>LRR K, L, MLRA 149B</b> )		
	oipedon (A2)		MLRA 149B)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )		
Black Hi			_ Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Loamy Mucky N			, L)		Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) This Park Surface (C0) (LRR K, L)		
	l Layers (A5) l Below Dark Surface	(411) X	_ Loamy Gleyed I		2)		-			
	ark Surface (A12)	(ATT) <u>^</u>	Depleted Matrix Redox Dark Sur				<ul> <li>Thin Dark Surface (S9) (LRR K, L)</li> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> </ul>			
	lucky Mineral (S1)		_ Depleted Dark S							
	ileyed Matrix (S4)		_ Redox Depress		.,		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
-	edox (S5)			( )				Red Parent Material (F21)		
Stripped	Matrix (S6)						Very Sh	nallow Dark Surface (TF12)		
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149B)					Other (B	Explain in Remarks)		
2										
	hydrophytic vegetati		nd hydrology mus	t be prese	ent, unless	disturbed	l or problematic.			
	_ayer (if observed):	Х								
Type: Ro								<i></i>		
Depth (ind	ches): <u>12</u>						Hydric Soil F	Present? Yes <u>X</u> No		
Remarks:										

Wetland LP-047



Soil



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	Sampling Date: 10/	19/2021
State: OH	_ Sampling Point:	pland LP-046,047
J/A		
one): <u>Convex</u>	Slope (	%) <u>:</u> 20
.21862870000001	Datum:	WGS 1984
NWI classifica	tion: N/A	
(If no, explain in Re	marks.)	
al Circumstances" pro	esent? Yes <u>X</u>	No
explain any answers	in Remarks.)	
	State: <u>OH</u> //A .21862870000001 NWI classifica (If no, explain in Re al Circumstances" pro-	State: OH Sampling Point: U J/A one): <u>Convex</u> Slope (

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>X</u> No <u>X</u> No <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-046,047				
Remarks: (Explain alternative procedures here or in a separate report.)         Upland data form for W-MJA-101921-06 and W-MJA-101921-07. Data point situated on overgrown soil refuse pile.							

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _ X
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-046,047

Trac Stratum (Plat size) 30	Absolute	Dominant I		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>1</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Description of the description of the
7				Prevalence Index worksheet:
· ·				Total % Cover of:        Multiply by:           OBL species         0         x 1 =
		= Total Cove	ſ	FACW species $3 \times 2 = 6$
Sapling/Shrub Stratum (Plot size: 15 )				FAC species $\begin{array}{c} & & \\ & & \\ \end{array}$ FAC species $\begin{array}{c} & & \\ & & \\ \end{array}$
1			<u> </u>	FAC species $105 \times 4 = 420$
2				UPL species $0 \times 5 = 0$
3				Column Totals: <u>108</u> (A) <u>426</u> (B)
4				
5				Prevalence Index = B/A = 3.9444444444
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cove	r	$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	70	Yes	FACU	data in Remarks or on a separate sheet)
2. Dipsacus fullonum	15	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Potentilla simplex		No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	3		FACW	be present, unless disturbed or problematic.
5. Solidago canadensis			FACU	Definitions of Vegetation Strata:
				-
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8			<u> </u>	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				size, and woody plants loss than 5.20 ft tan.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cove	r	inight.
Westerview Obstance (Distained 30			1	
Woody Vine Stratum (Plot size: 30 )				
1			<u> </u>	Hydrophytic
2			<u> </u>	Vegetation
3				Present? Yes No X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	to the depth	n needed to docur	ment the i	ndicator	or confirm	the absence of ind	icators.)	
Depth	Matrix			x Features	<u>s</u>	. 0	_		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 <sup>-</sup> 18	10YR 4/2	100					Silty clay loam		
-									
		<u> </u>		. <u> </u>	<u> </u>				
-									
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-									
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-									
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				·					
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.		Pore Lining, M=Matrix	
Hydric Soil	Indicators:							oblematic Hydric So	
Histosol		_	Polyvalue Belo		(S8) ( <b>LRF</b>	RR,		A10) ( <b>LRR K, L, MLR</b>	,
-	pipedon (A2)		MLRA 149B	,				Redox (A16) (LRR K	
Black Hi		_	Thin Dark Surfa				-	Peat or Peat (S3) (LR	R K, L, R)
	n Sulfide (A4)	_	Loamy Mucky I			, L)		(S7) (LRR K, L, M)	
	l Layers (A5) l Below Dark Surface		Loamy Gleyed Depleted Matrix		)		-	low Surface (S8) ( <b>LR</b> rface (S9) ( <b>LRR K, L</b> )	-
-	ark Surface (A12)	= (ATT) _	Redox Dark Su					ese Masses (F12) (LF	
	lucky Mineral (S1)	_	Depleted Dark	. ,	7)		-	odplain Soils (F19) ( <b>N</b>	
	Gleyed Matrix (S4)		Redox Depress		.,			c (TA6) ( <b>MLRA 144A,</b>	
	edox (S5)	_	_ '	( - )			Red Parent M		-, -,
	Matrix (S6)							Dark Surface (TF12)	
	rface (S7) ( <b>LRR R, M</b>	ILRA 149B)	1					n in Remarks)	
								,	
	f hydrophytic vegetati	ion and wetl	and hydrology mus	st be prese	ent, unless	disturbed	or problematic.		
Restrictive I	_ayer (if observed):								
Type:									
Depth (ind	ches):						Hydric Soil Prese	nt? Yes	No <u>X</u>
Remarks:							-		

#### General Site Photos Upland LP-046,047

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Soil

Sampling Date: 10/19/2021
DH Sampling Point: Wetland LP-048
ave Slope (%):
666666 Datum: WGS 1984
classification: <u>N/A</u>
ain in Remarks.)
ances" present? Yes X No
/ answers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-048
Remarks: (Explain alternative proced	ures here or in a separate report.)	
PEM wetland adjacent to gravel acces	s road in maintained powerline ease	ment.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes <u>No X</u> Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Trace Structures (Distriction 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cove		$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $64$ x 2 = $128$
1         Salix interior	2	No	FACW	FAC species $0 \times 3 = 0$
				FACU species x 4 =0
2				UPL species x 5 =
3				Column Totals:119 (A)183 (B)
4				Prevalence Index = B/A = 1.537815126(
5				
6				Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
	2	= Total Cove	er	$X$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Phalaris arundinacea	50	Yes	FACW	data in Remarks or on a separate sheet)
2. Lythrum salicaria	10	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Eupatorium perfoliatum	10	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Scirpus cyperinus	5	No	OBL	be present, unless disturbed or problematic.
5 Cyperus esculentus	2	No	FACW	Definitions of Vegetation Strata:
6. Carex vulpinoidea	40	Yes	OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	117	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes $\times$ No
4.				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate s		-		

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	indicator of	or confirm	n the absence of	findicators.)	
Depth	Matrix		Redo	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 10	10YR 4/1	90	5YR 4/6	10	Concer	М	Clay loam		
10 - 18	2.5Y 5/2	60	7.5YR 5/6	40	Concer	Μ	Clay loam	With grav	el
- - - - - - - - - - - - - - - - - - -	Dencentration, D=Deple Indicators: (A1) pipedon (A2)			   S=Masked w Surface			<sup>2</sup> Location: 1 Indicators fo 2 cm Mur Coast Pr	With grav PL=Pore Lining, M=Ma pr Problematic Hydric ck (A10) (LRR K, L, M airie Redox (A16) (LR cky Peat or Peat (S3)	atrix. : Soils <sup>3</sup> : ILRA 149B) R K, L, R)
Hydroge Stratified	n Sulfide (A4) I Layers (A5) I Below Dark Surface	- - - -	Loamy Mucky M Loamy Gleyed Depleted Matrix	Mineral (F Matrix (F2	1) ( <b>LRR K</b> ,		Dark Sur Polyvalue	face (S7) ( <b>LRR K, L, I</b> e Below Surface (S8)	M) (LRR K, L)
-	ark Surface (A12)	- (ATT) _	Redox Dark Su		1			k Surface (S9) ( <b>LRR k</b> Iganese Masses (F12)	
Sandy M	lucky Mineral (S1)	-	Depleted Dark	Surface (F			Piedmon	t Floodplain Soils (F19	9) ( <b>MLRA 149B</b> )
	leyed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )		
	edox (S5) Matrix (S6)						Red Parent Material (F21) Very Shallow Dark Surface (TF12)		
	rface (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (Explain in Remarks)		
								. ,	
	hydrophytic vegetati	on and wet	land hydrology mus	st be prese	ent, unless	disturbed	l or problematic.		
	_ayer (if observed):								
Type: Depth (ind	ches):						Hydric Soil P	resent? Yes <u>X</u>	No
Remarks:									

Wetland LP-048



Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Geau	uga County Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Upland LP-04
Investigator(s): MJA Section, Township,	, Range: N/A
Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave,	convex, none): Convex Slope (%): 5
Subregion (LRR or MLRA): LRR R Lat: 41.60113563333332	Long: -81.220343849999999 Datum: WGS 198
Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to 12 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$ N	√o (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes <u>X</u> 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? Hydric Soil Present?	Yes Yes	No <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: Upland LP-048
Remarks: (Explain alternative proceed	lures here or ir	n a separate report.)	·
Upland data form for W-MJA-101921-	05. Data point	adjacent to gravel driv	'e.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-048

Tree Stratum (Plot size:30)	Absolute	Dominant I Species?		Dominance Test worksheet:
1)				Number of Dominant Species That Are OBL, FACW, or FAC:0(A)
2				$\begin{array}{c} \text{matrice OBL, FACW, of FAC.} \\ \end{array} $
3				Total Number of Dominant Species Across All Strata: 2 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:0% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	r	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACVV species $x_2 = 0$
1				$\frac{1}{2} = \frac{1}{2} = \frac{1}$
2				FACU species         95         x 4 =         380           UPL species         35         x 5 =         175
3				Column Totals:         130         (A)         555         (B)
4				
5				Prevalence Index = B/A = 4.27
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
5		= Total Cove	r	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum       (Plot size:5)         1Securigera varia	30	Yes	UPL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Schedonorus arundinaceus			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Daucus carota			UPL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	20		FACU	be present, unless disturbed or problematic.
			FACU	Definitions of Vegetation Strata:
5. Solidago canadensis				
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	130	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
3				Vegetation Present? Yes <u>No</u> X
4				
Demorto: (Include abete numbere bore er en e concrete		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sneet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)						
Depth Matrix	th Matrix Redox Features					
(inches) Color (moist) %	Color (moist)	% Тур	e <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks	
0 <sup>-</sup> 3 10YR 3/2 100				Loam		
				· ·		
		. <u> </u>				
-						
				· · · · · · · · · · · · · · · · · · ·		
·		<u> </u>		·		
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-						
-						
		<u> </u>		·		
<sup>1</sup> Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, M	S=Masked Sand	l Grains.	<sup>2</sup> Location: PL=Pc	ore Lining, M=Matrix.	
Hydric Soil Indicators:					blematic Hydric Soils <sup>3</sup> :	
Histosol (A1)	Polyvalue Belo	w Surface (S8) (	LRR R,	2 cm Muck (A1	0) ( <b>LRR K, L, MLRA 149B</b> )	
Histic Epipedon (A2)	MLRA 1498				Redox (A16) (LRR K, L, R)	
Black Histic (A3)	Thin Dark Surf	ace (S9) ( <b>LRR R</b>	, MLRA 149B)	5 cm Mucky Pe	eat or Peat (S3) ( <b>LRR K, L, R</b> )	
Hydrogen Sulfide (A4)	ydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L)			Dark Surface (S7) (LRR K, L, M)		
Stratified Layers (A5)	Loamy Gleyed				w Surface (S8) ( <b>LRR K, L</b> )	
	_ Depleted Below Dark Surface (A11) Depleted Matrix (F3)			Thin Dark Surface (S9) (LRR K, L)		
Thick Dark Surface (A12)	Redox Dark Su				e Masses (F12) ( <b>LRR K, L, R</b> )	
Sandy Mucky Mineral (S1)				Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gleyed Matrix (S4)	Redox Depres	sions (F8)			TA6) ( <b>MLRA 144A, 145, 149B</b> )	
Sandy Redox (S5)				Red Parent Ma		
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
	( <b>9D</b> )				in Remarks)	
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
Restrictive Layer (if observed): X						
Type:_Gravel						
Depth (inches): 3	_			Hydric Soil Present	t? Yes NoX	
Remarks:						
Remarks.						



SE

Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: G	eauga County	Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Wetland LP-049
Investigator(s): MJA Section, Towns	hip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Depression Local relief (concert	ve, convex, none): <u>Concave</u>	Slope (%): 2
Subregion (LRR or MLRA): LRR R Lat: 41.599807166666667	Long: -81.22164450000001	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	_ No (If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrologysignificantly disturbed?	Are "Normal Circumstances" pre	esent? Yes X 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       X       No         Hydric Soil Present?       Yes       X       No         Wetland Hydrology Present?       Yes       X       No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-049
Remarks: (Explain alternative procedures here or in a separate report.) Small water-filled depression with cattails.	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Drift Deposits (B3)       Presence of Reduced         Algal Mat or Crust (B4)       Recent Iron Reduction         Iron Deposits (B5)       Thin Muck Surface (0         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Reduction Concave Surface (B8)	)       Moss Trim Lines (B16)         Dry-Season Water Table (C2)         dor (C1)       Crayfish Burrows (C8)         res on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         ed Iron (C4)       Stunted or Stressed Plants (D1)         on in Tilled Soils (C6)       X Geomorphic Position (D2)         (C7)       Shallow Aquitard (D3)
Field Observations:         Surface Water Present?       Yes X       No Depth (inches):         Water Table Present?       Yes X       No Depth (inches):         Saturation Present?       Yes X       No Depth (inches):         Saturation Present?       Yes X       No Depth (inches):	4 4 0 Wetland Hydrology Present? Yes <u>X</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

Tree Stretum (Distaire) 30	Absolute	Dominant In		Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7			<u> </u>	Total % Cover of: Multiply by:
		= Total Cover		OBL species95 x 1 =95
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1				FAC species $0 \times 3 = 0$
2				FACU species0 x 4 =0
				UPL species x 5 =0
3				Column Totals: <u>95</u> (A) <u>95</u> (B)
4				Prevalence Index = B/A = 1
5				Prevalence Index = B/A = 1
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover		$\underline{X}$ 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		Total Cover		X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum     (Plot size:)       1     Typha latifolia	80	Yes	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2 Salix nigra			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
			<u> </u>	Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12				height.
	95	= Total Cover		
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				Hydrophytic
				Vegetation Present? Yes <sup>X</sup> No
3				
4				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate	sheet.)			

I

Profile Desc	ription: (Describe t	o the depth	n needed to docur	nent the i	ndicator	or confirm	the absence of	of indicators.)
Depth	Matrix		Redo	x Features	<u>s</u>			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 2	10YR 4/2	97	7.5YR 5/8	3	Concer	M	Silty loam	
2 - 10	2.5Y 5/2	90	7.5YR 5/8	10	Concer	М	Clay	
-								
			<u> </u>					
			<u> </u>			<u> </u>	·	
-								
-								
-								
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			<u>.</u>				·	
-							·	
-								
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I								or Problematic Hydric Soils <sup>3</sup> :
Histosol		_	Polyvalue Belov		(S8) ( <b>LRF</b>	RR,		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black Hi		-	Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky N			, L)		urface (S7) ( <b>LRR K, L, M</b> )
	Layers (A5)		Loamy Gleyed		)		-	ue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					rk Surface (S9) (LRR K, L)
	rk Surface (A12)	-	Redox Dark Su					nganese Masses (F12) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	Depleted Dark		7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matrix (S4)	_	Redox Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)							rent Material (F21)
Stripped	Matrix (S6)						Very Sh	allow Dark Surface (TF12)
Dark Su	face (S7) ( <b>LRR R, M</b>	LRA 149B)					Other (E	Explain in Remarks)
<sup>3</sup> Indicators of	hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	ent, unless	disturbed	or problematic.	
	ayer (if observed):				,			
Type: Cla	and gravel							
Depth (inc	ches): <u>10</u>						Hydric Soil F	Present? Yes <u>X</u> No
Remarks:								

Wetland LP-049



Soil

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ine Projec City/County:	Geauga County	Sampling Date: 10/19/2021
	State: OH	_ Sampling Point: Wetland LP-050
Section, Tow	/nship, Range: <u>N/A</u>	
Local relief (con	cave, convex, none): Undulating	Slope (%): 1
5992589999999996	Long: <u>-81.22277683333333</u>	Datum: WGS 1984
d	NWI classifica	ation: N/A
s time of year? Yes X	No (If no, explain in Re	emarks.)
ignificantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
aturally problematic?	(If needed, explain any answer	s in Remarks.)
i	Section, Tow Local relief (con 99258999999996 d time of year? Yes <u>X</u> gnificantly disturbed?	Section, Township, Range:         N/A           Section, Township, Range:         N/A           Local relief (concave, convex, none):         Undulating           199258999999996         Long:         -81.22277683333333           d         NWI classification         NWI classification           time of year?         Yes         X         No         (If no, explain in Regnificantly disturbed?

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-050
Remarks: (Explain alternative proced	ures here or in a separate report.)	•
PEM wetland consisting of multiple po	lygons in a low-lying area along an ir	ntermittent stream.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
	<ul> <li>Drainage Patterns (B10)</li> <li>Moss Trim Lines (B16)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> </ul>
	Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Surface Water Present? Yes No X Depth (inches):	
Water Table Present?     Yes X     No     Depth (inches):     12	
Saturation Present? Yes X No Depth (inches): 0	
	Wetland Hydrology Present? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Wetland LP-050

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant I Species?		Dominance Test worksheet:
1	<u> </u>			Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant Species Across All Strata: 4 (B)
3 4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.75 (A/B)
6				
7				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cove	r	$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species 55 x 2 = 110
1,				FAC species x 3 =45
2				FACU species20 x 4 =80
				UPL species x 5 =0
3				Column Totals: <u>145</u> (A) <u>290</u> (B)
4 5				Prevalence Index = B/A = 2
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	r	$\frac{X}{X}$ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				X 3 - Prevalence Index is $\leq 3.0^{1}$
1. Phalaris arundinacea	40	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2 Juncus effusus	10	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Scirpus atrovirens		Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4Carex crinita		No	OBL	be present, unless disturbed or problematic.
5Onoclea sensibilis	15	No	FACW	Definitions of Vegetation Strata:
6Carex vulpinoidea	20	Yes	OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7Solidago canadensis	20	Yes	FACU	at breast height (DBH), regardless of height.
8 Frangula alnus	5	No	FAC	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9. Solidago rugosa	10	No	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		·		<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12		· ·		height.
	145	= Total Cove	r	
Woody Vine Stratum (Plot size: 30)				
1				Hydrophytic
2		<u> </u>		Vegetation
3		<u> </u>		Present? Yes X No
4		·		
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	o the dept	th needed to docur	nent the i	ndicator	or confirn	n the absence of	indicator	's.)	
Depth	Matrix			x Feature	<u>s</u>	0				
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 10	10YR 2/1	100					Silty clay loam			
10 <sup>-</sup> 18	10YR 4/2	80	10YR 5/6	20	Concer	М	Silty clay loam		With gravel	
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							·			
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-										
							·			
							·			
-										
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: I	PL=Pore L	ining, M=Matri	x.
Hydric Soil I			· · · ·						natic Hydric S	
Histosol	(A1)		Polyvalue Below	w Surface	(S8) (LRF	RR,	2 cm Muo	ck (A10) ( <b>I</b>	_RR K, L, MLF	RA 149B)
Histic Ep	ipedon (A2)		MLRA 149B)	)			Coast Pra	airie Redo	x (A16) ( <b>LRR I</b>	K, L, R)
Black His			Thin Dark Surfa					-	r Peat (S3) ( <b>Ll</b>	RR K, L, R)
	n Sulfide (A4)		Loamy Mucky N			, L)			(LRR K, L, M)	
	Layers (A5)	( )	Loamy Gleyed I		)				urface (S8) (LF	
-	l Below Dark Surface irk Surface (A12)	(ATT)	Depleted Matrix X Redox Dark Su						(S9) ( <b>LRR K, L</b> asses (F12) ( <b>L</b>	
	lucky Mineral (S1)		Depleted Dark St	. ,					in Soils (F12) (L	
	leyed Matrix (S4)		Redox Depress		.,				) (MLRA 144A	
-	edox (S5)							ent Materia		,
Stripped	Matrix (S6)						Very Sha	llow Dark	Surface (TF12	2)
Dark Sur	face (S7) ( <b>LRR R, M</b>	LRA 149E	3)				Other (Ex	kplain in R	emarks)	
3										
	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	l or problematic.			
	ayer (if observed):									
Type:										
	ches):						Hydric Soil Pr	resent?	Yes <u>×</u>	No
Remarks:										
1										

General Site Photos

Wetland LP-050



Soil

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W-MJA-101921-01

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W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Ge	eauga County	Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Upland LP-049,050
Investigator(s): MJA Section, Townsh	nip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Terrace Local relief (concave	ve, convex, none): <u>Flat</u>	Slope (%): 0
Subregion (LRR or MLRA): LRR R Lat: 41.59980433333333	Long: <u>-81.221706666666665</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" pro	esent? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes N	No <u>X</u> No <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-049,050
Remarks: (Explain alternative proce	dures here or in a se	parate report.)	
Upland data form for W-MJA-101921	-01, W-MJA-101921	-02, and W-MJA-1	01921-03. Data point situated in maintained powerline easement.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-049,050

Tree Stratum (Plateize: 30)	Absolute	Dominant I		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1		Species?		Number of Dominant Species That Are OBL_EACW_or FAC: 0 (A)
				That Are OBL, FACW, or FAC:0 (A)
2 3				Total Number of Dominant         Species Across All Strata:         2         (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: $0$ (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	. <u> </u>	= Total Cove	r	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x_2 = 0$
1				FAC species x 3 =
2				FACU species $130 \times 4 = 520$
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>140</u> (A) <u>550</u> (B)
4 5				Prevalence Index = B/A = 3.928571428
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/·				2 - Dominance Test is >50%
		= Total Cove	r	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum       (Plot size:5_)         1Schedonorus arundinaceus	70	Yes	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Plantago lanceolata			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Symphyotrichum pilosum		No	FACU	
5. Solidago rugosa	10	No	FAC	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	140	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1		<u> </u>		Hydrophytic
2				Vegetation
3				Present? Yes No X
4				
		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)			

I

Profile Desc	ription: (Describe t	o the dept	n needed to docu	ment the i	ndicator	or confirm	the absence of indi	cators.)	
Depth	Matrix			x Feature	<u>s</u>	-			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	<s< td=""></s<>
0 - 5	10YR 4/2	100					Silty clay loam		
5 <sup>-</sup> 18	10YR 5/3	100					Silty clay loam		
-				. <u></u>					
				·					
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-				<u> </u>					
				<u> </u>		<u> </u>			
-									
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				·		·			
-									
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=P		
Hydric Soil I	Indicators:						Indicators for Pro	-	
Histosol		-	Polyvalue Belo		(S8) ( <b>LRF</b>	RR,		10) ( <b>LRR K, L</b> ,	,
	pipedon (A2)		MLRA 149B	,				Redox (A16) (L	
Black Hi	stic (A3) in Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky I				-		B) (LRR K, L, R)
	d Layers (A5)	-	Loamy Gleyed			, L)		(S7) ( <b>LRR K, L</b> ow Surface (S8	
	d Below Dark Surface	- (A11)	Depleted Matrix		)			face (S9) ( <b>LRR</b>	
	ark Surface (A12)		Redox Dark Su						2) ( <b>LRR K, L, R</b> )
	lucky Mineral (S1)	-	Depleted Dark	• • •					( <b>MLRA 149B</b> )
	Bleyed Matrix (S4)	-	Redox Depress		,				144A, 145, 149B)
Sandy R	ledox (S5)						Red Parent M	aterial (F21)	
Stripped	Matrix (S6)						Very Shallow	Dark Surface ( <sup>-</sup>	TF12)
Dark Su	rface (S7) ( <b>LRR R, M</b>	ILRA 149B)	)				Other (Explain	in Remarks)	
<sup>3</sup> Indicators of	f hydrophytic vegetati	ion and wet	land hydrology mu	et ha nrasa	ont unloca	disturbed	or problematic		
	_ayer (if observed):		and hydrology mus	si be prese	ent, unicos				
Type:	, , , , , , , , , , , , , , , , , , ,								
	ches):						Hydric Soil Preser	nt? Yes	<u>No X</u>
Remarks:									

General Site Photos

Upland LP-049,050



Soil



S

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County: Gea	auga County	Sampling Date: 10/18/2021
Applicant/Owner: FirstEnergy	State: OH	_ Sampling Point: Wetland LP-051
Investigator(s): MJA Section, Townshi	ip, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Hillside Local relief (concave	e, convex, none): <u>Flat</u>	Slope (%): 8
Subregion (LRR or MLRA): LRR R Lat: 41.598625166666667	_ Long: <u>-81.22341816666668</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in Rei	marks.)
Are Vegetation, Soil, or HydrologyX_ significantly disturbed?	Are "Normal Circumstances" pre	esent? Yes <u>X</u> 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-051
Remarks: (Explain alternative procedu	res here or in a separate report.)	
PEM wetland in maintained powerline e	asement. T-line structure in wetland	d, altering hydrology.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	oils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes <u>No X</u> Depth (inches):					
Water Table Present? Yes <u>No X</u> Depth (inches):					
Mater Table Present? Fes No Depth (incres).					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec					

Tree Streture (Distring 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2		·		Total Number of Dominant
3	. <u> </u>			Species Across All Strata: 2 (B)
4	<u> </u>			Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
7				Total % Cover of:         Multiply by:
·		= Total Cove		$\begin{array}{c c c c c c c c c c c c c c c c c c c $
Sapling/Shrub Stratum (Plot size: 15 )		- 10(a) 0070	71	FACW species $135$ x 2 = $270$
<u> </u>				FAC species $5 \times 3 = 15$
1				FACU species $10 \times 4 = 40$
2				UPL species $0 \times 5 = 0$
3				Column Totals: <u>160</u> (A) <u>335</u> (B)
4				0.00075
5				Prevalence Index = B/A = 2.09375
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		- 10(a) 0000	1	<u>X</u> 3 - Prevalence Index is $\leq 3.0^1$
	50	Vaa	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Phragmites australis	50	Yes		data in Remarks or on a separate sheet)
2. Phalaris arundinacea	80	Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Solidago canadensis	10	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Lythrum salicaria	10	No	OBL	be present, unless disturbed or problematic.
5. Eupatorium perfoliatum	5	No	FACW	Definitions of Vegetation Strata:
6Solidago rugosa	5	No	FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
		·		size, and woody plants less than 3.28 ft tall.
11		·	·	Woody vines – All woody vines greater than 3.28 ft in
12		·		height.
	160	= Total Cove	r	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate				<u> </u>

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirm	the absence of ind	cators.)		
Depth (in shas)	Matrix			x Feature	<u>s</u>	1 - 2	T	-		
<u>(inches)</u> 0 <sup>-</sup> 4	Color (moist) 10YR 3/2	<u>%</u> 100	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>		Kei	marks	
4 - 18	10YR 4/2	60	10YR 5/8	2	Concer	PL	Silty clay			
4 - 18	5Y 5/1	38	1011(0,0							
- 10										
							·			
		<u> </u>								
					<u> </u>					
		<u> </u>								
-			,		<u> </u>					
-										
-										
<sup>1</sup> Type: C=Co Hydric Soil	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=F Indicators for Pr			
Histosol			Polyvalue Belov	v Surface	(S8) ( <b>LRF</b>	RR.	2 cm Muck (A		-	
Histic Ep	pipedon (A2)	-	MLRA 149B)	)			Coast Prairie	Redox (A16	6) ( <b>LRR</b>	K, L, R)
Black Hi	stic (A3) n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky N							-
	d Layers (A5)	-	Loamy Gleyed I			, ⊑)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)			
	d Below Dark Surface	(A11) _	X Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)			
	ark Surface (A12) lucky Mineral (S1)	-	Redox Dark Su Depleted Dark \$				<ul> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> </ul>			
	Gleyed Matrix (S4)	-	Redox Depress		.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
-	edox (S5)						Red Parent Material (F21)			
	Matrix (S6) rface (S7) ( <b>LRR R, M</b>	I RA 149B	)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
								i in i teman	(3)	
	f hydrophytic vegetati	on and wet	land hydrology mus	t be prese	ent, unless	disturbed	or problematic.			
Type:	_ayer (if observed):									
· · ·	ches):						Hydric Soil Prese	nt? Yes	Х	No
Remarks:										



Soil

S



Е



Ν

W

/	Sampling Date: 10/	18/2021
State: OH	Sampling Point: L	Ipland LP-051
N/A		
one): <u>Convex</u>	Slope (	%): <u></u> 8
.22344353333332	Datum:	WGS 1984
NWI classific	ation: N/A	
(If no, explain in R	emarks.)	
al Circumstances" p	resent? Yes <u>X</u>	No
explain any answe	rs in Remarks.)	
		State: OHSampling Point: L N/A one): ConvexSlope ( .22344353333332Datum: NWI classification:N/A

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-051
Remarks: (Explain alternative procedu Upland data form for W-MJA-101821-0		,	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	pils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes <u>No X</u> Depth (inches):					
Water Table Dresent? Vac Na X Denth (inches)					
Water Table Present? Yes <u>No X</u> Depth (inches):					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX				
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes       No       X       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective					
Saturation Present?       Yes No _X _ Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)					

Tura Charter (Distaine) 30	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum         (Plot size:)           1		Species?		Number of Dominant Species That Are OBL_EACW_or EAC: 1 (A)
				That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata: <u>5</u> (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:0.2 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	r	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $0 \times 2 = 0$
1. Rosa multiflora	10	Yes	FACU	FAC species $35 \times 3 = 105$
2. Frangula alnus	5	Yes	FAC	FACU species $155 \times 4 = 620$
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>190</u> (A) <u>725</u> (B)
4 5				Prevalence Index = B/A = 3.8157894736
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		2 - Dominance Test is >50%
Hark Strature (Distaire) 5		- 1000 0000	•	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum     (Plot size: 5)       1.     Schedonorus arundinaceus	45	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Poa pratensis		Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Solidago canadensis		Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Solidago rugosa		No	FAC	be present, unless disturbed or problematic.
5Euthamia graminifolia			FAC	Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10		· .		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		·		<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12		·		height.
	175	= Total Cove	r	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
3			<u> </u>	Vegetation Present? Yes No <sup>X</sup>
4		= Total Cove	r	
Remarks: (Include photo numbers here or on a separate	sheet.)	101010010	•	
	0110011)			

Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Features		0				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 <sup>-</sup> 18	10YR 4/2	100					Silty clay loam			
-										
					·					
-										
-										
-										
					<u> </u>					
-										
-										
						. <u> </u>				
-										
-					·					
					·	. <u> </u>				
	oncentration, D=Deple	etion, RM=I	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=P	ore Lining, M=Matrix.		
Hydric Soil I								blematic Hydric Soils <sup>3</sup> :		
Histosol		-	Polyvalue Belo		(S8) ( <b>LRF</b>	RR,		10) ( <b>LRR K, L, MLRA 149B</b> )		
	bipedon (A2)		MLRA 149B	,		DA 440D		Redox (A16) ( <b>LRR K, L, R</b> )		
Black His	n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky I				-	eat or Peat (S3) ( <b>LRR K, L, R</b> ) (S7) ( <b>LRR K, L, M</b> )		
	I Layers (A5)	-	Loamy Gleyed			, L)		ow Surface (S8) (LRR K, L)		
	Below Dark Surface	(A11) -	Depleted Matrix		/		-	face (S9) ( <b>LRR K, L</b> )		
	ark Surface (A12)		Redox Dark Su					se Masses (F12) ( <b>LRR K, L, R</b> )		
	lucky Mineral (S1)	-	Depleted Dark		7)			odplain Soils (F19) ( <b>MLRA 149B</b> )		
	ileyed Matrix (S4)	_	Redox Depress		,			(TA6) ( <b>MLRA 144A, 145, 149B</b> )		
	edox (S5)	_		. ,			Red Parent Ma			
Stripped	Matrix (S6)						Very Shallow [	Dark Surface (TF12)		
Dark Sur	face (S7) ( <b>LRR R, M</b>	LRA 149B)	)				Other (Explain	in Remarks)		
	hydrophytic vegetati	on and wet	and hydrology mus	st be prese	ent, unless	s disturbed	or problematic.			
Restrictive L	.ayer (if observed):									
Туре:										
Depth (inc	ches):						Hydric Soil Presen	t? Yes <u>No X</u>		
Remarks:										



NE

Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/Con	nty: <u>Geauga County</u> Sampling Date: <u>10/18/2021</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-052
Investigator(s): MJA Section	Township, Range: N/A
Landform (hillslope, terrace, etc.): Footslope Local relief	(concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): LRR R Lat: 41.59846200000005	Long: -81.22445083333334 Datum: WGS 1984
Soil Map Unit Name: Or: Orrville silt loam, frequently flooded	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	d? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problemati	? (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       X       No         Hydric Soil Present?       Yes       X       No         Wetland Hydrology Present?       Yes       X       No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-052
Remarks: (Explain alternative procedures here or in a separate report.) PEM wetland in maintained powerline easement.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	es (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	
Sediment Deposits (B2) X Oxidized Rhizospher	
Drift Deposits (B3)     Presence of Reduce     Algal Mat or Crust (B4)     Recent Iron Reduction	· · · · · · · · · · · · · · · · · · ·
Iron Deposits (B5) Thin Muck Surface (	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	
Sparsely Vegetated Concave Surface (B8)	× FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes <u>No X</u> Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	vious inspections), if available:
Remarks:	

Trac Stratum (Plat size) 30	Absolute	Dominant Ir		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>1</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
				Prevalence Index worksheet:
7				$\frac{\text{Total \% Cover of:}}{\text{OBL species}} \frac{3}{x 1 = 3}$
		= Total Cover	-	
Sapling/Shrub Stratum (Plot size: 15 )				
1				FAC species0 $x \ 3 = 0$ FACU species5 $x \ 4 = 20$
2				
3				
4				Column Totals: <u>108</u> (A) <u>223</u> (B)
				Prevalence Index = B/A = 2.0648148148
5				
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
		= Total Cover	-	$\frac{X}{X}$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5 )				
1 Phalaris arundinacea	100	Yes	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2 Mimulus ringens			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Solidago canadensis			FACU	1 n diseters of hudris soil and wattend hudrals mused
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
5				Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb - All herbaceous (non-woody) plants, regardless of
				size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	108	= Total Cover	-	
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate				
	oneet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the absence o	of indicators.)			
Depth	Matrix		Redo	x Feature	S						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0 <sup>-</sup> 18	2.5Y 3/1	90	5YR 3/4	10	Concer	M,PL	Silty clay loam				
						<u> </u>	·				
-											
·			<u> </u>					<u> </u>			
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				. <u></u>							
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. <u> </u>						<u> </u>					
-											
$^{1}$ Type: C=Co	oncentration, D=Deple	tion RM=	Reduced Matrix M	S=Masked	Sand Gra	ains	<sup>2</sup> Location	PL=Pore Lining, M=Matrix.			
Hydric Soil I			toddood matrix, m					or Problematic Hydric Soils <sup>3</sup> :			
Histosol			Polyvalue Belov	w Surface	(S8) (LRF	R.		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )			
	vipedon (A2)	-	MLRA 149B		(00) (	,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )			
Black His			Thin Dark Surfa	,	.RR R, ML	RA 149B)		ucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)	_	Loamy Mucky N					ırface (S7) ( <b>LRR K, L, M</b> )			
Stratified	Layers (A5)	_	Loamy Gleyed	Matrix (F2	)		Polyvalı	ue Below Surface (S8) (LRR K, L)			
Depleted	Below Dark Surface	(A11)	X Depleted Matrix	(F3)			Thin Da	rk Surface (S9) ( <b>LRR K, L</b> )			
	rk Surface (A12)	-	Redox Dark Su					nganese Masses (F12) ( <b>LRR K, L, R</b> )			
	lucky Mineral (S1)	-	Depleted Dark		7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )			
	leyed Matrix (S4)	-	Redox Depress	ions (F8)				podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
	edox (S5)						Red Parent Material (F21)				
	Matrix (S6)						Very Shallow Dark Surface (TF12)				
Dark Sur	face (S7) ( <b>LRR R, M</b>	LRA 149B)	)				Other (Explain in Remarks)				
3											
	hydrophytic vegetati	on and wet	land hydrology mus	st be prese	ent, unless	disturbed	or problematic.				
	ayer (if observed):										
Туре:											
Depth (inc	hes):						Hydric Soil F	Present? Yes X No			
Remarks:											

Wetland LP-052



Soil



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g Date: 10	/18/2021
ling Point:	Wetland LP-053
Slope	(%): <u>3</u>
_ Datum:	WGS 1984
'A	
Yes X	No
narks.)	
/	-

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-053
Remarks: (Explain alternative proced	ures here or in a separate report.)	
Large PEM wetland in maintained pov	verline easement. Wetland drains into	o an intermittent stream that flows out of northeast corner.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)       Water-Stained Leaves (B9)         X       High Water Table (A2)       Aquatic Fauna (B13)         X       Saturation (A3)       Marl Deposits (B15)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2)       X       Oxidized Rhizospheres on Living         Drift Deposits (B3)       Presence of Reduced Iron (C4)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled S         Iron Deposits (B5)       Thin Muck Surface (C7)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Sparsely Vegetated Concave Surface (B8)	Drainage Patterns (B10)         Moss Trim Lines (B16)         Dry-Season Water Table (C2)         Crayfish Burrows (C8)         Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Stunted or Stressed Plants (D1)
Field Observations:	
Surface Water Present?       Yes       No       X       Depth (inches):         Water Table Present?       Yes       X       No       Depth (inches):       6         Saturation Present?       Yes       X       No       Depth (inches):       0	Wetland Hydrology Present? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Tree Stratum (Plateira) 30	Absolute	Dominant		Dominance Test worksheet:
Thee Stratum (Plot size)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2		·		Total Number of Dominant
3				Species Across All Strata:1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	er	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $101 \times 2 = 202$
1				FAC species $0 \times 3 = 0$
2				FACU species $5 \times 4 = 20$
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>106</u> (A) <u>222</u> (B)
4				Prevalence Index = B/A = 2.0943396226
5				
6		. <u> </u>		Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove	er	$\frac{X}{X}$ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
1 Phalaris arundinacea	100	Yes	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2 Solidago canadensis			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3 Impatiens capensis			FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Wards store All marks in store and the store 2.20 ft in
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	106	= Total Cove	ər	
Woody Vine Stratum (Plot size:30)				
1				Hydrophytic
2	·			Vegetation
3				Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			
	,			

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Profile Desc	ription: (Describe to	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of	f indicators.)			
Depth	Matrix		Redo	x Features	6						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0 - 18	2.5Y 3/1	90	5YR 3/4	10	Concer	PL	Silty clay loam				
-											
-											
<u> </u>		······									
-											
-											
-											
-											
-											
-											
-											
-											
·	,										
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: I	PL=Pore Lining, M=Matrix.			
Hydric Soil I	ndicators:							or Problematic Hydric Soils <sup>3</sup> :			
Histosol	(A1)		Polyvalue Belov	w Surface	(S8) ( <b>LRF</b>	RR,	2 cm Mu	ıck (A10) ( <b>LRR K, L, MLRA 149B</b> )			
Histic Ep	ipedon (A2)		MLRA 149B	)			Coast Pr	rairie Redox (A16) ( <b>LRR K, L, R</b> )			
Black His	stic (A3)		Thin Dark Surfa	ace (S9) ( <b>L</b>	.RR R, MI	RA 1498	) 5 cm Mu	icky Peat or Peat (S3) ( <b>LRR K, L, R</b> )			
Hydroge	n Sulfide (A4)	_	Loamy Mucky M	/lineral (F1	) (LRR K	, L)	Dark Sur	rface (S7) ( <b>LRR K, L, M</b> )			
Stratified	l Layers (A5)	_	Loamy Gleyed	Matrix (F2	)		Polyvalue	e Below Surface (S8) ( <b>LRR K, L</b> )			
Depleted	Below Dark Surface	(A11) <u> </u>	X Depleted Matrix	(F3)			Thin Dar	rk Surface (S9) ( <b>LRR K, L</b> )			
	rk Surface (A12)	_	Redox Dark Su					nganese Masses (F12) ( <b>LRR K, L, R</b> )			
	lucky Mineral (S1)	_	Depleted Dark		7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )			
	leyed Matrix (S4)	_	Redox Depress	ions (F8)				podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
	edox (S5)							ent Material (F21)			
	Matrix (S6)						Very Shallow Dark Surface (TF12)				
Dark Sur	face (S7) ( <b>LRR R, M</b>	LRA 149B)					Other (Explain in Remarks)				
2											
	hydrophytic vegetation	on and wet	and hydrology mus	st be prese	ent, unless	disturbed	or problematic.				
Restrictive L	ayer (if observed):										
Туре:											
Depth (inc	hes):						Hydric Soil P	resent? Yes X No			
Remarks:											



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Soil



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Project/Site: Leroy Center-Mayfield 138 kV Transmission Lin	e Projec City/County: C	eauga County	Sampli	ng Date: 10/	8/2021
Applicant/Owner: FirstEnergy		S	tate: OH Sam	pling Point:	oland LP-052,053
Investigator(s): MJA	Section, Town	ship, Range: <u>N/A</u>			
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (conca	ave, convex, none):	Convex	Slope (	%) <u>:</u> 5
Subregion (LRR or MLRA): LRR R Lat: 41.59	9824751666667	Long: <u>-81.224</u>	79611666667	Datum:	WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent	t slopes		NWI classification:	N/A	
Are climatic / hydrologic conditions on the site typical for this t	time of year? Yes X	No (If n	o, explain in Remarks	.)	
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed?	Are "Normal Cir	cumstances" present?	Yes X	No
Are Vegetation, Soil, or Hydrology na	turally problematic?	(If needed, expl	ain any answers in Re	marks.)	

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
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Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

Sampling Point: Upland LP-052,053

Tree Stratum (Plot size: <sup>30</sup> )	Absolute	Dominant Ir Species?		Dominance Test worksheet:
				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: $0.333333333333333333333333333333333333$
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cover	-	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species X Z =
1. Rubus allegheniensis	25	Yes	FACU	FAC species $x_3 = 0$
2				FACU species $x_4 = 0.00$
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>125</u> (A) <u>420</u> (B)
4				Prevalence Index = $B/A = 3.36$
5				
6			<u> </u>	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Cover	-	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				3 - Prevalence Index is $≤3.0^{1}$
1 Solidago canadensis	60	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2 Phalaris arundinacea		Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Vegetation Strata:
5				Definitions of Vegetation official.
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11.				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12	100	= Total Cover		height.
20	100			
Woody Vine Stratum (Plot size: 30)				
1				Hadaa a ka da
2				Hydrophytic Vegetation
3				Present? Yes No X
4.				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate				
	,			

Profile Desc	ription: (Describe t	to the depth	needed to docu	ment the i	ndicator	or confirm	the absence of ir	dicators.)	)	
Depth	Matrix			x Features		2				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	l	Remarks	
0 - 18	10YR 4/3	100					Silty loam			
-										
							·			
-										
							·			
-										
_										
		<u> </u>					<u> </u>			
-										
-										
							·			
-							. <u> </u>			
-										
-							. <u></u>			
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL			
Hydric Soil	Indicators:						Indicators for I	Problemat	ic Hydric S	ioils <sup>3</sup> :
Histosol	· /	_	Polyvalue Belo	w Surface	(S8) ( <b>LRF</b>	R,	2 cm Muck	(A10) ( <b>LR</b>	R K, L, MLI	RA 149B)
·	oipedon (A2)		MLRA 149B	,			Coast Prair			
Black Hi		_	Thin Dark Surfa				5 cm Muck	y Peat or P	Peat (S3) ( <b>L</b>	RR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky I			, L)	Dark Surfac			
	l Layers (A5)	_	Loamy Gleyed		)		Polyvalue E			
	d Below Dark Surface	e (A11)	Depleted Matrix				Thin Dark S			
	ark Surface (A12)	—	Redox Dark Su				-			<b>_RR K, L, R</b> )
	lucky Mineral (S1)	_	Depleted Dark		7)					(MLRA 149B)
	Bleyed Matrix (S4)	-	_ Redox Depress	sions (F8)						A, 145, 149B)
	ledox (S5)						Red Parent			
	Matrix (S6)						Very Shallo			2)
Dark Su	rface (S7) ( <b>LRR R, M</b>	ILRA 149B)					Other (Expl	ain in Rem	narks)	
3										
	f hydrophytic vegetati	ion and wetl	and hydrology mus	st be prese	ent, unless	disturbed	or problematic.			
	_ayer (if observed):									
Туре:										
Depth (ind	ches):						Hydric Soil Pres	sent? Ye	es	No X
Remarks:										



SE

Soil

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

County	Sampling Date: 10/18/2021
State: OH	_ Sampling Point: Wetland LP-054
ange: N/A	
ivex, none): Concave	Slope (%): <u>2</u>
ng: <u>-81.226431</u>	Datum: WGS 1984
NWI classifica	ation: N/A
(If no, explain in Re	emarks.)
"Normal Circumstances" p	resent? Yes X No
eeded, explain any answer	s in Remarks.)
	State: OH Inge: N/A vex, none): Concave ng: -81.226431 NWI classifica (If no, explain in Re "Normal Circumstances" p

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-054
Remarks: (Explain alternative proced	ures here or in a separate report.)	
PEM wetland in maintained powerline	easement. Adjacent ATV path affec	ting hydrology.

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two requ	ired)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)	
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)	
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)	
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2) Oxidized Rhizospheres on Living R	Roots (C3) Saturation Visible on Aerial Imagery (C	9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) X Geomorphic Position (D2)	
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present? Yes <u>No X</u> Depth (inches):		
Water Table Present? Yes <u>No X</u> Depth (inches):		
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		
Saturation Present? Yes No X Depth (inches):		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
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Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
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Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect		

## **VEGETATION –** Use scientific names of plants.

Tree Stratum (Plot size: <sup>30</sup> )	Absolute	Dominant Species?		Dominance Test worksheet:
				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2	<u> </u>			Total Number of Dominant
3				Species Across All Strata: <u>1</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				Drevelance Index werkeheet
7				Prevalence Index worksheet:
·				Total % Cover of:        Multiply by:           OBL species         0         x 1 =
15 N		= Total Cove	31	FACW species $100 \times 2 = 200$
Sapling/Shrub Stratum (Plot size: 15)				FAC species $5 \times 3 = 15$
1				FACU species $15$ $x 4 = 60$
2				UPL species $0 \times 5 = 0$
3				Column Totals: $120$ (A) $275$ (B)
4				
5				Prevalence Index = $B/A = 2.291666666666$
6				Hydrophytic Vegetation Indicators:
				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
		= Total Cove	er	$X$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Phalaris arundinacea	100	Yes	FACW	data in Remarks or on a separate sheet)
2. Solidago canadensis	10	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Symphyotrichum pilosum	5	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Euthamia graminifolia		No	FAC	be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
5				_
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7		. <u> </u>	<u> </u>	
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11.				
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	120	= Total Cove		norgin.
Western (Distance 30		- 10141 0000	51	
Woody Vine Stratum (Plot size: 30 )				
1				Hydrophytic
2				Vegetation
3				Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe to	o the depth	needed to docur	nent the i	ndicator	or confirn	n the absence of	f indicato	rs.)	
Depth	Matrix			x Feature	<u>s</u> 1	. 2			<b>_</b>	
<u>(inches)</u> 0 <sup>-</sup> 8	Color (moist) 10YR 3/2	<u>%</u>	Color (moist) 2.5YR 4/8	<u>%</u> 5	Type <sup>1</sup> Concer	Loc <sup>2</sup> PL	<u>Texture</u> Silty loam		Remarks	
							·			
8 - 18	10YR 4/2	95	5YR 4/4	5	Concer	PL,M	Silty clay loam			
-							·			
-										
-										
							·			
							·			
-							·			
-						_				
-										
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=R	Reduced Matrix, MS	S=Masked	I Sand Gra	ains.	<sup>2</sup> Location: I	PL=Pore L	_ining, M=Matr	ix.
Hydric Soil I	Indicators:								natic Hydric S	
<u> </u>		_	_ Polyvalue Below		(S8) ( <b>LRF</b>	RR,			LRR K, L, ML	
Histic Ep	oipedon (A2) stic (A3)		MLRA 149B) Thin Dark Surfa		RR R MI	RA 149B			ox (A16) ( <b>LRR</b> or Peat (S3) ( <b>L</b>	
	n Sulfide (A4)	_	Loamy Mucky N					-	(LRR K, L, M)	-
	l Layers (A5)	_	_ Loamy Gleyed I		2)		Polyvalue Below Surface (S8) (LRR K, L)			
-	d Below Dark Surface ark Surface (A12)		Depleted Matrix Redox Dark Sul						(S9) ( <b>LRR K</b> ,	
	lucky Mineral (S1)		Depleted Dark Sull				Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)			
	Bleyed Matrix (S4)	_	Redox Depress		,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
-	edox (S5)							ent Materia		
	Matrix (S6)								Surface (TF12	2)
	rface (S7) ( <b>LRR R, M</b>	LKA 149D)						xplain in R	emarks)	
	f hydrophytic vegetatio	on and wetla	and hydrology mus	t be prese	ent, unless	disturbed	l or problematic.			
	_ayer (if observed):									
Type:							Hydric Soil Pi	rocont?	Vec X	No
Depth (ind Remarks:							Hydric Soli Pi	resent?	1es <u>//</u>	
Nemarks.										

Wetland LP-054



Soil

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## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County:	Geauga County	Sampling Date: 10/18/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Wetland LP-055
Investigator(s): MJA Section, Tow	vnship, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Swale Local relief (con	ncave, convex, none): <u>Concave</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): LRR R Lat: 41.59646271666667	Long: -81.22695923333335	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answe	rs in Remarks.)
Soil Map Unit Name:       MgB: Mahoning silt loam, 2 to 6 percent slopes         Are climatic / hydrologic conditions on the site typical for this time of year?       Yes X         Are Vegetation, Soil, or Hydrology significantly disturbed?	NWI classific NWI classific No (If no, explain in Re Are "Normal Circumstances" p	ation: N/A emarks.) resent? Yes <u>X</u> No

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-055
Remarks: (Explain alternative procedu	ures here or in a separate report.)	·
Data point for PEM wetland adjacent to	ATV access road in maintained po	werline easement.

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Primary Indicators (minimum of one is required; check all that apply)	Drainage Patterns (B10)         Moss Trim Lines (B16)         Dry-Season Water Table (C2)         Crayfish Burrows (C8)         Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Stunted or Stressed Plants (D1)
Field Observations:	
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes _X No Depth (inches):       10         Saturation Present?       Yes _X No Depth (inches):       0	Wetland Hydrology Present? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

## **VEGETATION –** Use scientific names of plants.

Tree Stretum (Plateize: 30)	Absolute	Dominant I		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2 3				Total Number of Dominant         Species Across All Strata:         1         (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	er	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $100   x 2 = 200$
1				FAC species $5 \times 3 = 15$
2				FACU species x 4 = 40
				UPL species $0 \times 5 = 0$
3				Column Totals: <u>125</u> (A) <u>265</u> (B)
4 5				Prevalence Index = B/A = 2.12
				Hydrophytic Vegetation Indicators:
6				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
		= Total Cove	er	X 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Phalaris arundinacea	100	Yes	FACW	data in Remarks or on a separate sheet)
2. Solidago canadensis	10	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Persicaria sagittata	5	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Carex vulpinoidea	5	No	OBL	be present, unless disturbed or problematic.
5 Juncus tenuis	_	No	FAC	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	125	= Total Cove	er	
Woody Vine Stratum (Plot size:30)				
1	<u> </u>			Hydrophytic
2				Vegetation
3				Present? Yes X No
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe t	to the dept	h needed to docun	nent the i	ndicator o	or confirm	the absence o	f indicators.)		
Depth	Matrix		Redo	x Features	<u>s</u>					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Ren	narks	
0 <sup>-</sup> 18	10YR 4/2	98	10YR 4/6	2	Concer	М	Clay loam			
-										
-										
-										
-										
-										
-										
-										
1										
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	iins.		PL=Pore Lining,		
Hydric Soil I				o (	(00) <b>(1 00</b>	_		or Problematic H	-	
Histosol		-	Polyvalue Belov		(S8) ( <b>LRR</b>	κ,		rairie Redox (A16	X, L, MLRA 149B)	)
Black His	vipedon (A2)		MLRA 149B) Thin Dark Surfa			DA 1408			5) ( <b>LKK K, L, K</b> ) t (S3) ( <b>LRR K, L,</b> I	D)
	n Sulfide (A4)	-	Loamy Mucky M					rface (S7) ( <b>LRR I</b>		<b>IX</b> )
	Layers (A5)	-	Loamy Gleyed I			-)		e Below Surface		
	Below Dark Surface	e (A11)	X Depleted Matrix		/		-	k Surface (S9) (L		
-	rk Surface (A12)	. ,	 Redox Dark Sur						(F12) ( <b>LRR K, L</b> ,	R)
Sandy M	lucky Mineral (S1)	-	Depleted Dark S	Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			49B)
Sandy G	leyed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic S	podic (TA6) ( <b>MLF</b>	RA 144A, 145, 14	<b>9B</b> )
-	edox (S5)							ent Material (F21		
	Matrix (S6)							allow Dark Surfac		
Dark Sur	face (S7) ( <b>LRR R, M</b>	ILRA 149B	)				Other (E	xplain in Remark	.s)	
31	· · · · · · · · · · · · · · · · · · ·					d'a familia a d				
	hydrophytic vegetati		land hydrology mus	t be prese	ent, uniess	disturbed	or problematic.			
	ayer (il observed):									
Type:									×	
	ches):						Hydric Soil P	resent? Yes	<u> </u>	
Remarks:										

General Site Photos

Wetland LP-055



Soil



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## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/County:	Geauga County	Sampling Date: 10/18/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Upland LP-054,055
Investigator(s): MJA Section, Tow	nship, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Shoulder slope Local relief (con-	cave, convex, none): <u>Convex</u>	Slope (%): <u>8</u>
Subregion (LRR or MLRA): LRR R Lat: 41.59644456666666	Long: <u>-81.2268956</u>	Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{X}$	No (If no, explain in R	Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answe	ers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes NoX YesX No Yes NoX	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-054,055
Remarks: (Explain alternative procedur		Il yes, optional wetland Site ID.
	1 1 /	point situated in maintained powerline easement.

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _ X
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	
Saturation Present?       Yes No _X Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect)	

## **VEGETATION –** Use scientific names of plants.

Sampling Point: Upland LP-054,055

Trac Stratum (Plat aiza: 30 )	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2			·	Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cove	er	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x_2 = 0$
1				PAC species x 3 =
2				FACU species $x_4 = \frac{1}{2}$
3				UPL species $0 \times 5 = 0$
				Column Totals: <u>150</u> (A) <u>555</u> (B)
4 5				Prevalence Index = B/A = 3.7
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Cove	er	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum     (Plot size: 5)       1.     Schizachyrium scoparium	50	Yes	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Solidago canadensis	15			
3. Euthamia graminifolia		No	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	40	Yes	FACU	be present, unless disturbed or problematic.
5Solidago rugosa	10	No	FAC	Definitions of Vegetation Strata:
6 Juncus tenuis	20	No	FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9			······	Herb – All herbaceous (non-woody) plants, regardless of
10			. <u></u>	size, and woody plants less than 3.28 ft tall.
11			. <u> </u>	<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12		. <u> </u>		height.
	150	= Total Cove	er	
Woody Vine Stratum (Plot size: 30 )				
1				
2				Hydrophytic
				Vegetation Present? Yes No <sup>X</sup>
3				
4				
		= Total Cove	er	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docur	ment the i	ndicator	or confirm	n the absence of indi	cators.)	
Depth	Matrix			x Features	<u>s</u>	2			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 4	10YR 4/3	100					Silty loam		
4 - 18	10YR 6/1	80	7.5YR 6/6	20	Concer	М	Silty clay loam		
-									
		·					· ·		
	<u> </u>	<u> </u>					· ·		
-							· ·		
-									
-									
-									
		·					· ·		
		<u> </u>					· ·		
-							·		
-									
-									
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matr	ix.
Hydric Soil I		,	,					oblematic Hydric S	
<u> </u>	(A1)		Polyvalue Belov	w Surface	(S8) ( <b>LRF</b>	RR,	2 cm Muck (A	10) ( <b>LRR K, L, MLI</b>	RA 149B)
	oipedon (A2)		MLRA 149B)	,				Redox (A16) (LRR	
Black Hi			Thin Dark Surfa					Peat or Peat (S3) (L	-
	n Sulfide (A4)		Loamy Mucky M			, L)		(S7) (LRR K, L, M)	
	l Layers (A5) l Below Dark Surface	(A11)	Loamy Gleyed		)		-	ow Surface (S8) (Ll	
-	ark Surface (A12)	(ATT)	X Depleted Matrix Redox Dark Su					face (S9) ( <b>LRR K,</b> I ese Masses (F12) ( <b>I</b>	
	lucky Mineral (S1)		Depleted Dark		7)			odplain Soils (F19)	
	leyed Matrix (S4)		Redox Depress		.,			(TA6) ( <b>MLRA 144</b>	
	edox (S5)			( - )			Red Parent M		, , , ,
	Matrix (S6)							Dark Surface (TF12	2)
	rface (S7) ( <b>LRR R, M</b>	LRA 149B	)				Other (Explain		,
<sup>3</sup> Indiantara of	hudrophutio vogototi	an and way	tland hydralagy mus	the press	nt unloco	diaturbad	l ar problematic		
	f hydrophytic vegetation ayer (if observed):	on and we	liand hydrology mus	st be prese	nt, uniess	aisturbed	or problematic.		
Type:	<b>,</b> ,-								
	ches):						Hydric Soil Prese	nt? Yes X	No
Remarks:							-		

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Soil

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Project	<sup>ec</sup> City/County: Geauga County S	Sampling Date: 08/09/2021
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Wetland LP-056
Investigator(s): MJA	_ Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): <u>Concave</u>	Slope (%): 2
Subregion (LRR or MLRA): LRR R Lat: 41.5956644	Long: -81.22834215	Datum: WGS 1984
Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to 12 percent slope	NWI classificat	ion: N/A
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes X No (If no, explain in Ren	narks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" pre	esent? Yes X 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-056
Remarks: (Explain alternative procedu	res here or in a separate report.)	
PEM wetland in maintained powerline e between polygons.	easement, bisected by atv access ro	ad. Occasional flooding over access road creates hydrological connection

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

## **VEGETATION –** Use scientific names of plants.

Trace Structures (Distriction 30	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1		No		That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 1 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	$\frac{1}{\text{OBL species}} = \frac{51}{\text{x 1} = 51}$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species 80 x 2 = 160
1,		No		FAC species 20 x 3 = 60
				FACU species x 4 = 40
2				UPL species0 x 5 =0
3				Column Totals: <u>161</u> (A) <u>311</u> (B)
4				Prevalence Index = B/A = 1.931677018
5				Hydrophytic Vegetation Indicators:
6				$\underline{X}$ 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
	·	= Total Cov	er	$\overline{X}$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Juncus torreyi		No	FACW	data in Remarks or on a separate sheet)
2. Agrostis gigantea	30	Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3Juncus effusus	30	Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Schedonorus arundinaceus	10	No	FACU	be present, unless disturbed or problematic.
5. Carex vulpinoidea	15	No	OBL	Definitions of Vegetation Strata:
6. Euthamia graminifolia	20	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7 Phalaris arundinacea	40	Yes	FACW	at breast height (DBH), regardless of height.
8. Scirpus atrovirens	5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9 Lythrum salicaria	1	No	OBL	and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
	161	= Total Cov	er	height.
Woody Vine Stratum (Plot size: 30 )				
1,		No		
2				Hydrophytic
				Vegetation Present? Yes X No
3				
4		= Total Cov		
Remarks: (Include photo numbers here or on a separate s				

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	the absence of	of indicators	s.)	
Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 <sup>-</sup> 18	10YR 4/2	92	5YR 4/6	8	Concer	PL	Silty loam			
						<u> </u>				
-										
-										
		<u> </u>				<u> </u>				
-					. <u> </u>					
-										
						<u> </u>				
-										
-										
-										
-										
		<u> </u>					·			
-										
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS	S=Masked	Sand Gra	ins.			ning, M=Matri	
Hydric Soil I	ndicators:						Indicators f	or Problema	atic Hydric S	oils³:
Histosol		-	Polyvalue Below	w Surface	(S8) ( <b>LRR</b>	R,		. , .	RR K, L, MLF	,
	ipedon (A2)		MLRA 149B)						: (A16) ( <b>LRR I</b>	
Black His		-	Thin Dark Surfa				5 cm M	ucky Peat or	Peat (S3) (LI	RR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky N			L)			_RR K, L, M)	
	Layers (A5)	-	Loamy Gleyed I		)				rface (S8) (LF	-
	Below Dark Surface	e (A11)	X Depleted Matrix						59) ( <b>LRR K, L</b>	
	rk Surface (A12)	-	Redox Dark Su	. ,					sses (F12) ( <b>L</b>	
	lucky Mineral (S1)	-	Depleted Dark \$		7)					(MLRA 149B)
-	leyed Matrix (S4)	_	Redox Depress	ions (F8)					(MLRA 144A	., 145, 149B)
-	edox (S5)							rent Material		
<u> </u>	Matrix (S6)						Very Sh	allow Dark S	Surface (TF12	.)
Dark Sur	face (S7) ( <b>LRR R, M</b>	ILRA 149B)					Other (E	Explain in Re	emarks)	
2										
	hydrophytic vegetati	ion and wet	land hydrology mus	st be prese	nt, unless	disturbed	or problematic.			
	ayer (if observed):									
Туре:										
Depth (inc	ches):						Hydric Soil F	Present?	Yes X	No
Remarks:										



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General Site Photos

Wetland LP-056



Soil

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	ity/County: Geauga County Sampling Date: 08/09/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Upland LP-056
Investigator(s): MJA	ection, Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Hillside Loc	al relief (concave, convex, none): Concave Slope (%): <u>3</u>
Subregion (LRR or MLRA): LRR R Lat: 41.595594117	1485 Long: -81.22828580030098 Datum: WGS 1984
Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to 12 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	isturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro	lematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>X</u> No <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-056
Remarks: (Explain alternative proceed	lures here or in a s	separate report.)	
Upland data form for W-MJA-080921-	02. Data point situ	uated on shoulder of	f atv access road in maintained powerline easement.

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	

## **VEGETATION –** Use scientific names of plants.

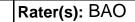
Tree Stratum (Plot size: <sup>30</sup> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1)				Number of Dominant Species That Are OBL_EACW or FAC <sup>.</sup> 0 (A)
			·	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL_EACW_or_EAC <sup>.</sup> 0 (A/B)
5				That Are OBL, FACW, or FAC:0 (A/B)
6			·	Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cov	er	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1		No		FAC species x 3 =0
2				FACU species90 x 4 =360
				UPL species3 x 5 =15
3				Column Totals: <u>93</u> (A) <u>372</u> (B)
4				Prevalence Index = B/A = 4
5				Hudrophytic Vocatation Indicators
6			·	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7			·	2 - Dominance Test is >50%
		= Total Cov	rer	$3$ - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Schedonorus arundinaceus	60	Yes	FACU	data in Remarks or on a separate sheet)
2. Agrostis perennans	10	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Daucus carota	3	No	UPL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Lotus corniculatus	5	No	FACU	be present, unless disturbed or problematic.
5Plantago lanceolata		No	FACU	Definitions of Vegetation Strata:
6Phleum pratense	5	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
9			·	Herb – All herbaceous (non-woody) plants, regardless of
10			·	size, and woody plants less than 3.28 ft tall.
11				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
12			·	height.
	93	= Total Cov	rer	
Woody Vine Stratum (Plot size: 30 )				
1		No		
2				Hydrophytic Vegetation
3				Present? Yes <u>No X</u>
4.				
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate				
	,			

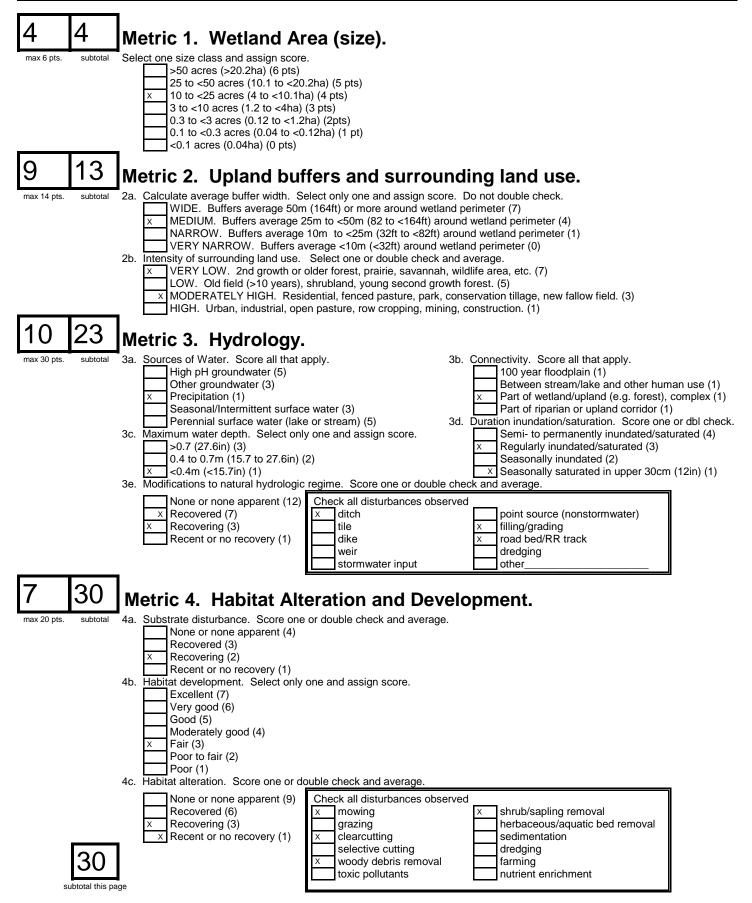
Profile Description: (Descril	be to the dept	h needed to docu	ment the i	ndicator	or confirm	the absence of indic	ators.)
Depth <u>Matrix</u>			ox Features	<u>s</u>			
(inches) Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 <sup>-</sup> 3 10YR 5/4	100					Silty loam	
-							
-							
·	·					·	
-							
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·	<u> </u>					· ·	
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						. <u> </u>	
-							
		<u> </u>				2,	
<sup>1</sup> Type: C=Concentration, D=D	epletion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.		re Lining, M=Matrix.
Hydric Soil Indicators:							olematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Polyvalue Belo		(S8) ( <b>LRF</b>	RR,		0) ( <b>LRR K, L, MLRA 149B</b> )
Histic Epipedon (A2)		MLRA 149B	,				edox (A16) ( <b>LRR K, L, R</b> )
Black Histic (A3)		Thin Dark Surfa					at or Peat (S3) ( <b>LRR K, L, R</b> )
Hydrogen Sulfide (A4)		Loamy Mucky I			, L)		67) ( <b>LRR K, L, M</b> )
Stratified Layers (A5)		Loamy Gleyed	Matrix (F2)	)			w Surface (S8) ( <b>LRR K, L</b> )
Depleted Below Dark Surf	face (A11)	Depleted Matrix	x (F3)			Thin Dark Surfa	ace (S9) ( <b>LRR K, L</b> )
Thick Dark Surface (A12)		Redox Dark Su	Irface (F6)			Iron-Manganes	e Masses (F12) ( <b>LRR K, L, R</b> )
Sandy Mucky Mineral (S1	)	Depleted Dark	Surface (F	7)		Piedmont Flood	dplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy Gleyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spodic (	TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Redox (S5)						Red Parent Ma	terial (F21)
Stripped Matrix (S6)						Very Shallow D	ark Surface (TF12)
Dark Surface (S7) (LRR F	R, MLRA 149B	)				Other (Explain	in Remarks)
							·
<sup>3</sup> Indicators of hydrophytic vege	etation and we	tland hydrology mu	st be prese	nt, unless	disturbed	or problematic.	
Restrictive Layer (if observe		, ,,				1	
Type: Rocky	, , ,						
Depth (inches): <u>3</u>						Hydric Soil Present	? Yes No_X
Remarks:							

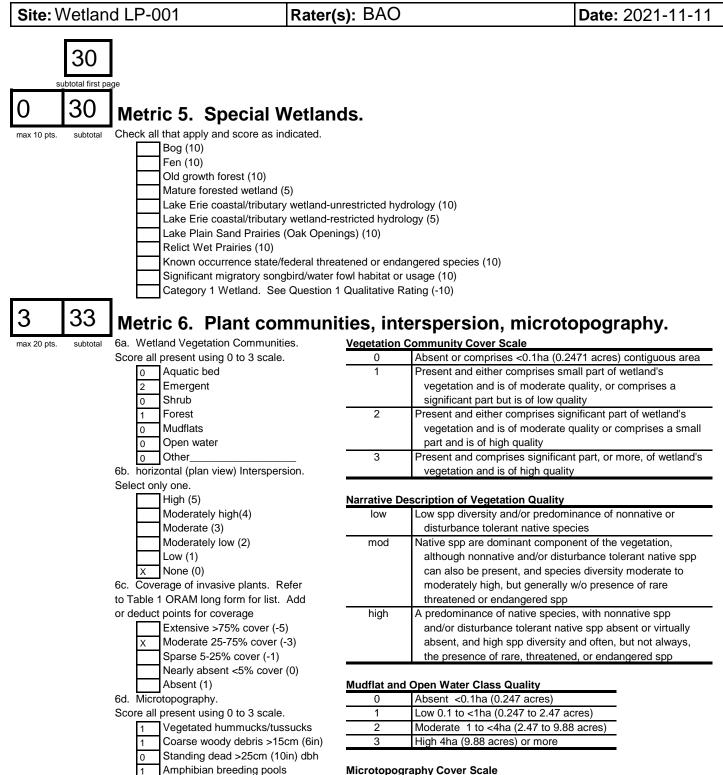


S

Appendix B OEPA ORAM Data Forms Site: Wetland LP-001







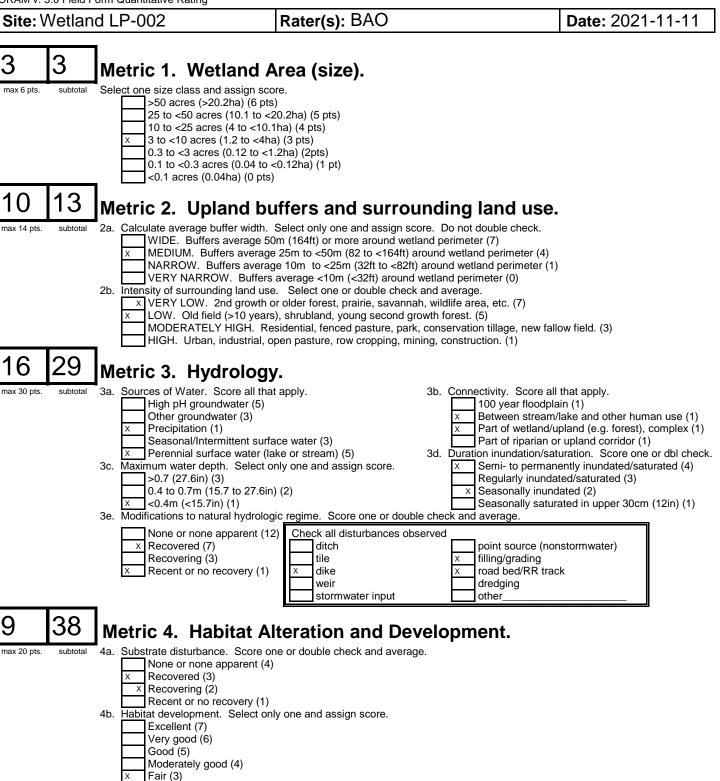
0	Absent			
1	Present very small amounts or if more common			
	of marginal quality			
2	Present in moderate amounts, but not of highest			
	quality or in small amounts of highest quality			
3	Present in moderate or greater amounts			
	and of highest quality			

33 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

W-BAO-111121-01 Leroy Center-Mayfield 138 kV Transmission Line Project



Check all disturbances observed

woody debris removal

mowing

grazing

Х

clearcutting

selective cutting

toxic pollutants

Poor to fair (2) Poor (1)

Recovered (6)

Recovering (3)

None or none apparent (9)

Recent or no recovery (1)

4c. Habitat alteration. Score one or double check and average.

shrub/sapling removal

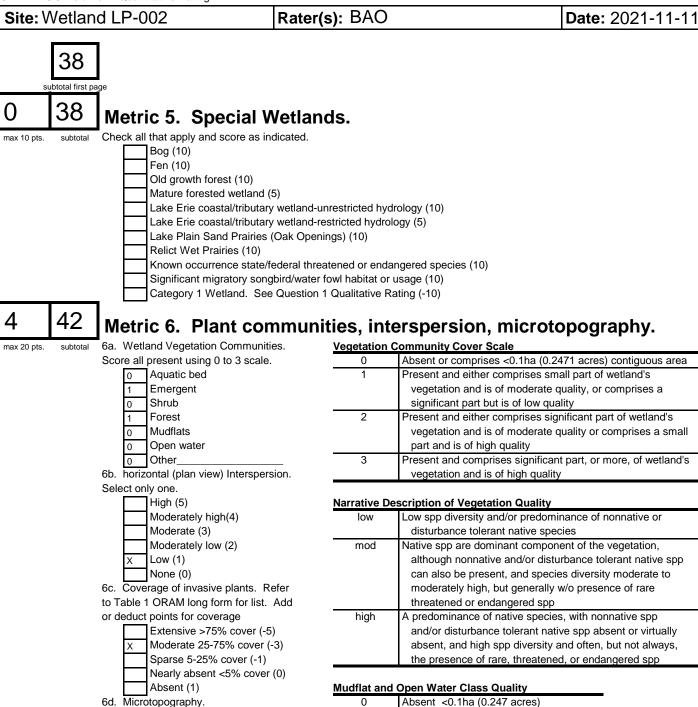
nutrient enrichment

sedimentation

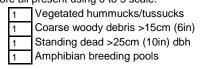
dredging

farming

herbaceous/aquatic bed removal



6d. Microtopography. Score all present using 0 to 3 scale.



3	High 4ha (9.88 acres) or more			
Microtopography Cover Scale				

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

Low 0.1 to <1ha (0.247 to 2.47 acres)

Moderate 1 to <4ha (2.47 to 9.88 acres)

#### 42 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

1

2

>0.7 (27.6in) (3)

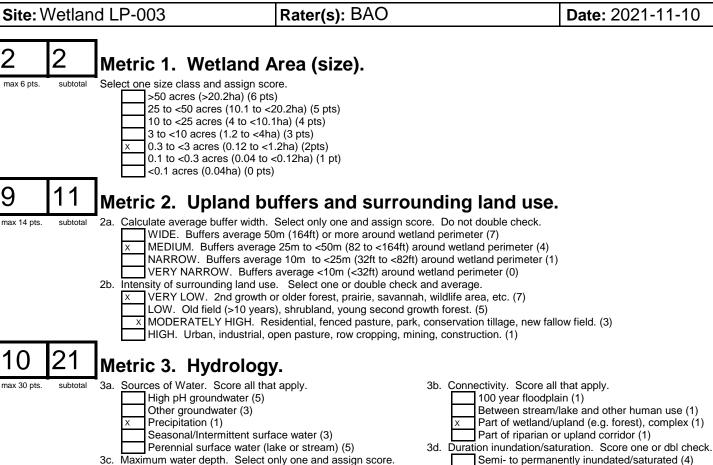
Recovered (7)

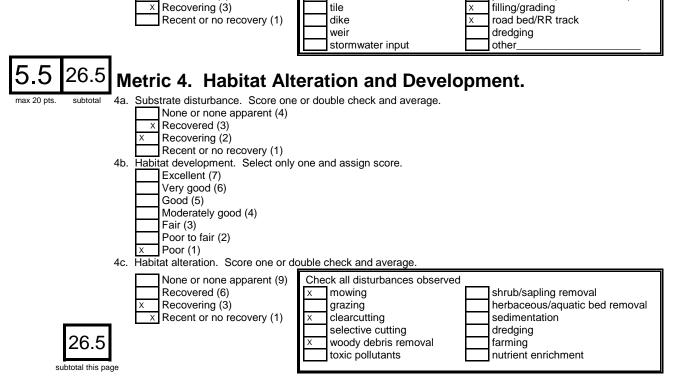
<0.4m (<15.7in) (1)

0.4 to 0.7m (15.7 to 27.6in) (2)

None or none apparent (12)

9





3e. Modifications to natural hydrologic regime. Score one or double check and average.

ditch

Check all disturbances observed

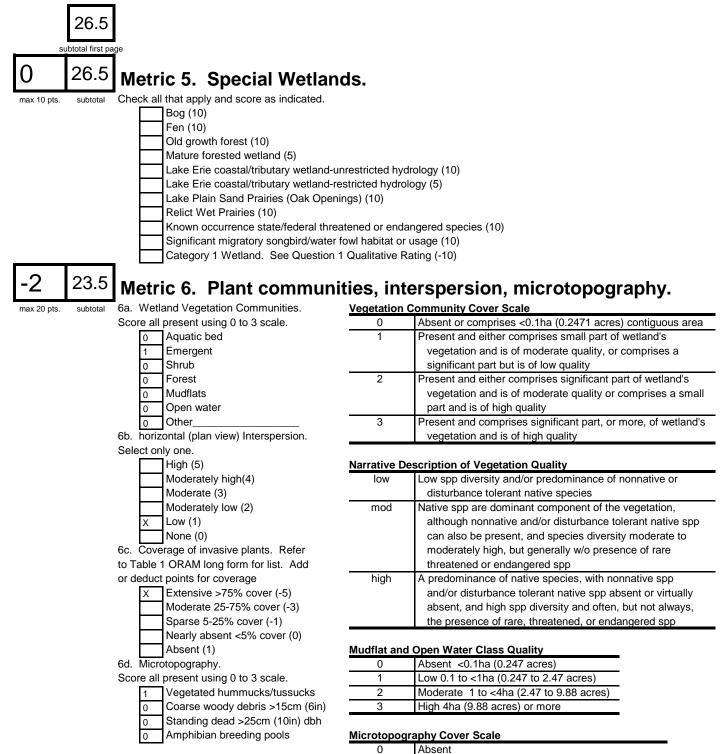
Regularly inundated/saturated (3)

Seasonally saturated in upper 30cm (12in) (1)

Seasonally inundated (2)

point source (nonstormwater)

Site: Wetland LP-003



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

# 23.5 GRAND TOTAL (max 100 pts)

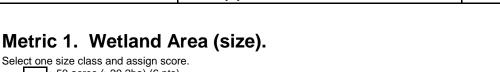
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

Site: Wetland LP-004

subtotal

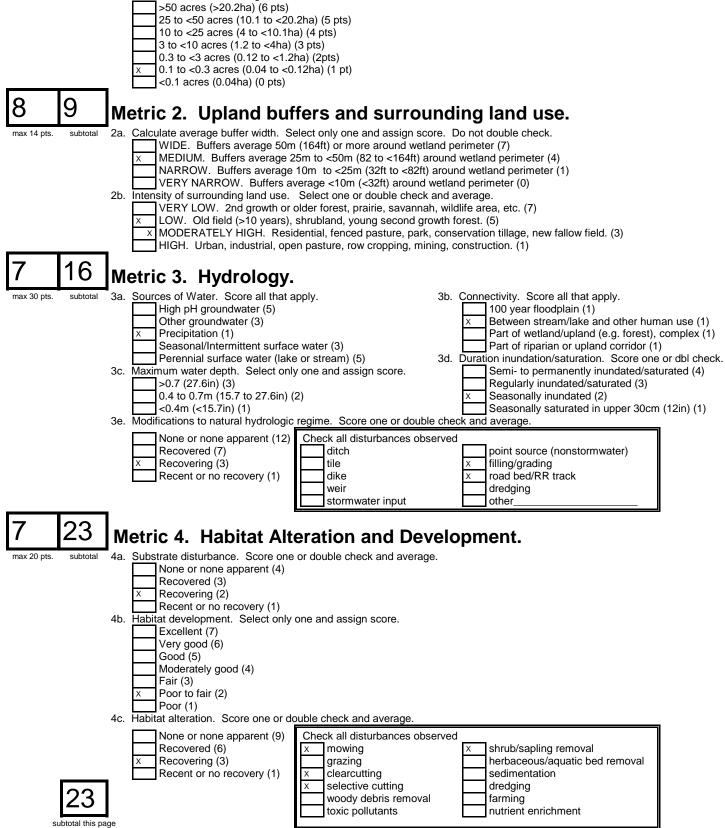
1

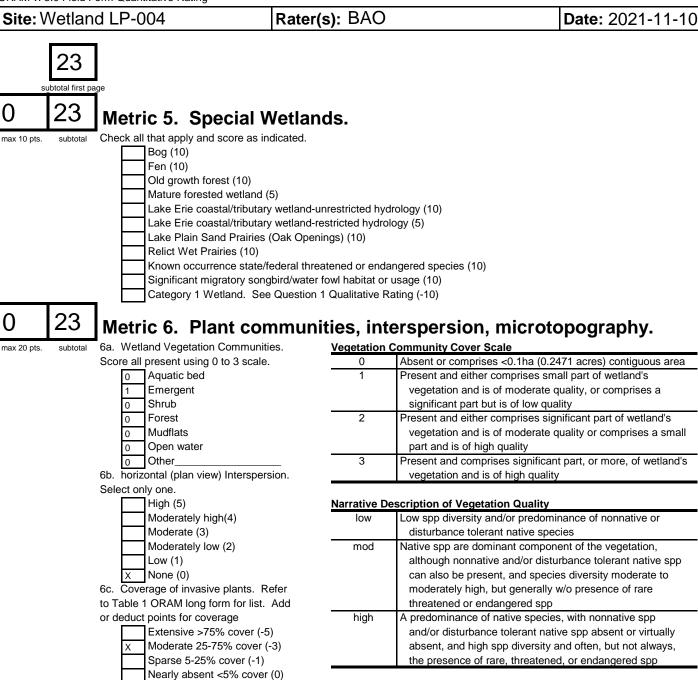
max 6 pts.



Date: 2021-11-10

Rater(s): BAO





#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

#### **Microtopography Cover Scale**

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

# 23 GRAND TOTAL (max 100 pts)

Absent (1)

Score all present using 0 to 3 scale.

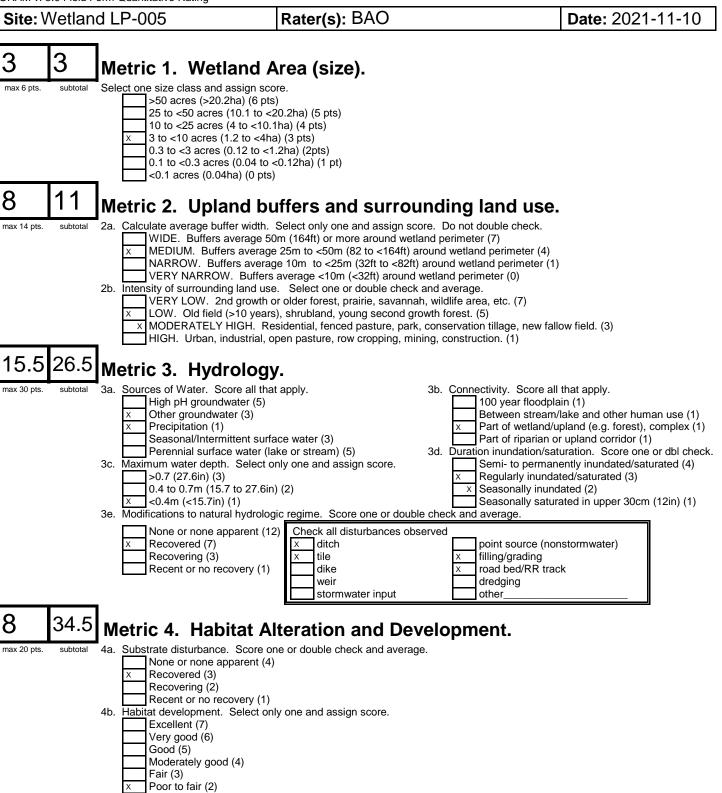
Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh

Amphibian breeding pools

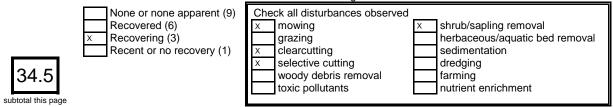
6d. Microtopography.

0

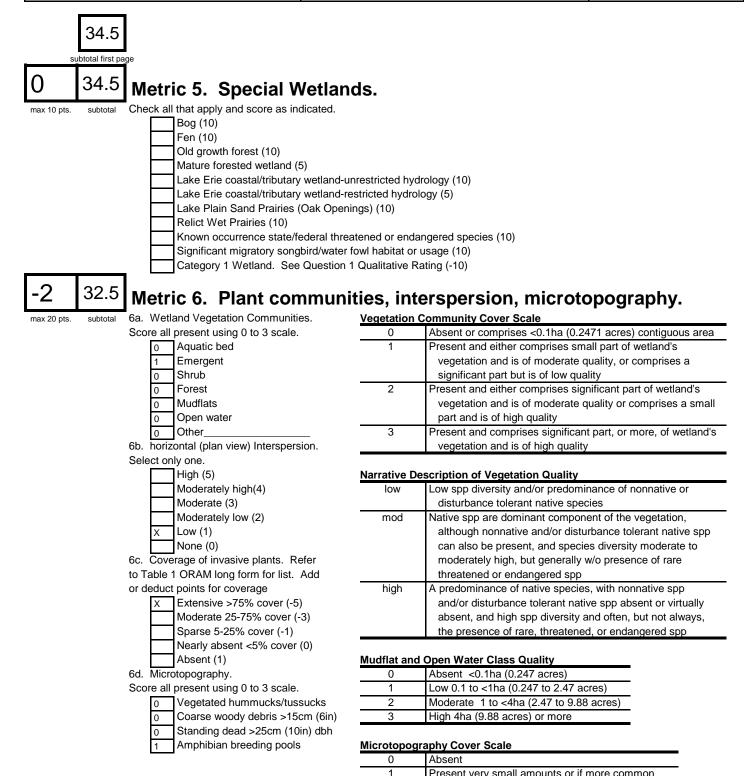
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html



Poor (1)4c. Habitat alteration. Score one or double check and average.



Site: Wetland LP-005



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

# 32.5 GRAND TOTAL (max 100 pts)

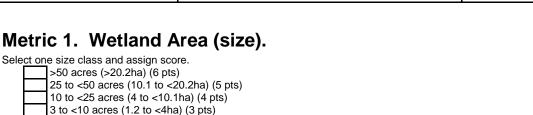
Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

subtotal

0

max 6 pts.

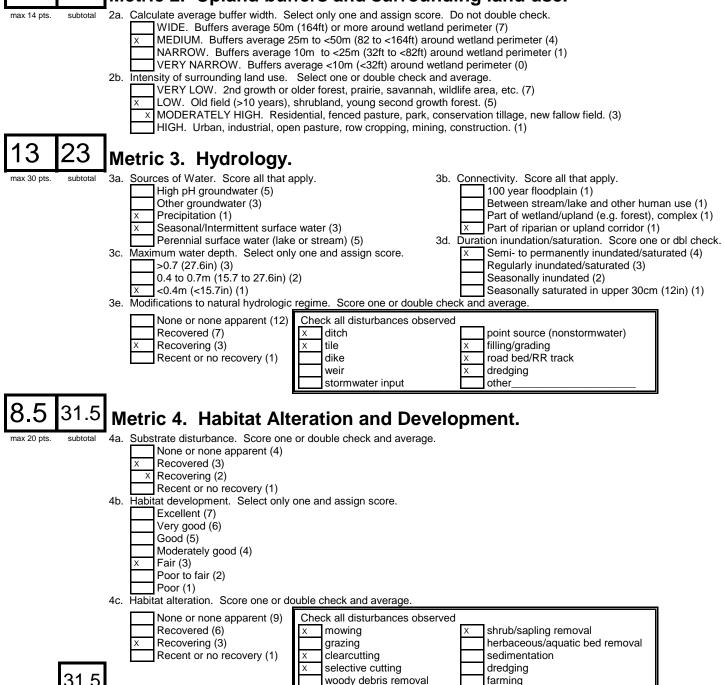
8



- 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)

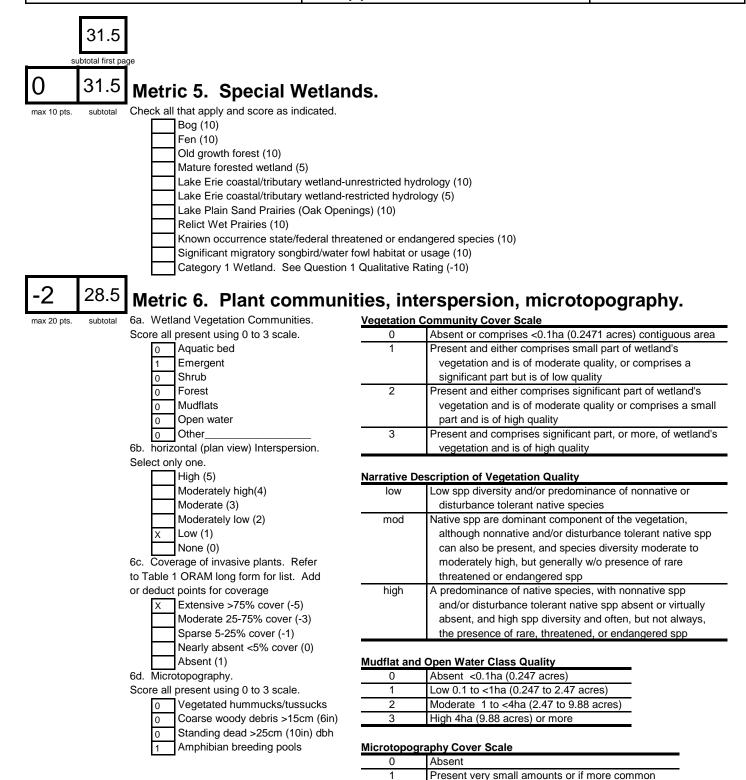
## Metric 2. Upland buffers and surrounding land use.

Rater(s): BAO



toxic pollutants

nutrient enrichment



# 28.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

2

3

Present in moderate amounts, but not of highest

quality or in small amounts of highest quality

Present in moderate or greater amounts

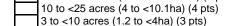
of marginal quality

and of highest quality

subtotal

max 6 pts.

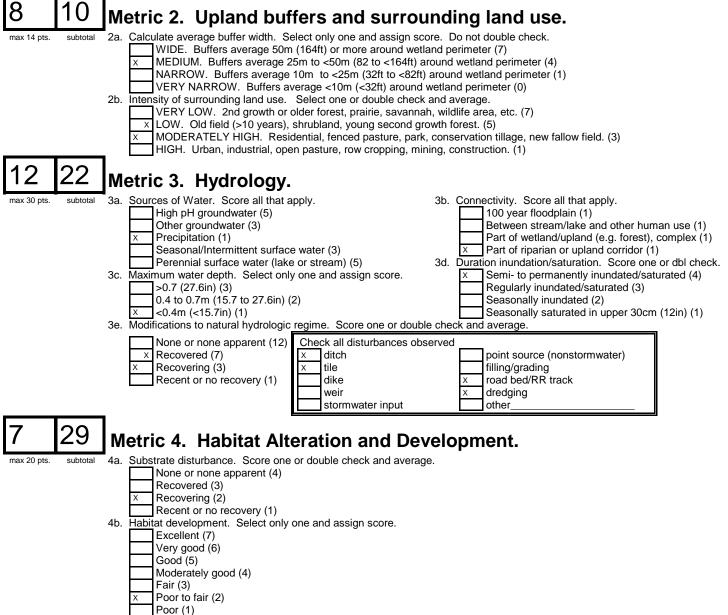
Date: 2021-11-09



- 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)

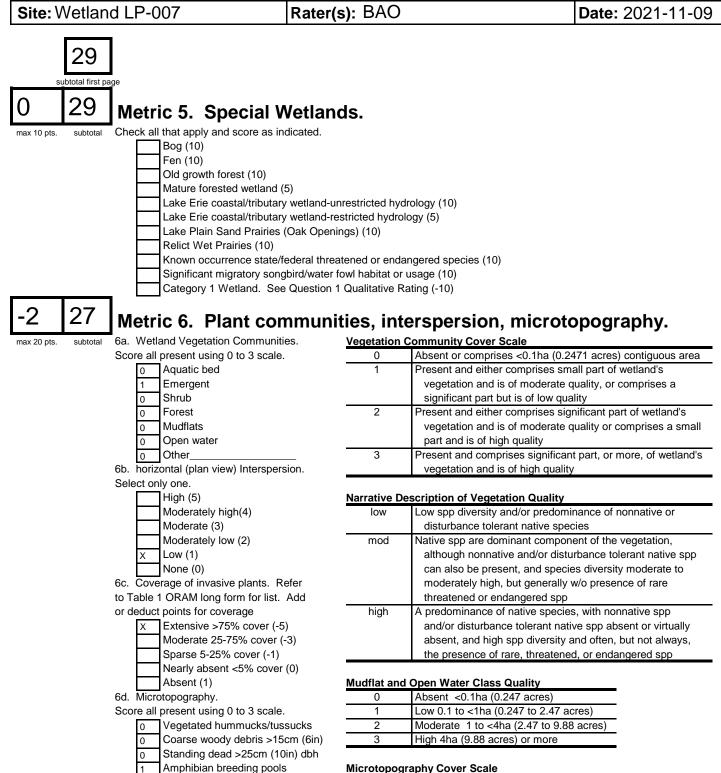
## Metric 2. Upland buffers and surrounding land use.

Rater(s): BAO



4c. Habitat alteration. Score one or double check and average.





Amphibian breeding pools

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

GRAND TOTAL (max 100 pts)

subtotal

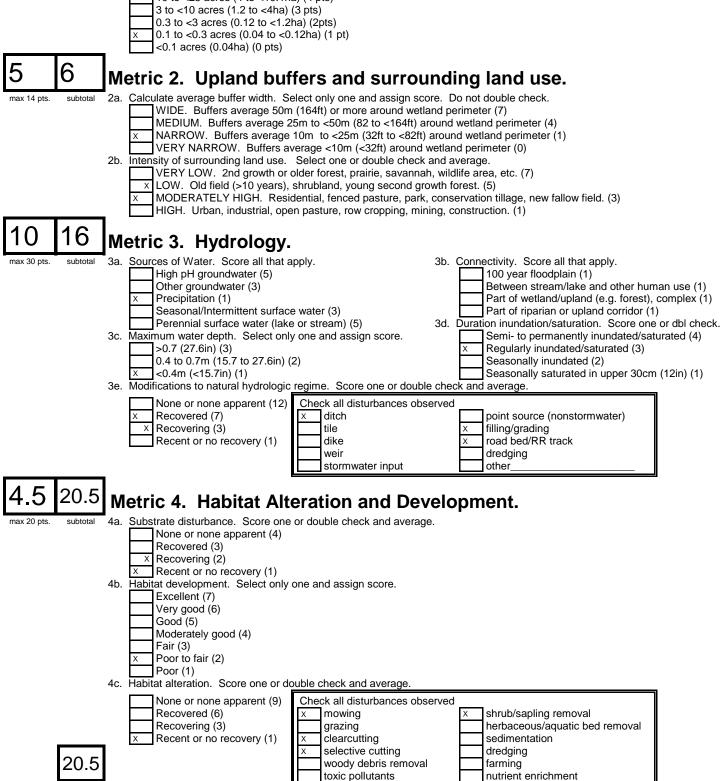
1

max 6 pts.

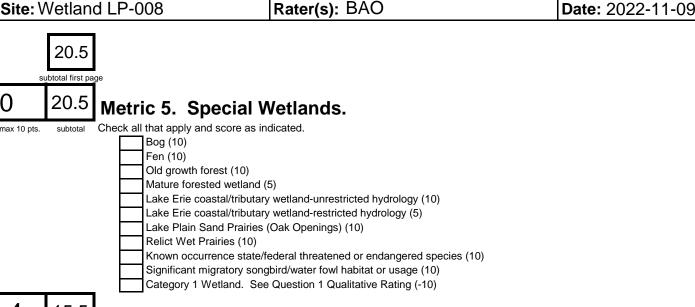


Date: 2022-11-09

Rater(s): BAO



subtotal this page





max 20 pts.

max 10 pts.

## Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities. subtotal Score all present using 0 to 3 scale.

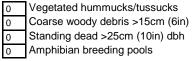
Score all present using 0 to 3 scale.		
	0	Aquatic bed
	1	Emergent
	0	Shrub
	0	Forest
	0	Mudflats
	0	Open water
	0	Other
6b.	horiz	ontal (plan view) Interspersion.
Sele	ect on	ly one.
		High (5)
		Moderately high(4)
		Moderate (3)
		Moderately low (2)
		Low (1)
	Х	None (0)
6c.	Cove	rage of invasive plants. Refer
to Ta	able '	1 ORAM long form for list. Add
or de	educt	points for coverage
	Х	Extensive >75% cover (-5)
	1	Moderate 25 75% eaver (2)



Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.



**Vegetation Community Cover Scale** Absent or comprises <0.1ha (0.2471 acres) contiguous area 0 Present and either comprises small part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part but is of low quality 2 Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality 3 Present and comprises significant part, or more, of wetland's vegetation and is of high quality

#### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or	
	disturbance tolerant native species	
mod	Native spp are dominant component of the vegetation,	
	although nonnative and/or disturbance tolerant native spp	
	can also be present, and species diversity moderate to	
	moderately high, but generally w/o presence of rare	
	threatened or endangered spp	
high	A predominance of native species, with nonnative spp	
	and/or disturbance tolerant native spp absent or virtually	
	absent, and high spp diversity and often, but not always,	
	the presence of rare, threatened, or endangered spp	

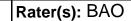
#### Mudflat and Open Water Class Quality

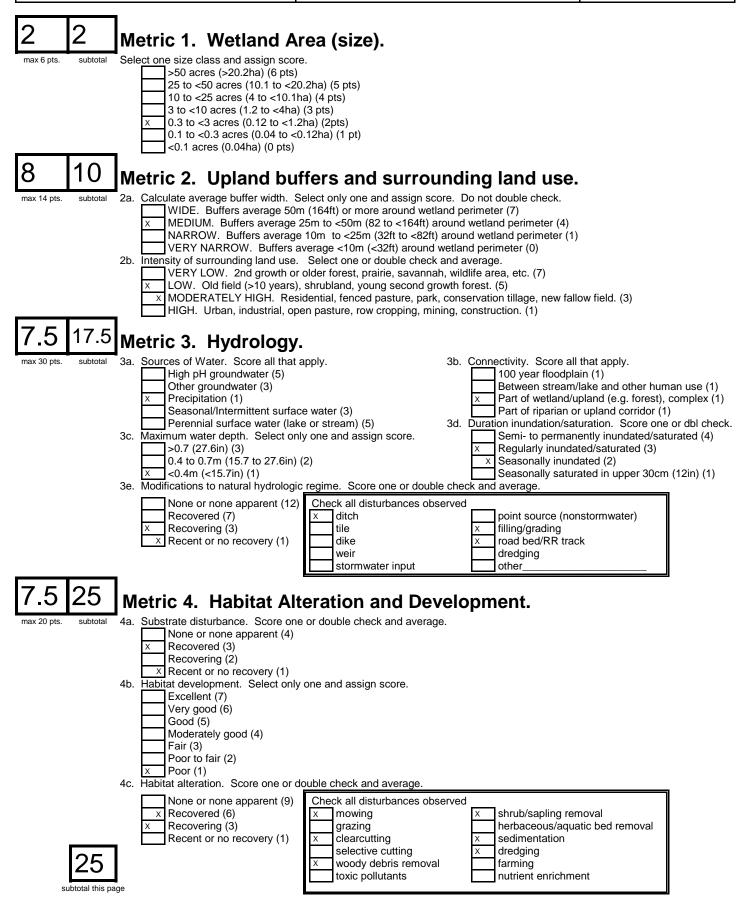
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

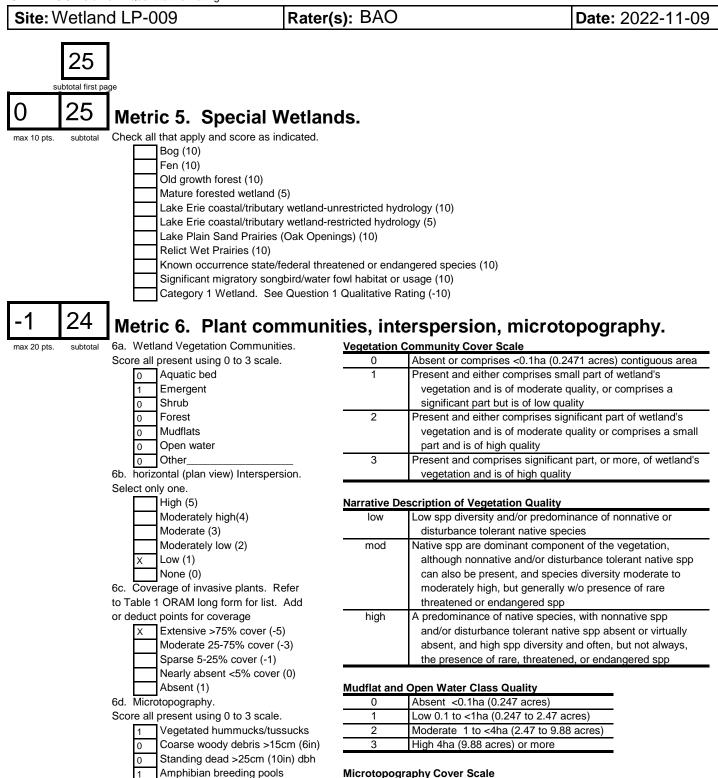
#### **Microtopography Cover Scale**

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

#### 15.5 GRAND TOTAL (max 100 pts)

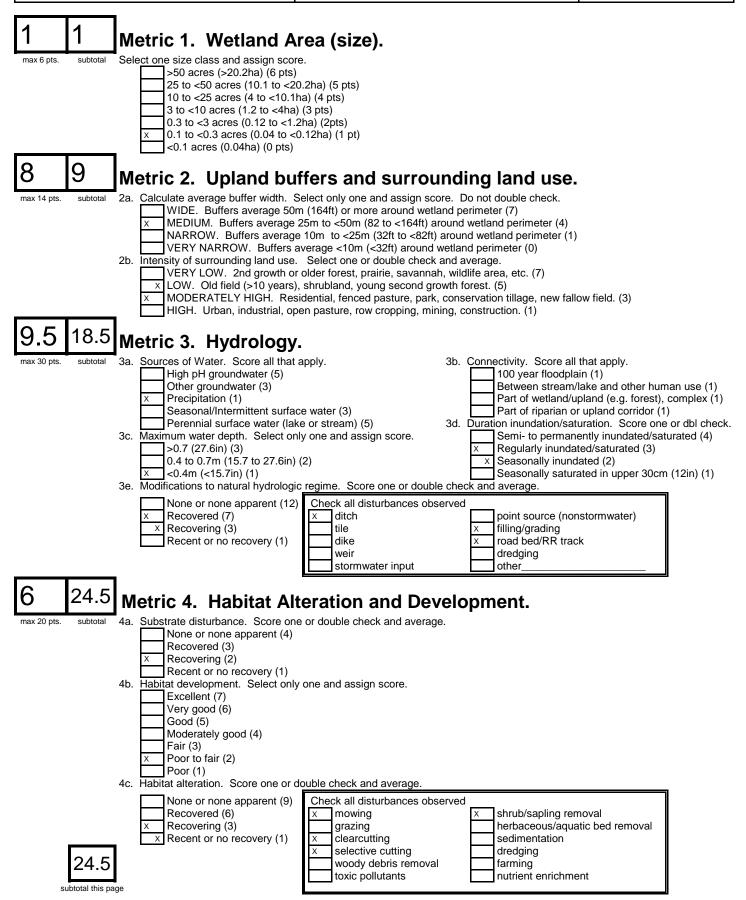


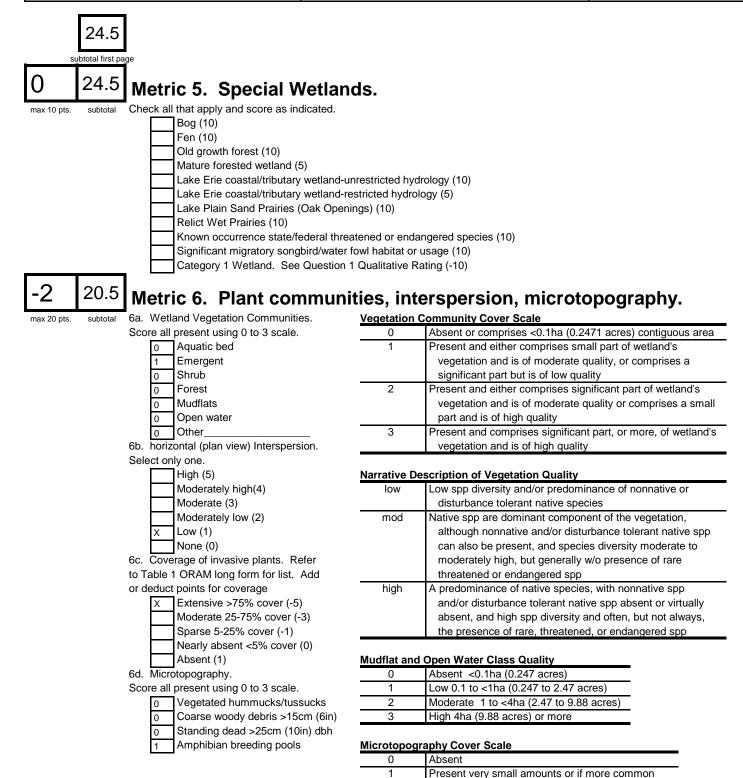




0	Absent	
1	Present very small amounts or if more common	
	of marginal quality	
2	Present in moderate amounts, but not of highest	
	quality or in small amounts of highest quality	
3	Present in moderate or greater amounts	
	and of highest quality	

24 GRAND TOTAL (max 100 pts)





20.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

2

3

Present in moderate amounts, but not of highest

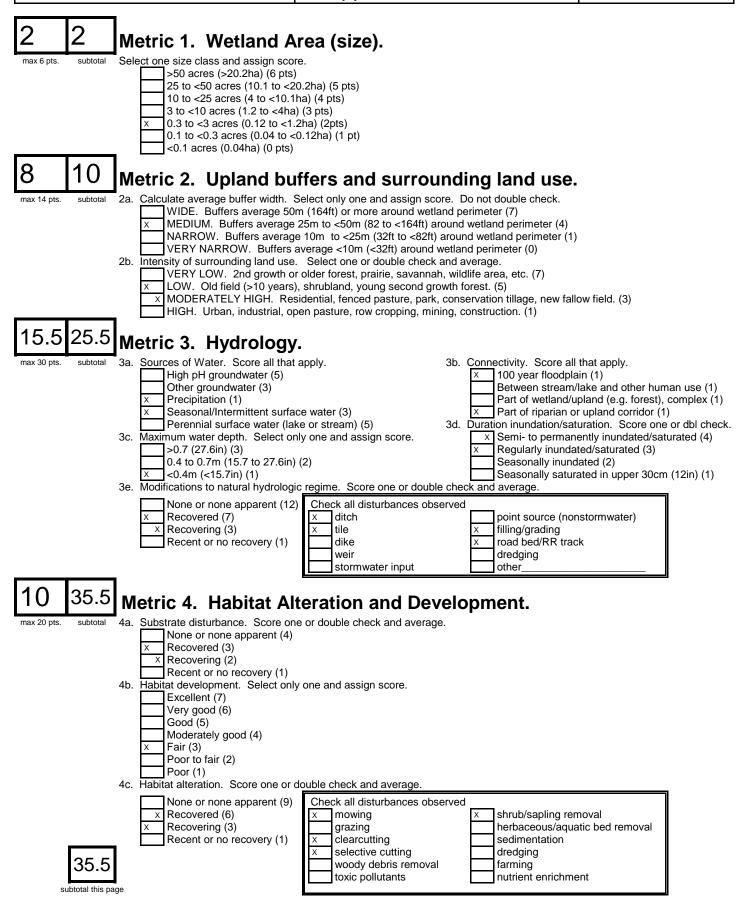
quality or in small amounts of highest quality

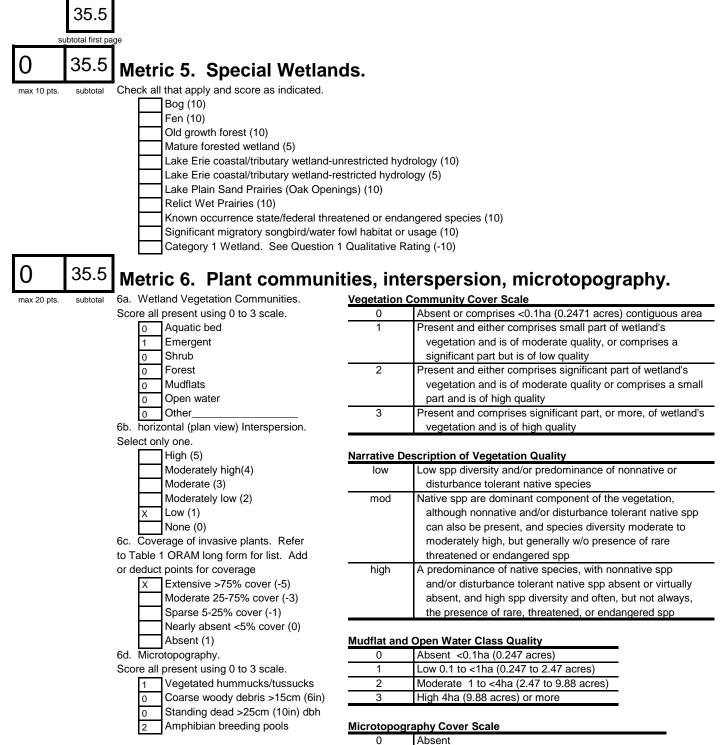
Present in moderate or greater amounts

of marginal quality

and of highest quality

#### Rater(s): BAO





# 35.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

1

2

3

Present very small amounts or if more common

Present in moderate amounts, but not of highest

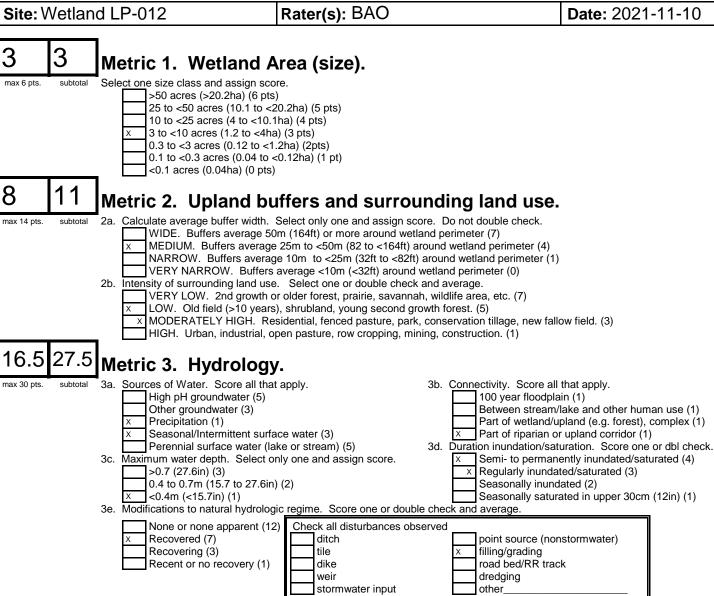
quality or in small amounts of highest quality

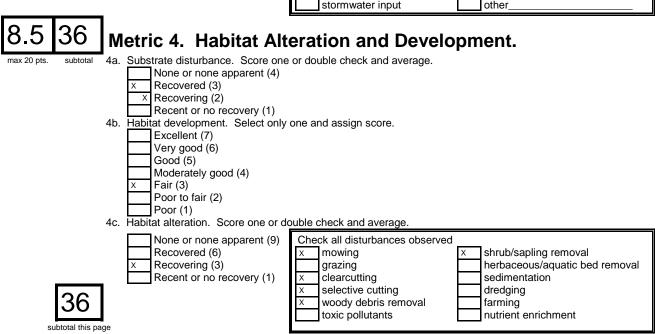
Present in moderate or greater amounts

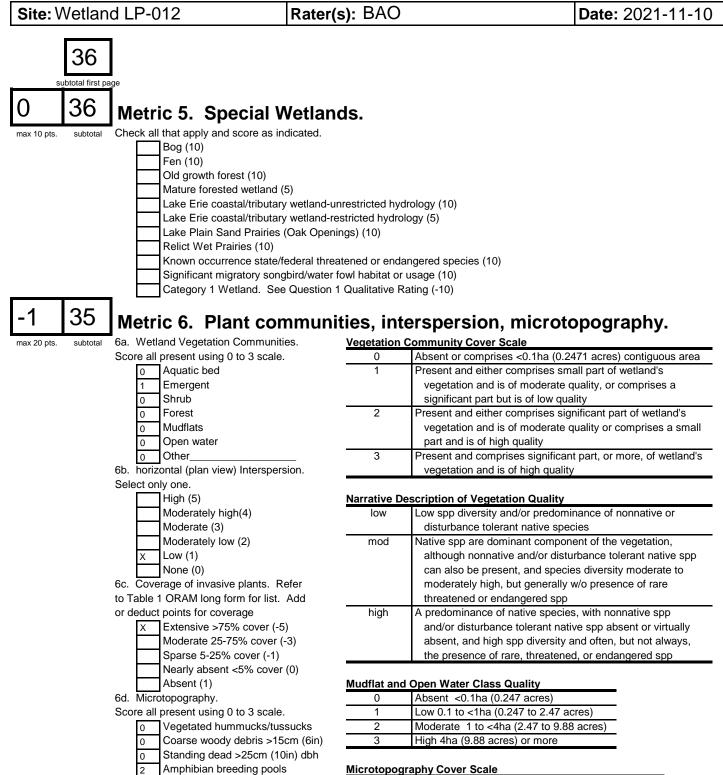
of marginal quality

and of highest quality

3



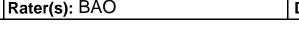


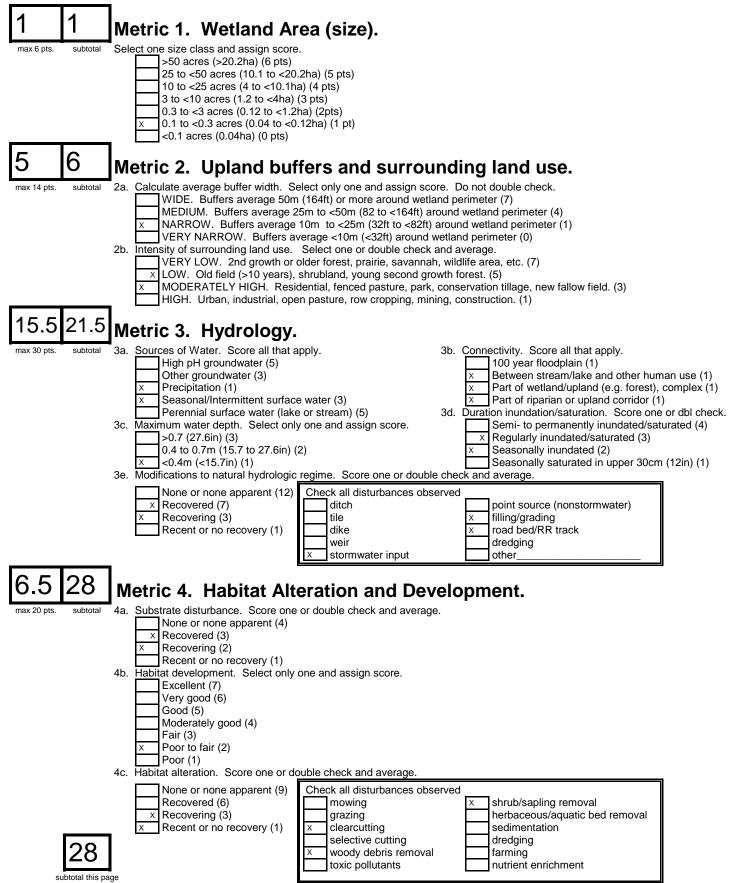


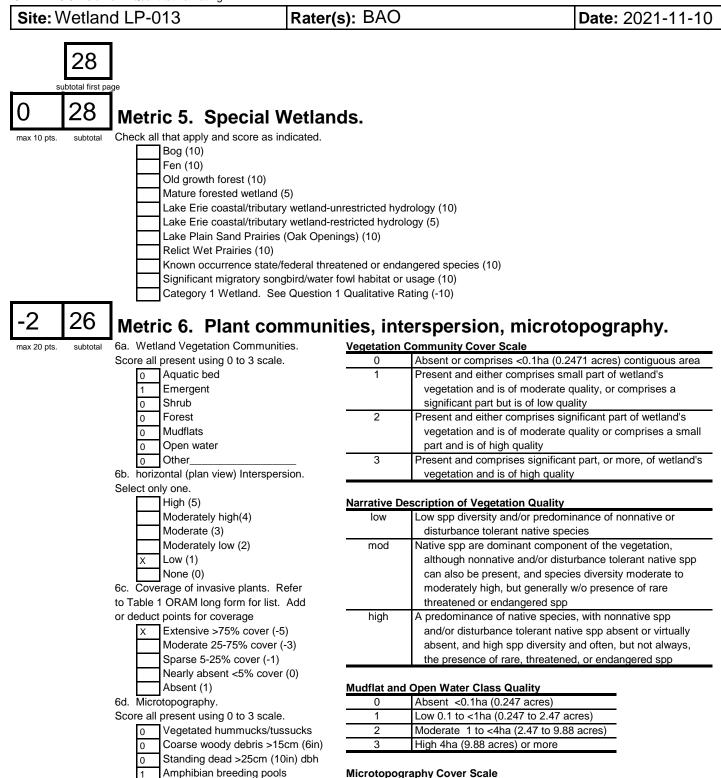
## Microt

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

35 GRAND TOTAL (max 100 pts)







0	Absent
1	Present very small amounts or if more common
	of marginal quality
2	Present in moderate amounts, but not of highest
	quality or in small amounts of highest quality

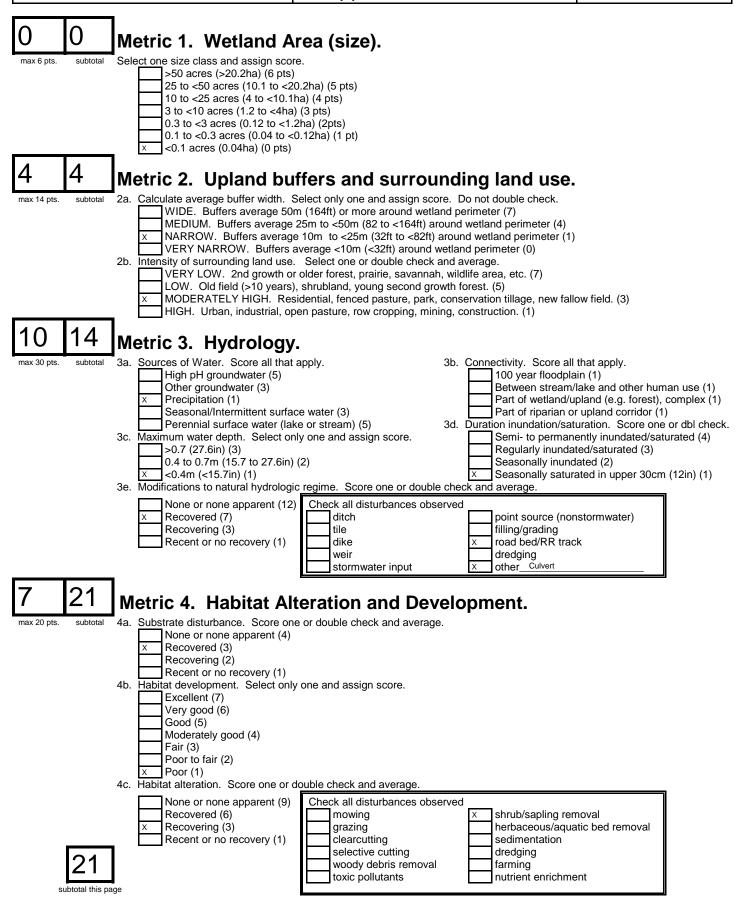
and of highest quality

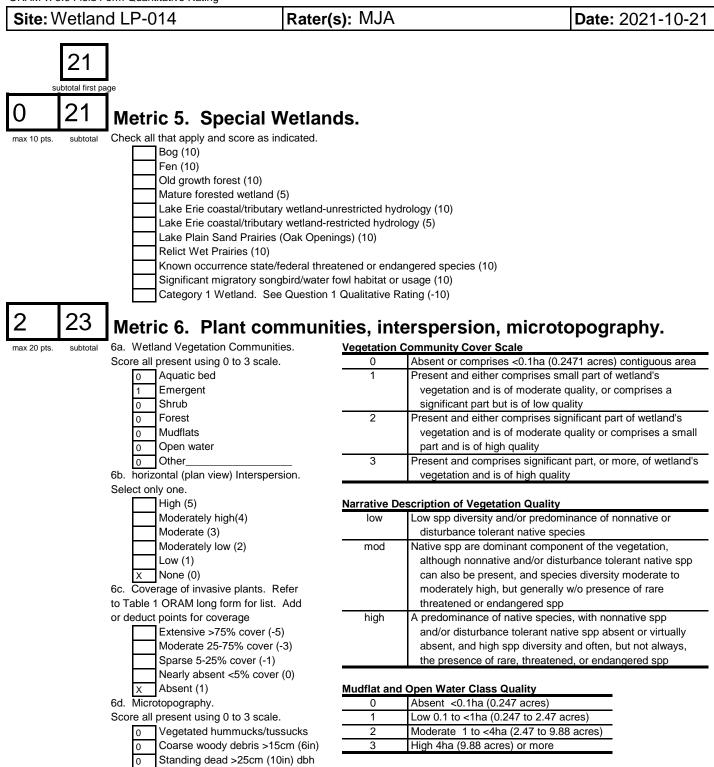
# 26 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

3

Present in moderate or greater amounts



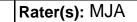


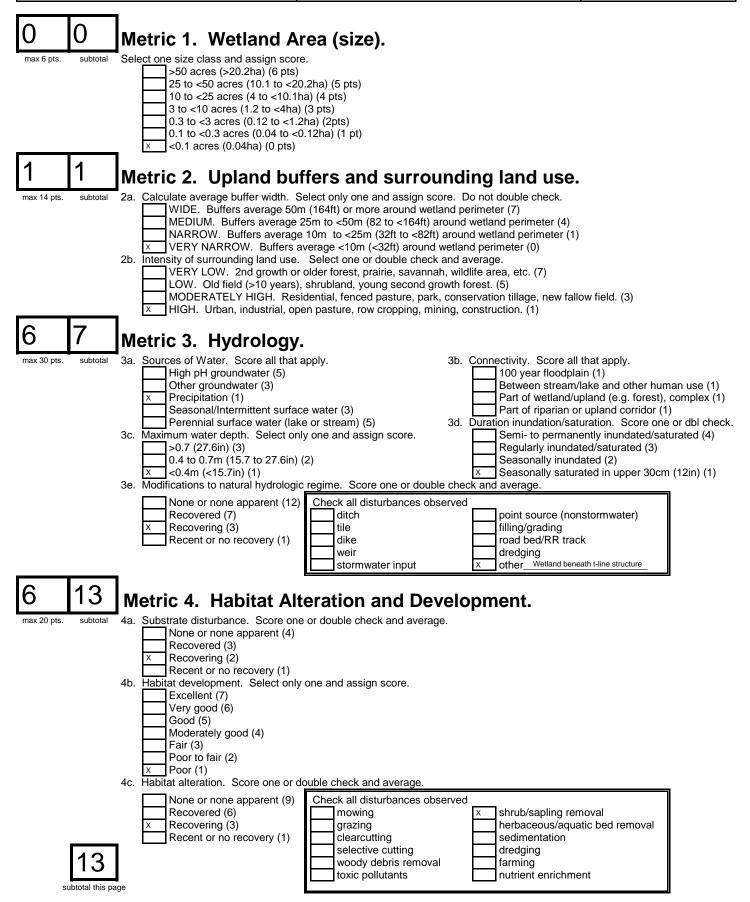
Amphibian breeding pools

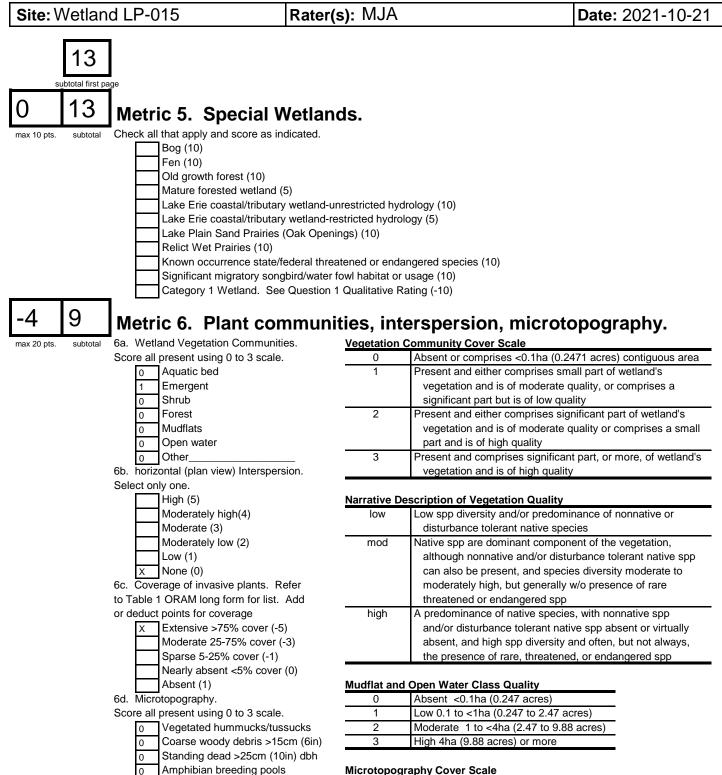
Microtopogra	aphy Cover Scale
0	Abcont

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

23 GRAND TOTAL (max 100 pts)

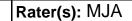


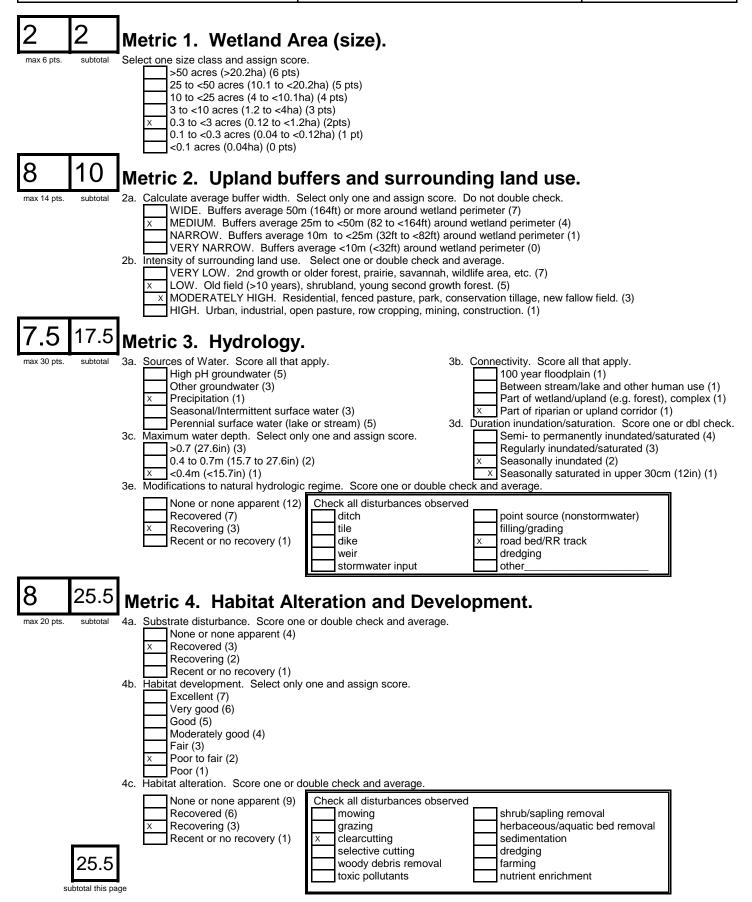




## 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 3 Present in moderate or greater amounts and of highest quality

## **9 GRAND TOTAL (max 100 pts)**





25.5 subtotal first page 25.5

subtotal



Relict Wet Prairies (10)

Known occurrence state/federal threatened or endangered species (10)

Rater(s): MJA

Significant migratory songbird/water fowl habitat or usage (10)

Category 1 Wetland. See Question 1 Qualitative Rating (-10)



max 20 pts.

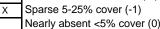
max 10 pts.

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities. subtotal Sc le.

Score all present using 0 to 3 scale.		
0	Aquatic bed	
1	Emergent	
0	Shrub	
0	Forest	
0	Mudflats	
0	Open water	
0	Other	
6b. hori	zontal (plan view) Interspersion.	
Select o	nly one.	
	High (5)	
	Moderately high(4)	
	Moderate (3)	
	Moderately low (2)	
	Low (1)	
Х	None (0)	
6c. Cov	rerage of invasive plants. Refer	
to Table	1 ORAM long form for list. Add	
or dedu	ct points for coverage	
	Extensive >75% cover (-5)	

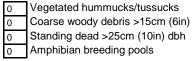
(-5) Moderate 25-75% cover (-3)



Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.



#### **Vegetation Community Cover Scale** Absent or comprises <0.1ha (0.2471 acres) contiguous area 0 Present and either comprises small part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part but is of low quality 2 Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality 3 Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Date: 2021-10-21

#### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or	
	disturbance tolerant native species	
mod	Native spp are dominant component of the vegetation,	
	although nonnative and/or disturbance tolerant native spp	
	can also be present, and species diversity moderate to	
	moderately high, but generally w/o presence of rare	
	threatened or endangered spp	
high	A predominance of native species, with nonnative spp	
	and/or disturbance tolerant native spp absent or virtually	
	absent, and high spp diversity and often, but not always,	
	the presence of rare, threatened, or endangered spp	

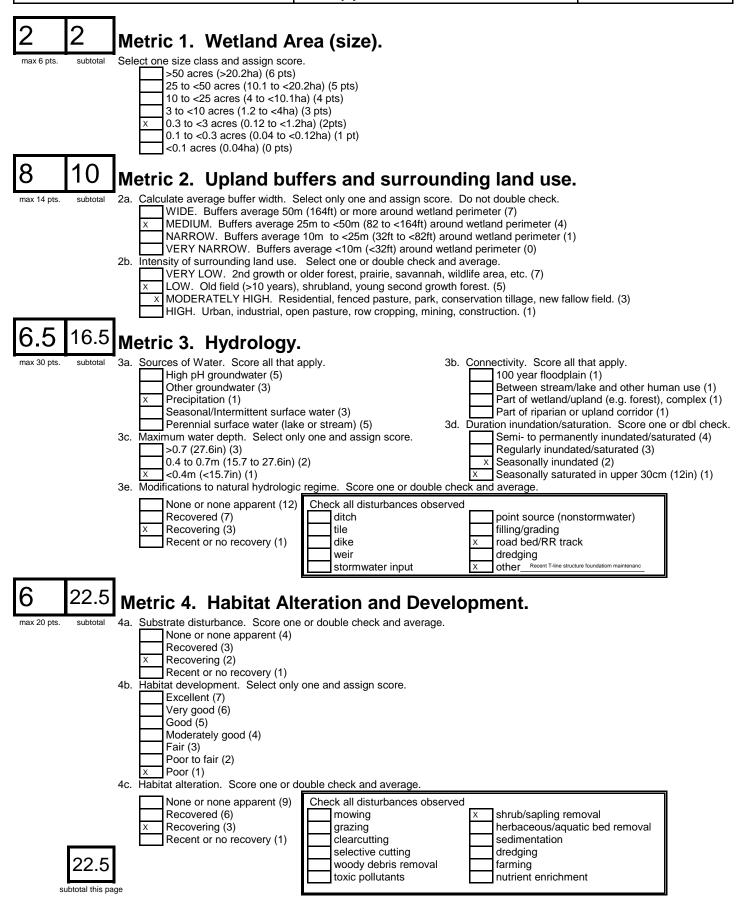
#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

#### **Microtopography Cover Scale**

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

#### 25.5 GRAND TOTAL (max 100 pts)



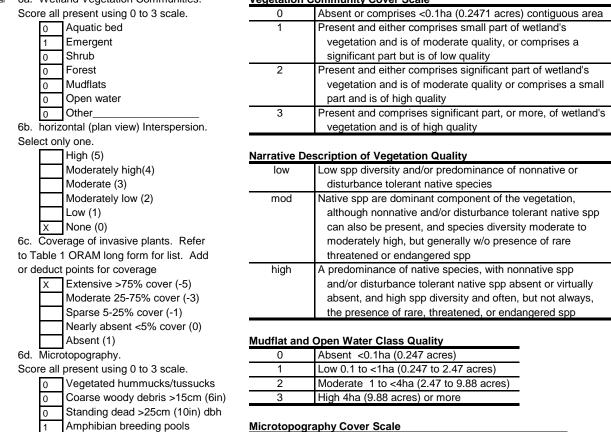
max 10 pts.

3

nax 20 pts.



Rater(s): MJA



# 19.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

0

1

2

3

Absent

of marginal quality

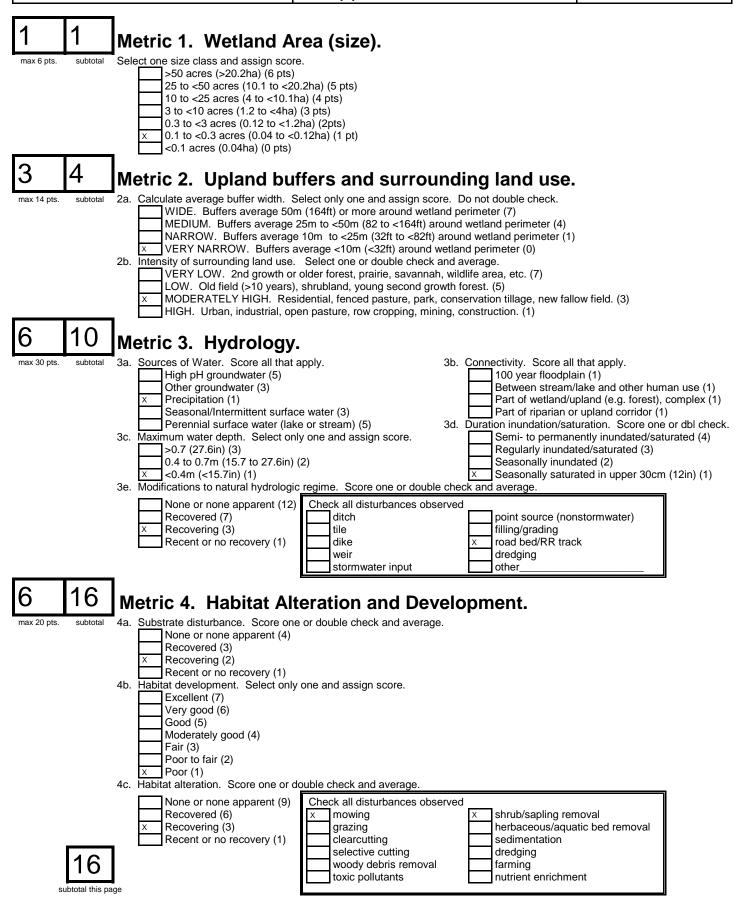
and of highest quality

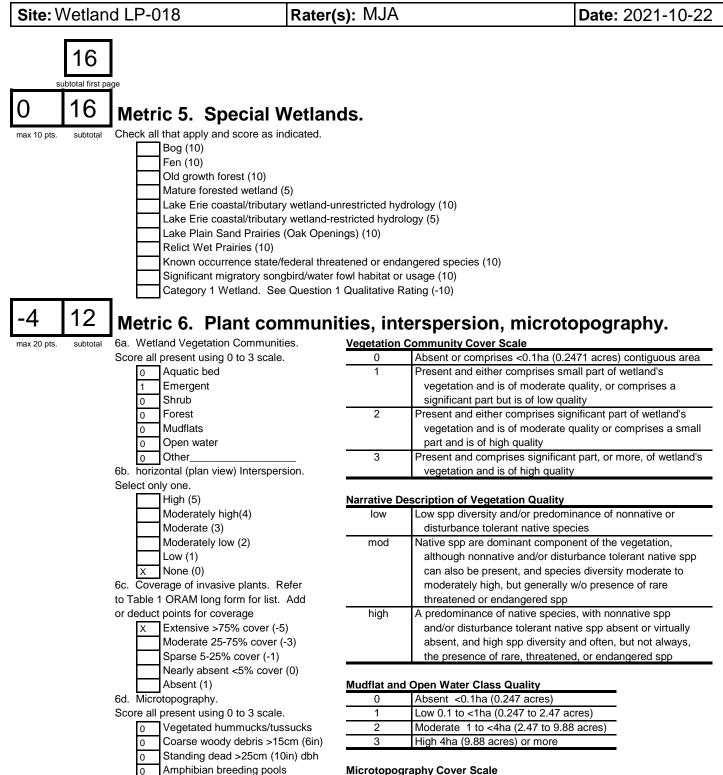
Present very small amounts or if more common

Present in moderate amounts, but not of highest

quality or in small amounts of highest quality

Present in moderate or greater amounts

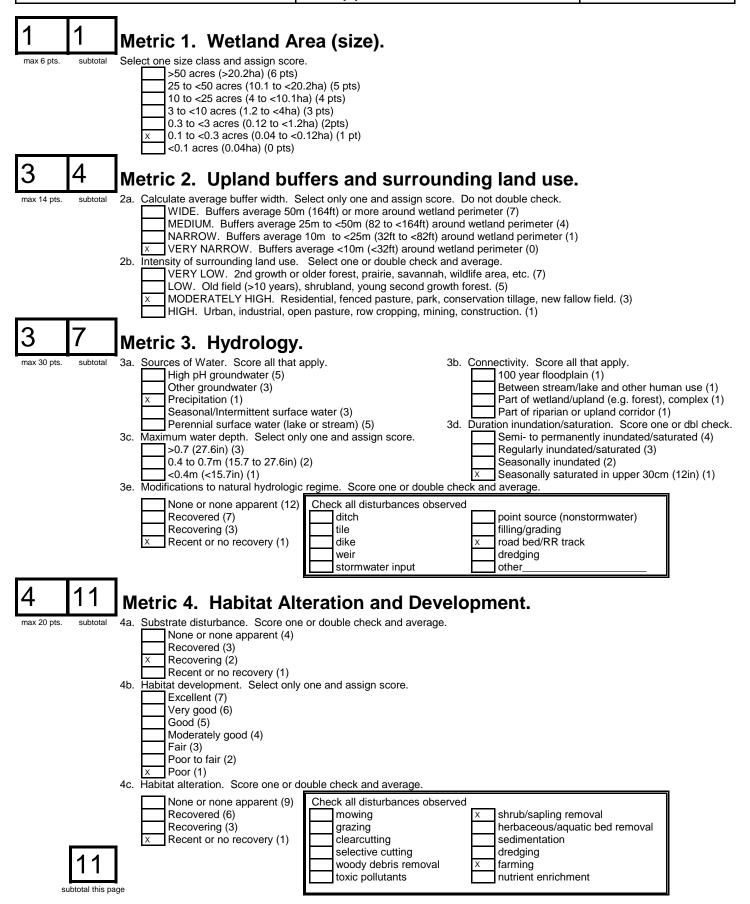


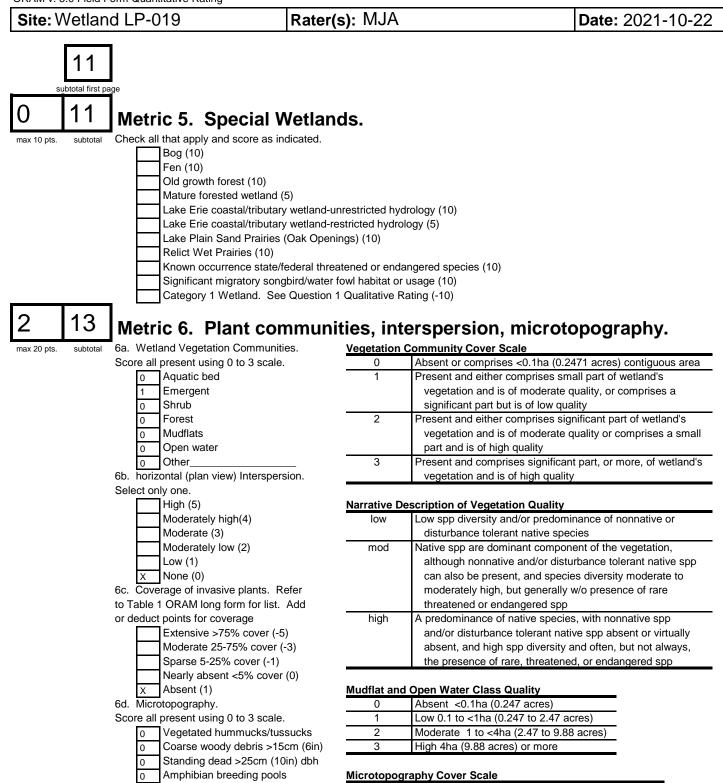


# 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 3 Present in moderate or greater amounts and of highest quality

# 12 GRAND TOTAL (max 100 pts)

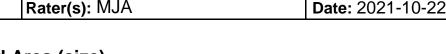
### Rater(s): MJA

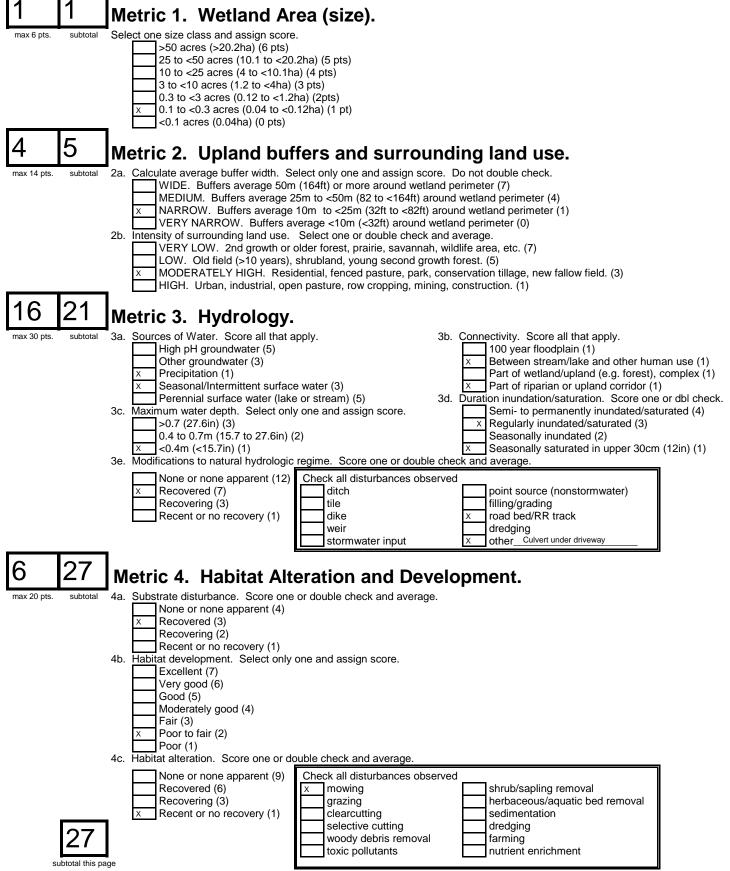


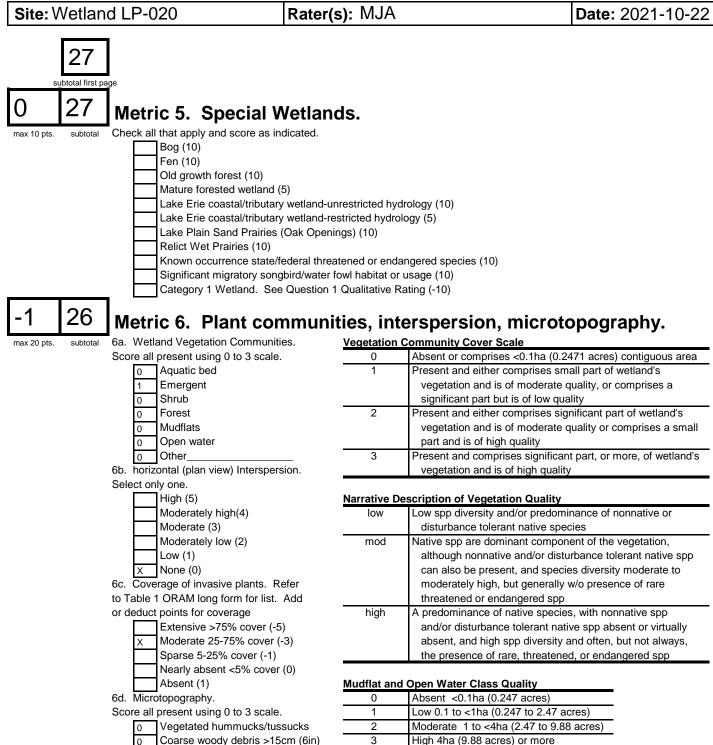


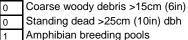
0	Absent	
1	1 Present very small amounts or if more common	
	of marginal quality	
2	Present in moderate amounts, but not of highest	
	quality or in small amounts of highest quality	
3	Present in moderate or greater amounts	
	and of highest quality	

## 13 GRAND TOTAL (max 100 pts)





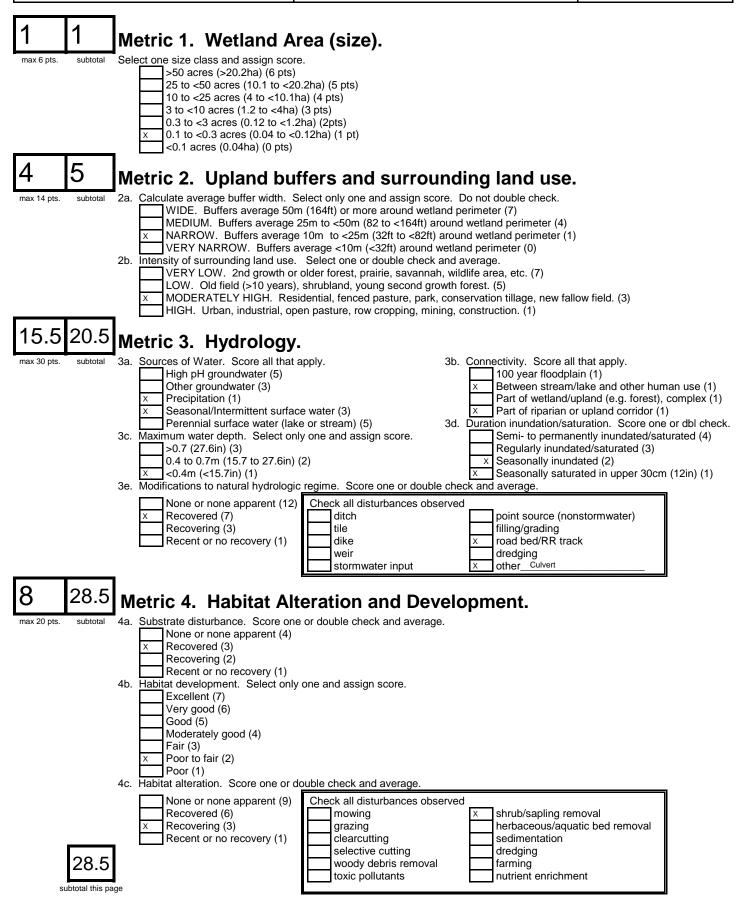


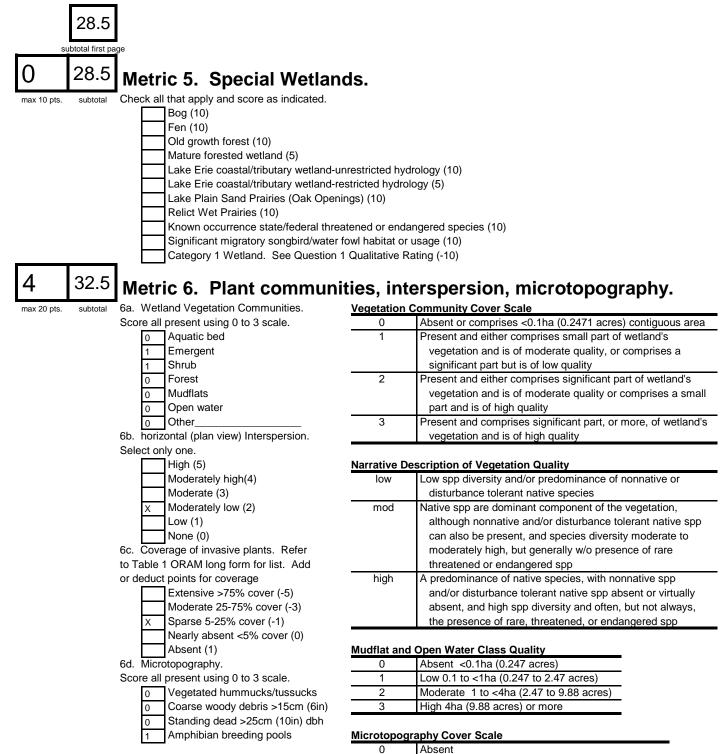


Microtopography Cover Scale
-----------------------------

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

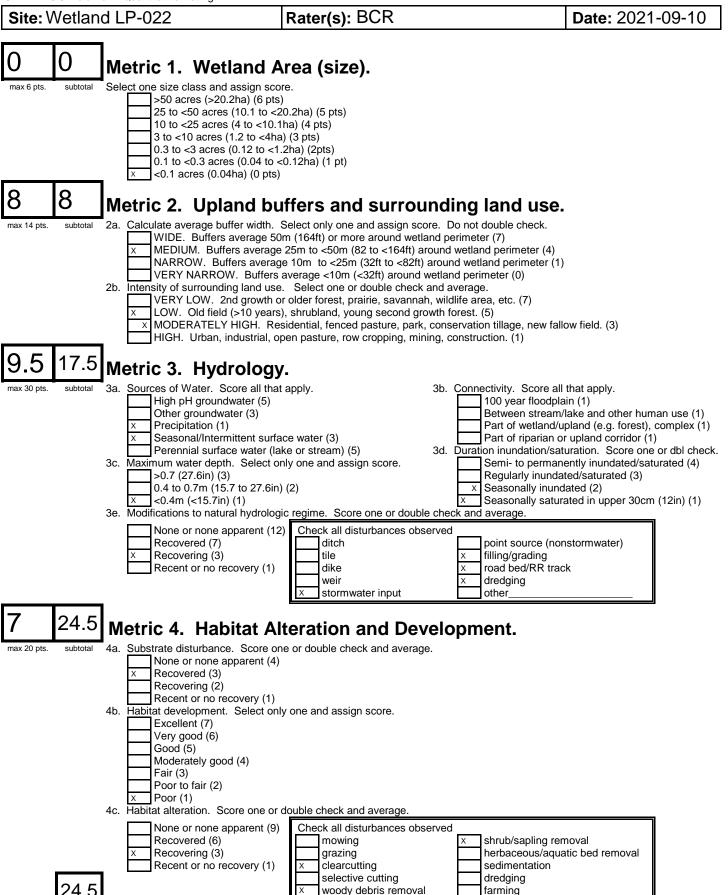
## 26 GRAND TOTAL (max 100 pts)





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

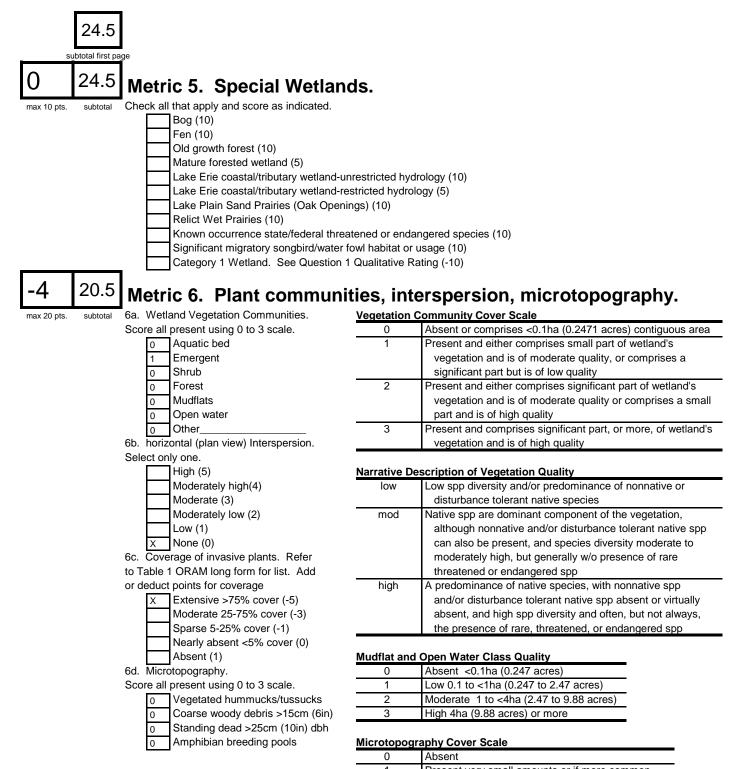
# 32.5 GRAND TOTAL (max 100 pts)



toxic pollutants

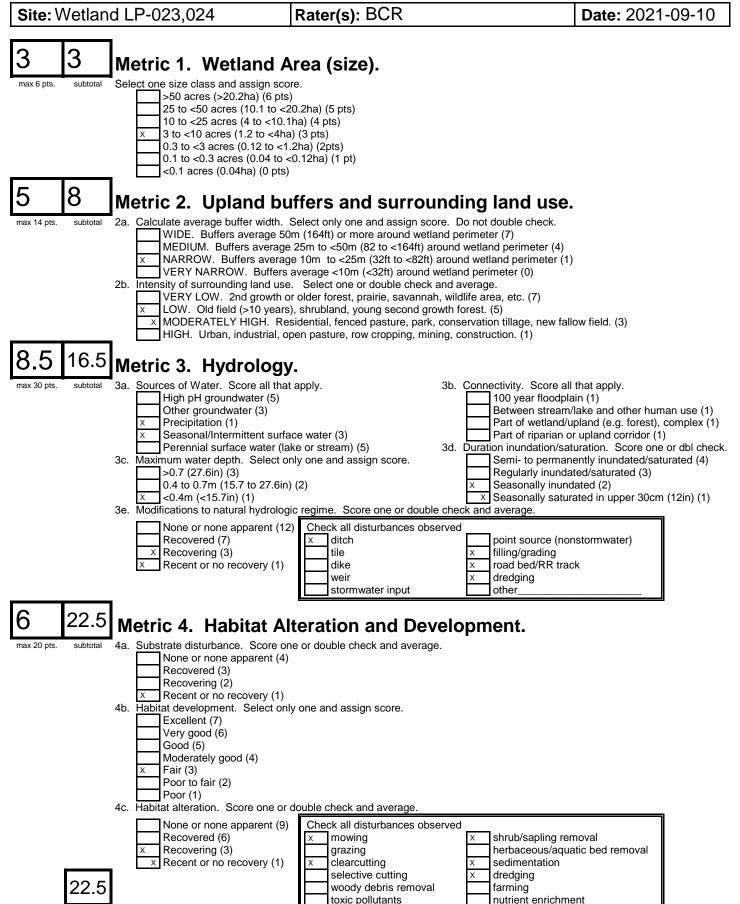
nutrient enrichment



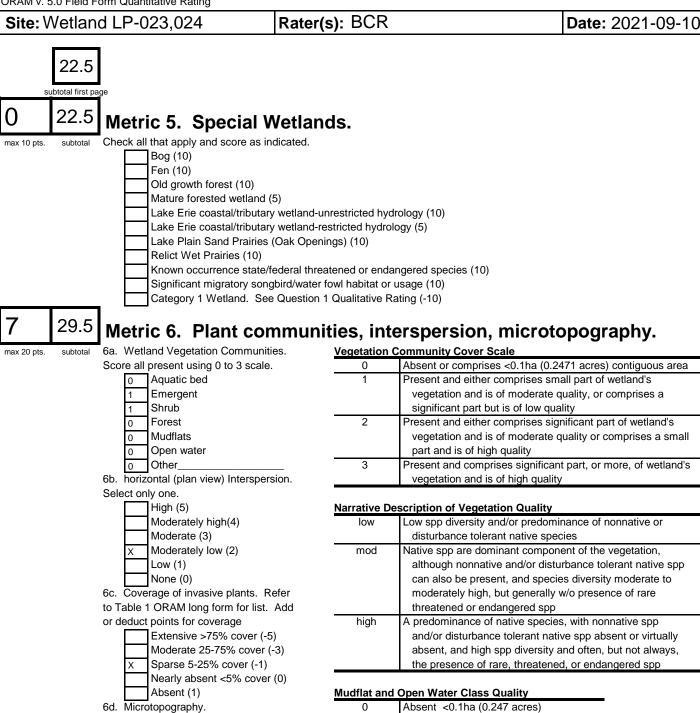


1	Present very small amounts or it more common
	of marginal quality
2	Present in moderate amounts, but not of highes
	quality or in small amounts of highest quality
3	Present in moderate or greater amounts
	and of highest quality

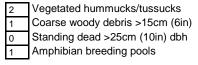
# 20.5 GRAND TOTAL (max 100 pts)



subtotal this page



Score all present using 0 to 3 scale.



Microto	pography	Cover	Scale
101101010	pography	00101	ocaic

1

2

3

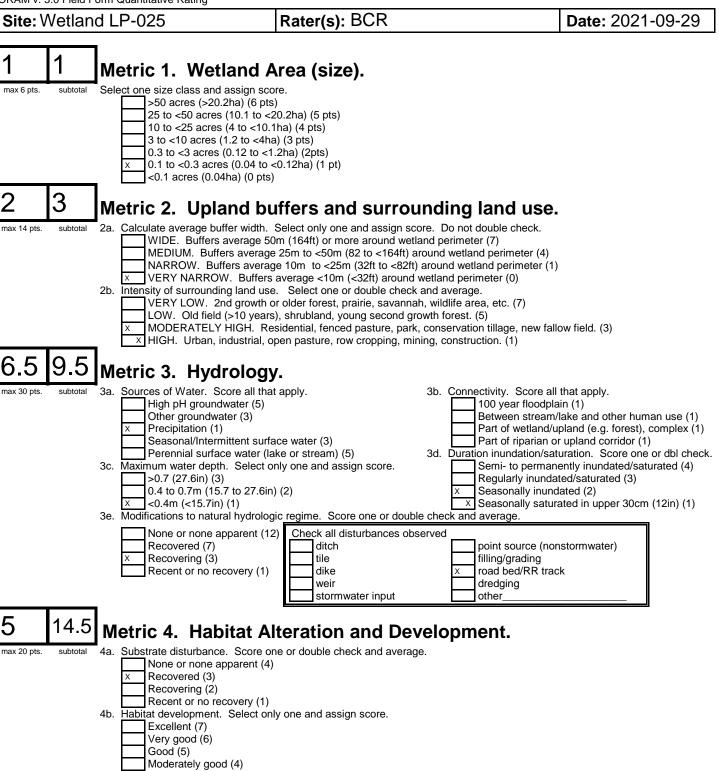
0	Absent	
1	Present very small amounts or if more common	
	of marginal quality	
2	Present in moderate amounts, but not of highest	
	quality or in small amounts of highest quality	
3	Present in moderate or greater amounts	
	and of highest quality	

Low 0.1 to <1ha (0.247 to 2.47 acres)

High 4ha (9.88 acres) or more

Moderate 1 to <4ha (2.47 to 9.88 acres)

#### 29.5 GRAND TOTAL (max 100 pts)



Check all disturbances observed

woody debris removal

mowing

grazing

clearcutting

selective cutting

toxic pollutants

Fair (3) Poor to fair (2) Poor (1)

Recovered (6)

Recovering (3)

4c. Habitat alteration. Score one or double check and average.

None or none apparent (9)

Recent or no recovery (1)

W-BCR-092921-05 Leroy Center-Mayfield 138 kV Transmission Line Project

shrub/sapling removal

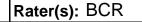
nutrient enrichment

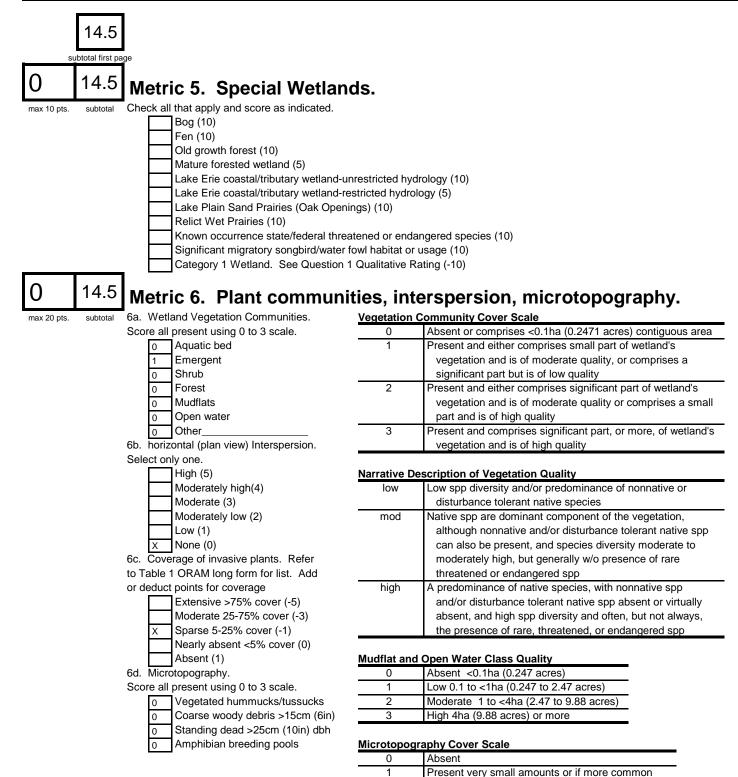
sedimentation

dredging

farming

herbaceous/aquatic bed removal





# 14.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

2

3

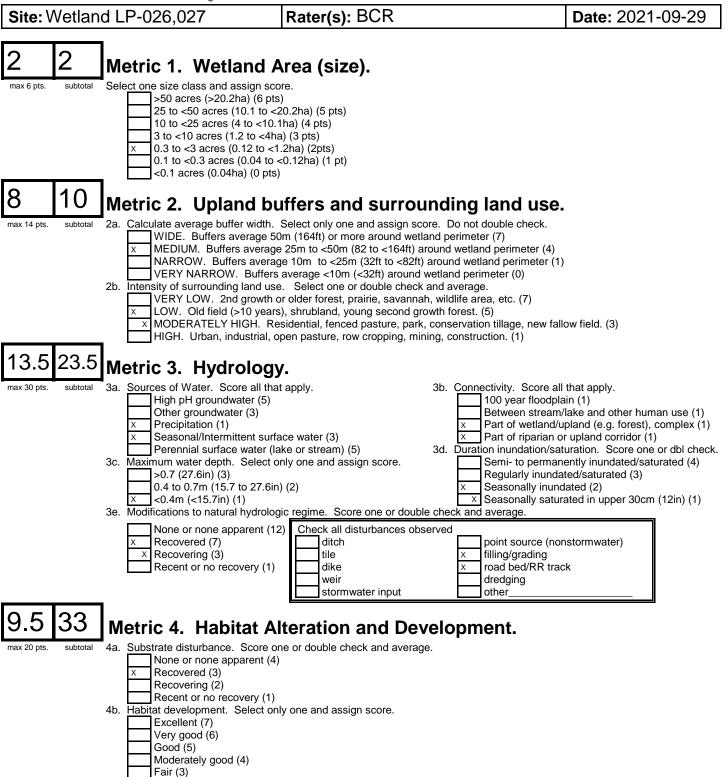
Present in moderate amounts, but not of highest

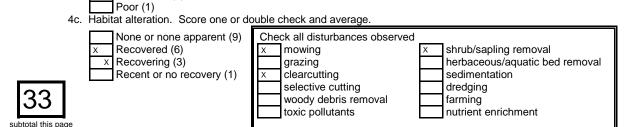
quality or in small amounts of highest quality

Present in moderate or greater amounts

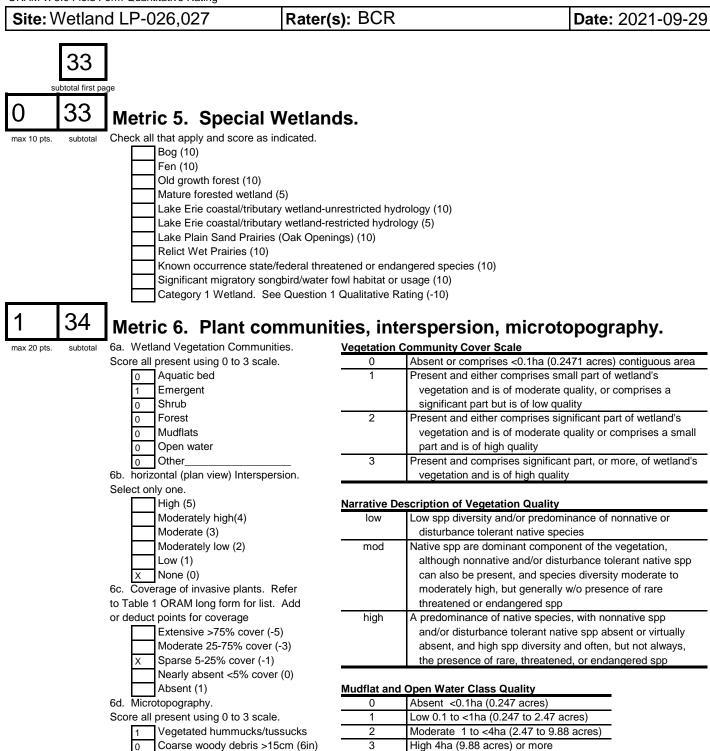
of marginal quality

and of highest quality





Poor to fair (2)



 0
 Coarse woody debris >15cm (6in)

 0
 Standing dead >25cm (10in) dbh

 0
 Amphibian breeding pools

Microtopography Cover Scale

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

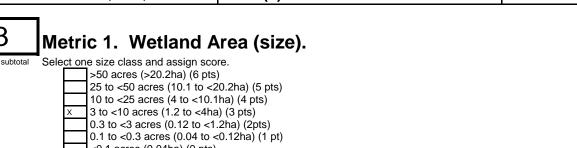
## 34 GRAND TOTAL (max 100 pts)

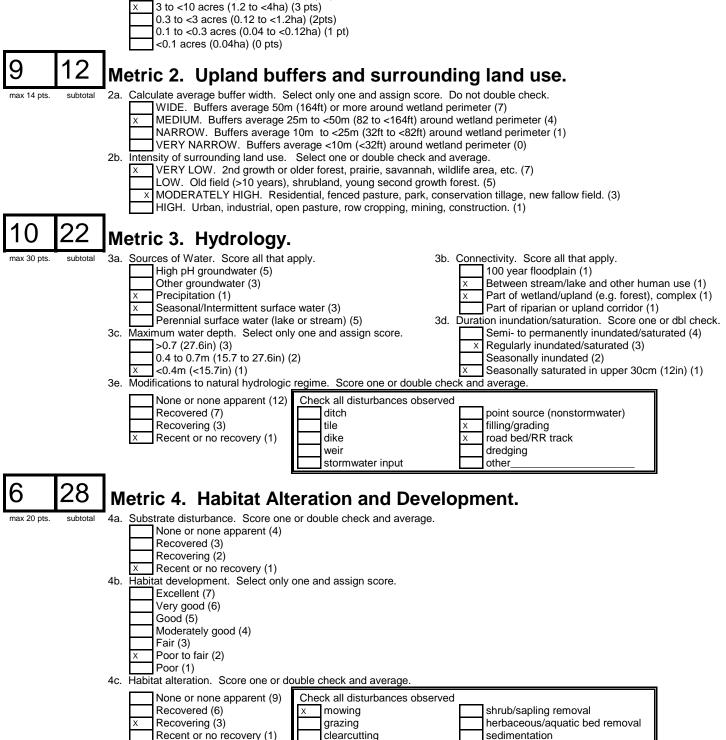
3

3

max 6 pts.

Site: Wetland LP-028,029,030





selective cutting

toxic pollutants

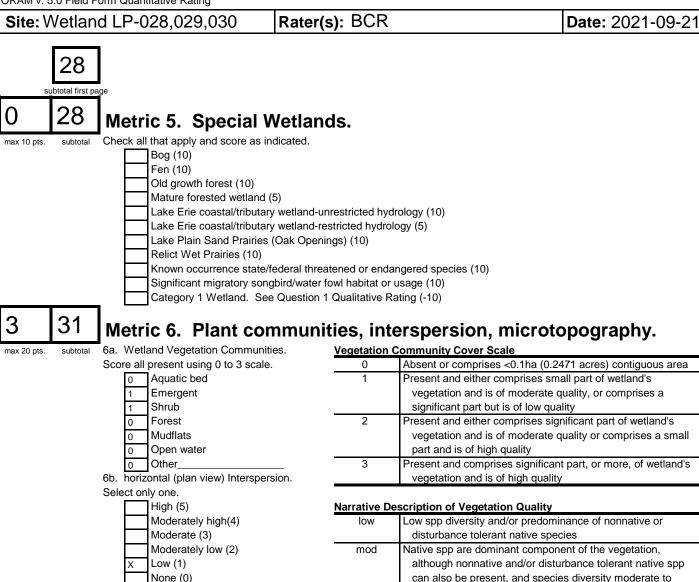
woody debris removal

nutrient enrichment

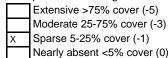
dredging

farming

Rater(s): BCR



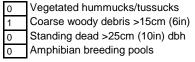
6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage



Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.



Mudflat and Open Water Class Quality		
0	Absent <0.1ha (0.247 acres)	
1	Low 0.1 to <1ha (0.247 to 2.47 acres)	
2	Moderate 1 to <4ha (2.47 to 9.88 acres)	
3	High 4ha (9.88 acres) or more	

threatened or endangered spp

### **Microtopography Cover Scale**

high

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

## 31 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

W-BCR-092921-01 Leroy Center-Mayfield 138 kV Transmission Line Project

moderately high, but generally w/o presence of rare

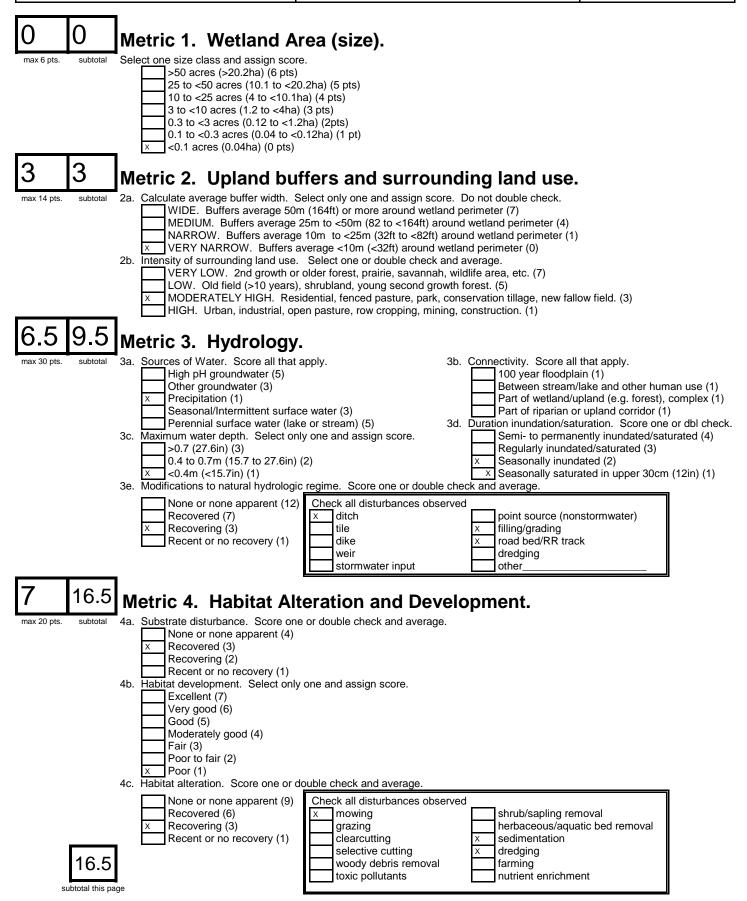
A predominance of native species, with nonnative spp

and/or disturbance tolerant native spp absent or virtually

absent, and high spp diversity and often, but not always,

the presence of rare, threatened, or endangered spp

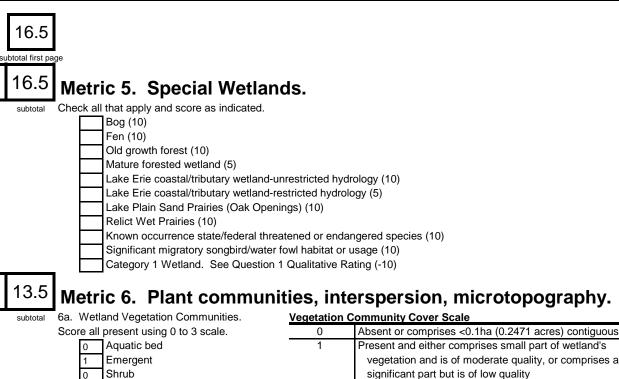




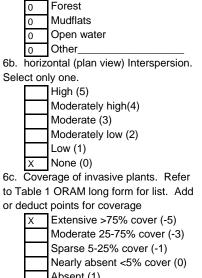
max 10 pts.

3

max 20 pts.



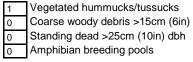
Rater(s): BCR



Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.



### Vegetation Community Cover Scale 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area</td> 1 Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality 2 Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality 3 Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Date: 2021-09-28

### Narrative Description of Vegetation Quality

analive Description of vegetation quality		
low	low Low spp diversity and/or predominance of nonnative or	
	disturbance tolerant native species	
mod	Native spp are dominant component of the vegetation,	
	although nonnative and/or disturbance tolerant native spp	
	can also be present, and species diversity moderate to	
	moderately high, but generally w/o presence of rare	
	threatened or endangered spp	
high	A predominance of native species, with nonnative spp	
	and/or disturbance tolerant native spp absent or virtually	
	absent, and high spp diversity and often, but not always,	
	the presence of rare, threatened, or endangered spp	

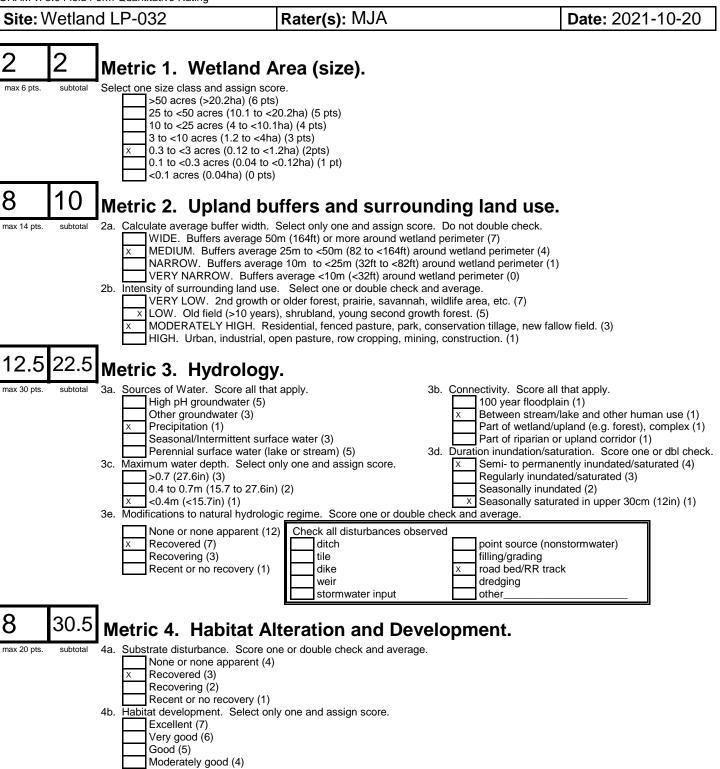
#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

#### Microtopography Cover Scale

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

# 13.5 GRAND TOTAL (max 100 pts)



Check all disturbances observed

woody debris removal

mowing

grazing

clearcutting

selective cutting

toxic pollutants

0.

Fair (3) Poor to fair (2) Poor (1)

Recovered (6)

Recovering (3)

4c. Habitat alteration. Score one or double check and average.

None or none apparent (9)

Recent or no recovery (1)

W-MJA-102021-01 Leroy Center-Mayfield 138 kV Transmission Line Project

shrub/sapling removal

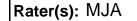
nutrient enrichment

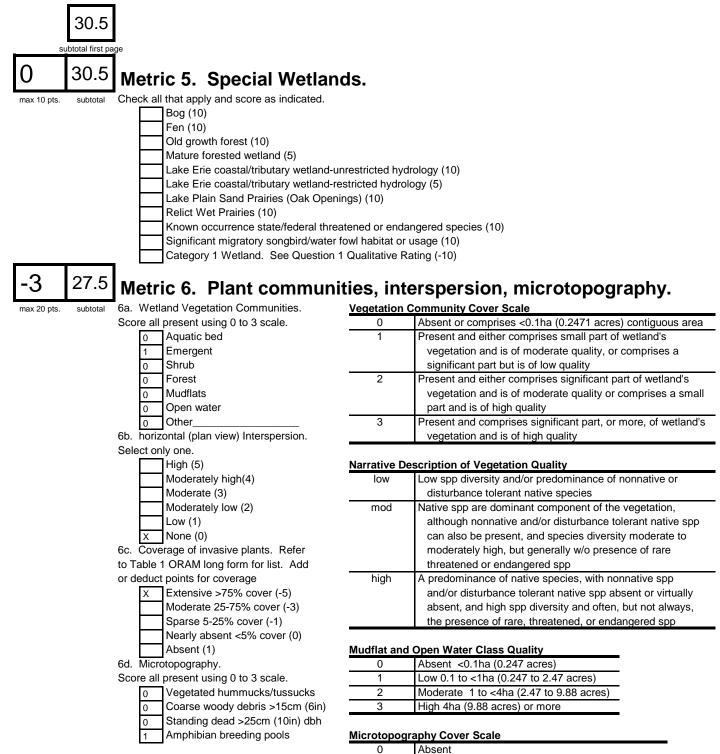
sedimentation

dredging

farming

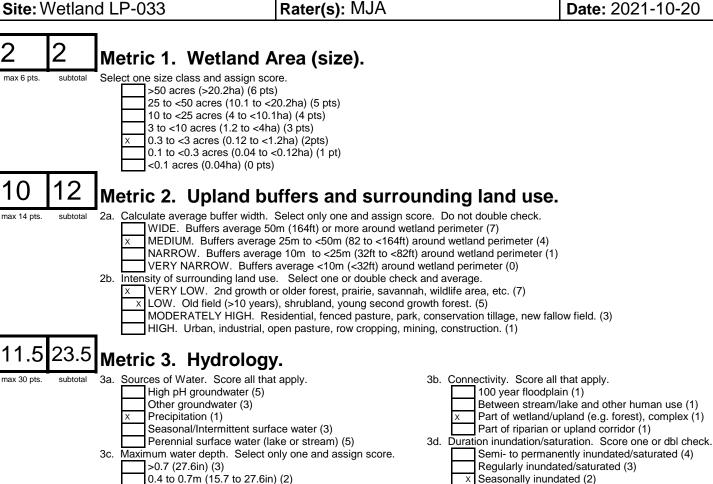
herbaceous/aquatic bed removal

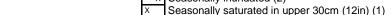




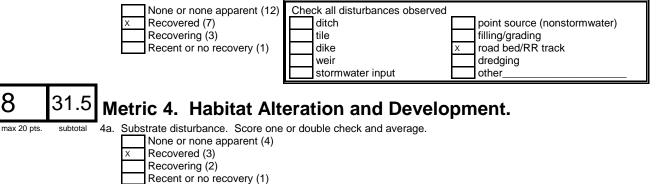
0		
1	Present very small amounts or if more common	
	of marginal quality	
2	Present in moderate amounts, but not of highest	
	quality or in small amounts of highest quality	
3	Present in moderate or greater amounts	
	and of highest quality	

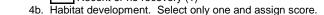
# 27.5 GRAND TOTAL (max 100 pts)



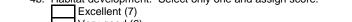


3e. Modifications to natural hydrologic regime. Score one or double check and average.

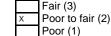




<0.4m (<15.7in) (1)

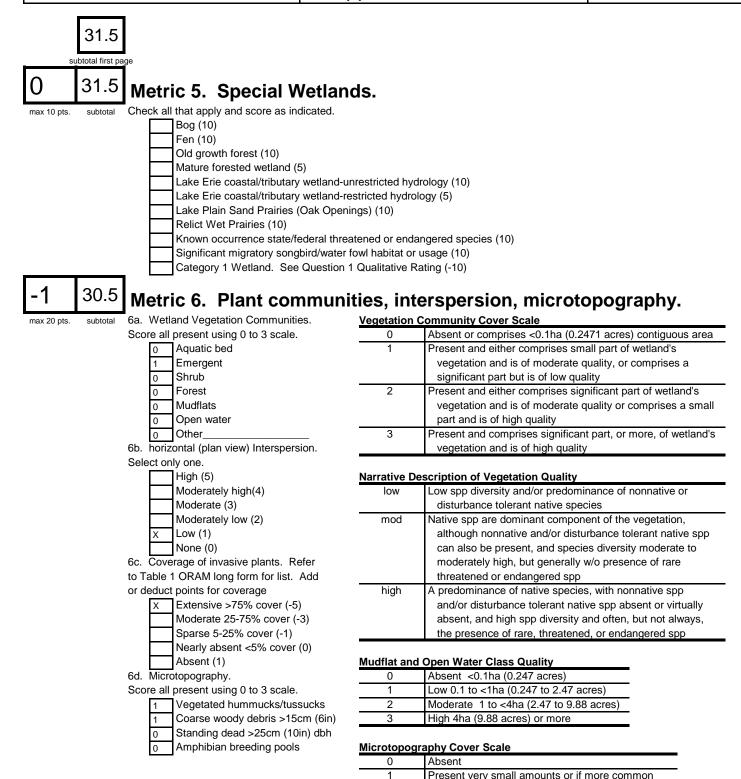






4c. Habitat alteration. Score one or double check and average.

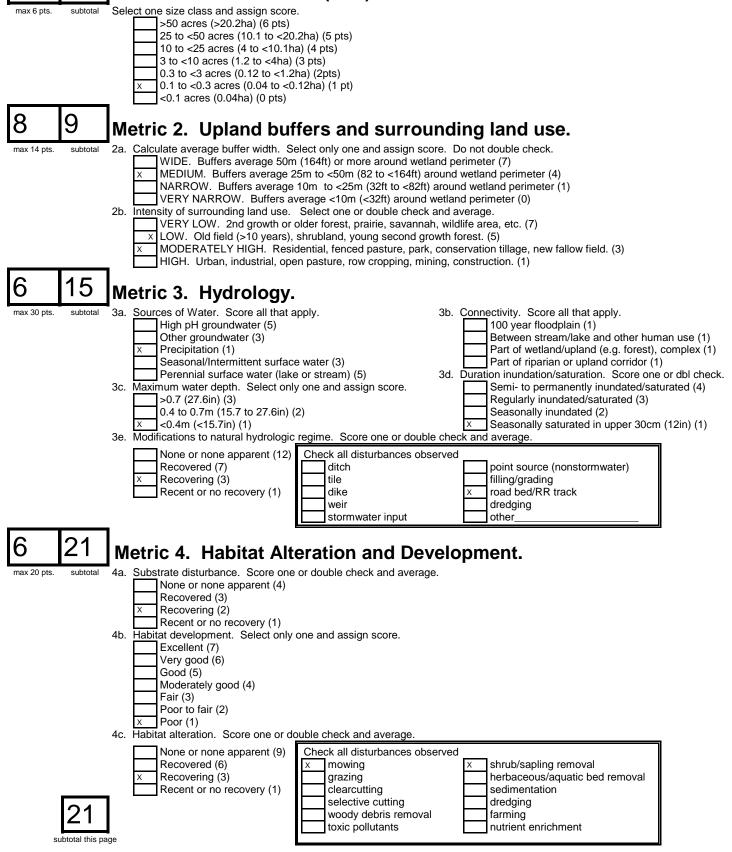


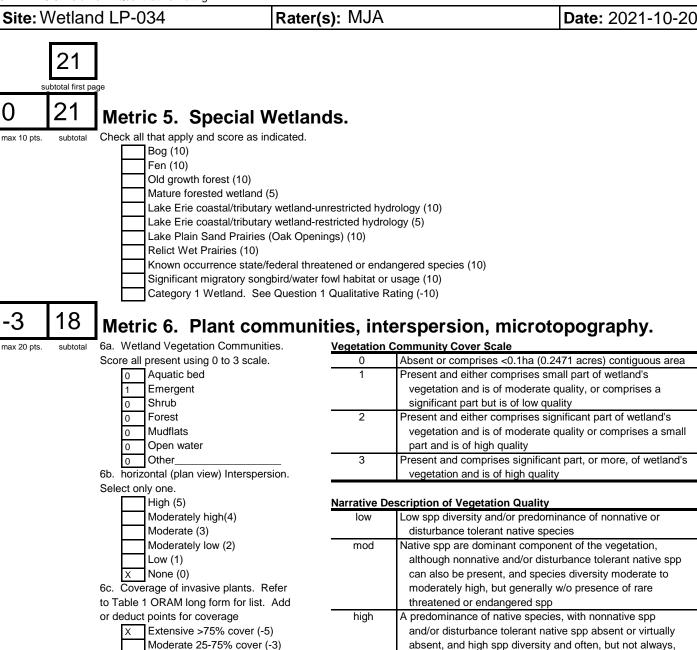


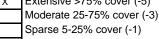
	1	r resent very small amounts of it more common
		of marginal quality
	2	Present in moderate amounts, but not of highest
		quality or in small amounts of highest quality
	3	Present in moderate or greater amounts
i		and of highest quality

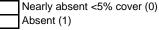
# 30.5 GRAND TOTAL (max 100 pts)

1



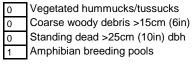






6d. Microtopography.

Score all present using 0 to 3 scale.



1	Low 0.1 to <1ha (0.247 to 2.47 acres)		
2	Moderate 1 to <4ha (2.47 to 9.88 acres)		
3	High 4ha (9.88 acres) or more		

Absent <0.1ha (0.247 acres)

Mudflat and Open Water Class Quality

### Microtopography Cover Scale

0

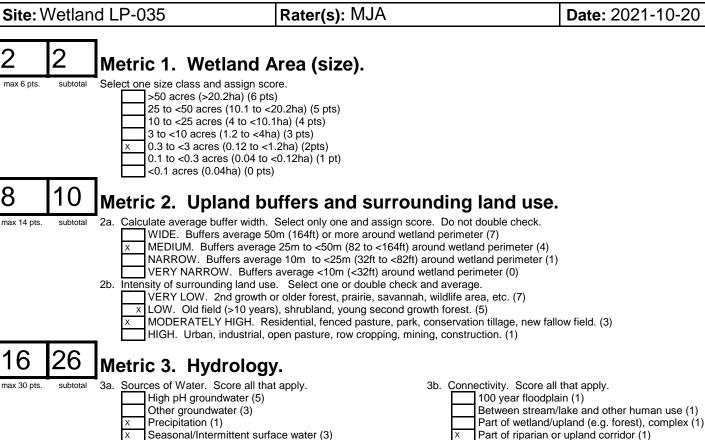
0	Absent	
1	Present very small amounts or if more common	
	of marginal quality	
2	Present in moderate amounts, but not of highest	
	quality or in small amounts of highest quality	
3	Present in moderate or greater amounts	
	and of highest quality	

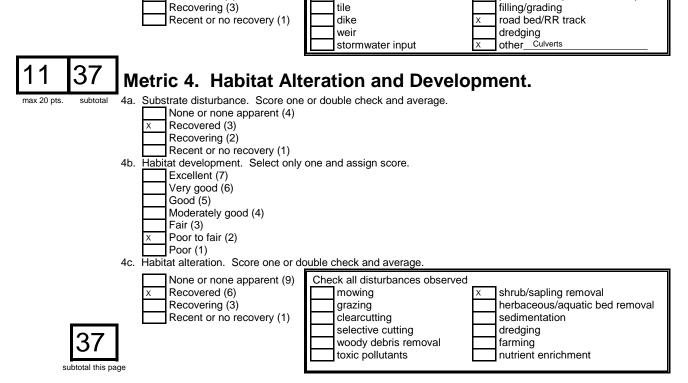
### 18 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

the presence of rare, threatened, or endangered spp

8





3e. Modifications to natural hydrologic regime. Score one or double check and average.

ditch

Check all disturbances observed

Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

0.4 to 0.7m (15.7 to 27.6in) (2)

None or none apparent (12)

>0.7 (27.6in) (3)

Recovered (7)

<0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

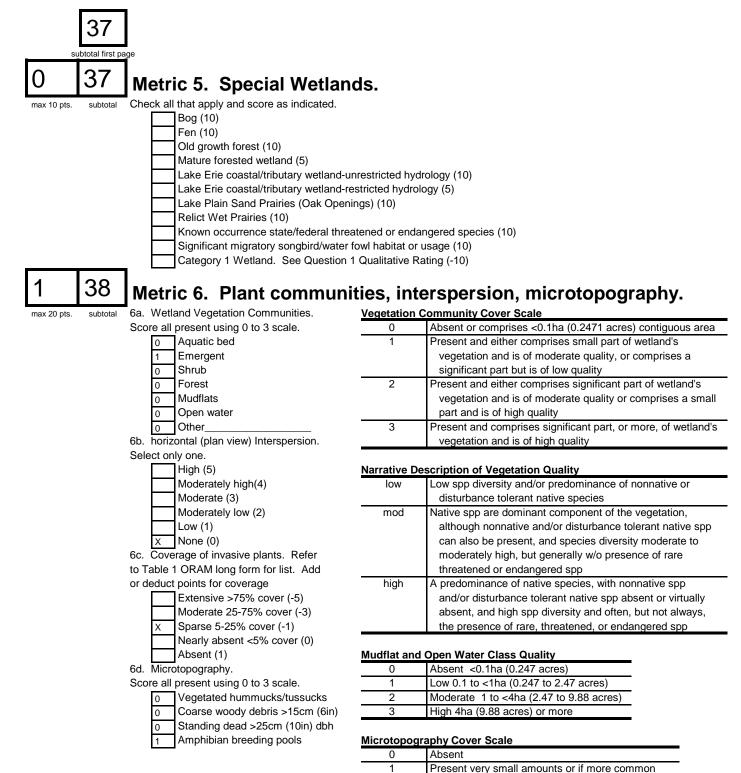
Regularly inundated/saturated (3)

Seasonally inundated (2)

point source (nonstormwater)

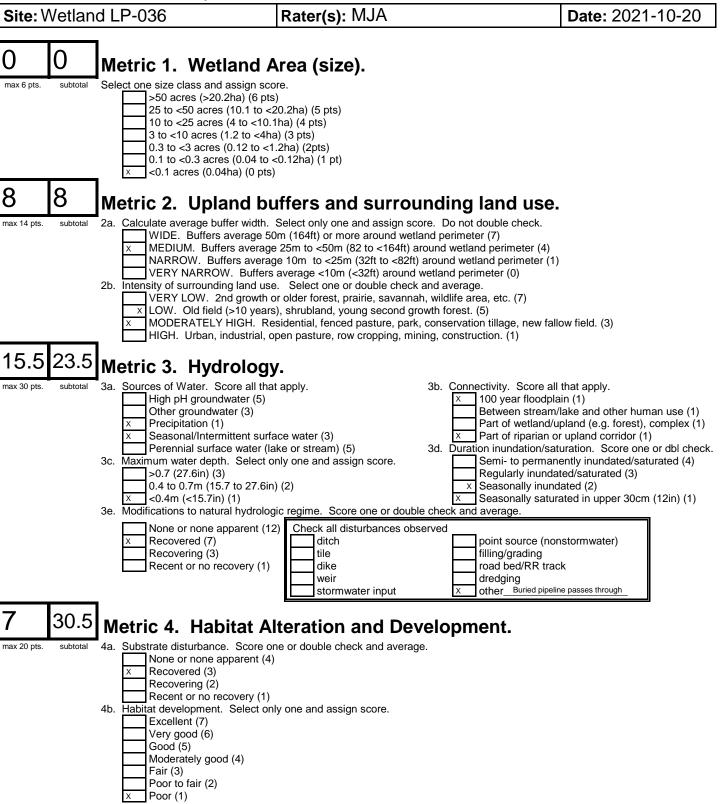
× Semi- to permanently inundated/saturated (4)

Seasonally saturated in upper 30cm (12in) (1)



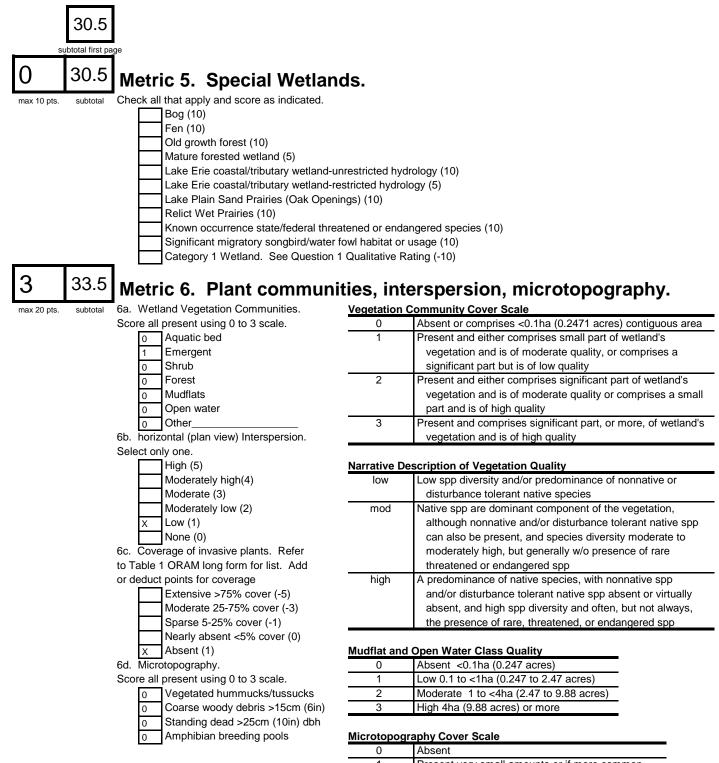
		of marginal quality
	2	Present in moderate amounts, but not of highest
		quality or in small amounts of highest quality
	3	Present in moderate or greater amounts
		and of highest quality
( - <b>)</b>		

## 38 GRAND TOTAL (max 100 pts)



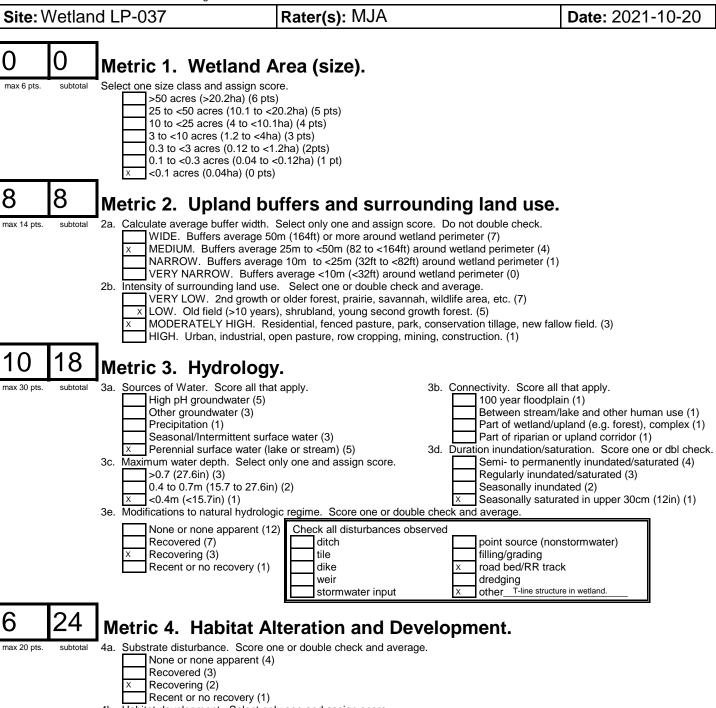
4c. Habitat alteration. Score one or double check and average.

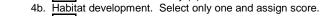


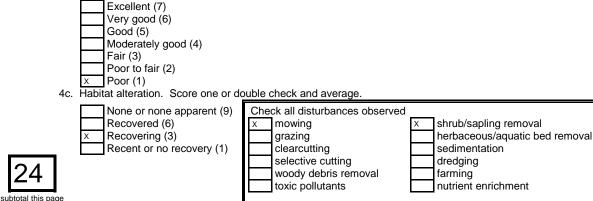


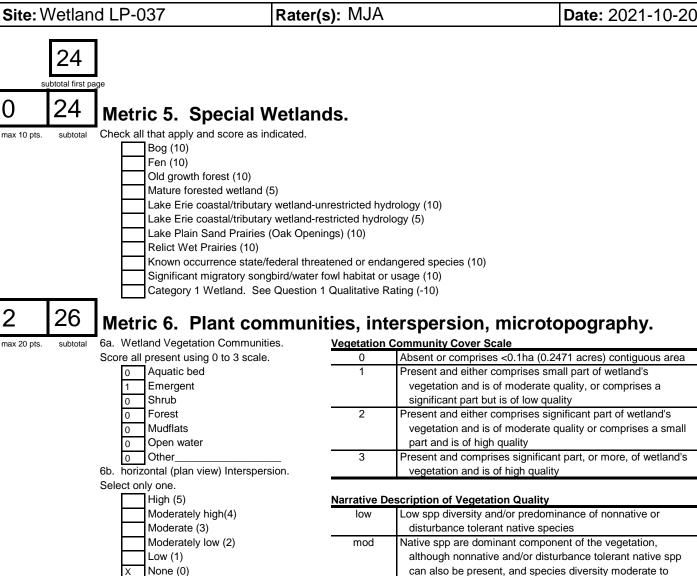
1	Present very small amounts or it more common
	of marginal quality
2	Present in moderate amounts, but not of highes
	quality or in small amounts of highest quality
3	Present in moderate or greater amounts
	and of highest quality

# 33.5 GRAND TOTAL (max 100 pts)

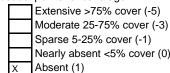






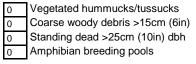


6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage



6d. Microtopography.

Score all present using 0 to 3 scale.



	moderately high, but generally w/o presence of rare
	threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

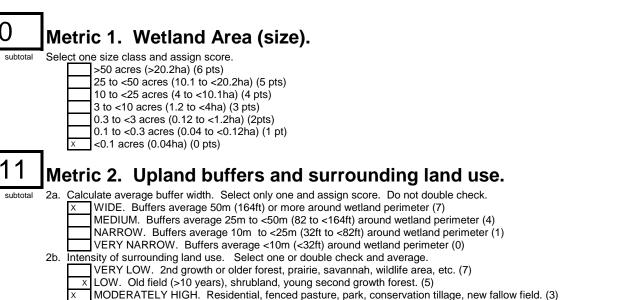
#### Microtopography Cover Scale

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

### 26 GRAND TOTAL (max 100 pts)

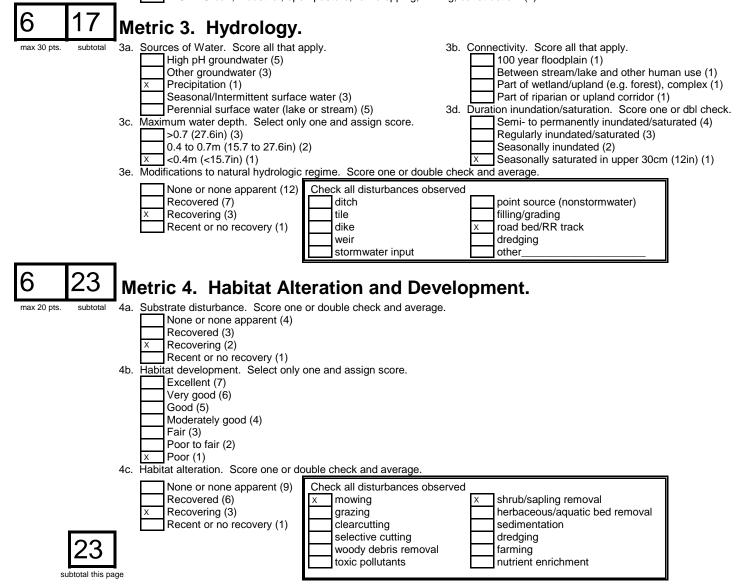
max 6 pts.

max 14 pts

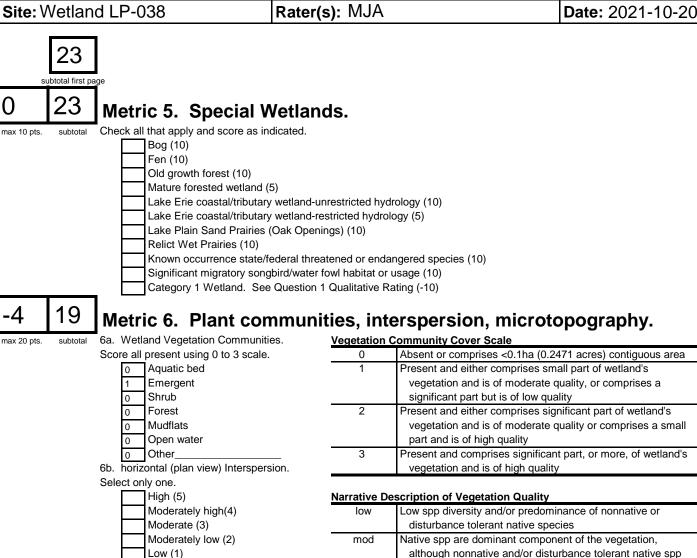


Rater(s): MJA

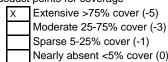
HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)



Date: 2021-10-20



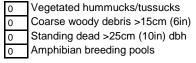
X None (0) 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage



Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.



 
 Iarrative Description of Vegetation Quality

 low
 Low spp diversity and/or predominance of nonnative or disturbance tolerant native species

 mod
 Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp

 high
 A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

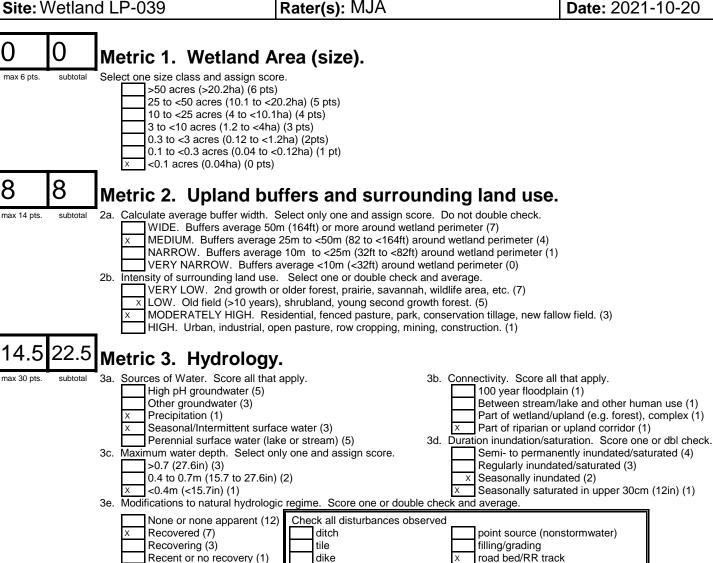
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

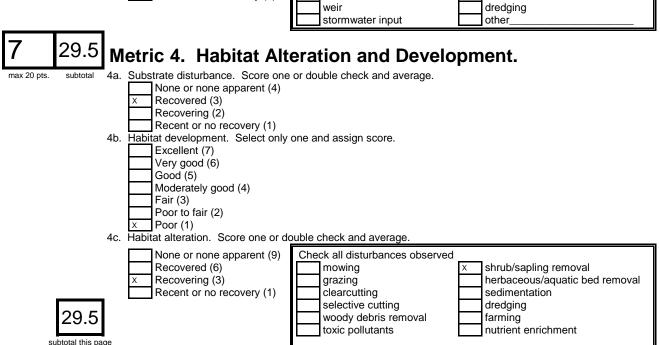
### Microtopography Cover Scale

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

## 19 GRAND TOTAL (max 100 pts)

8





### This foregoing document was electronically filed with the Public Utilities

### Commission of Ohio Docketing Information System on

8/23/2022 2:03:04 PM

in

### Case No(s). 22-0747-EL-BLN

Summary: Application Letter of Notification (Part 4 of 5) electronically filed by Ms. Devan K. Flahive on behalf of American Transmission Systems Incorporated